CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
CENTRAL VALLEY REGION

ORDER R5-2014-____

WASTE DISCHARGE REQUIREMENTS

FOR
COLUSA INDUSTRIAL PROPERTIES, INC.
COLUSA INDUSTRIAL PROPERTIES WASTEWATER TREATMENT FACILITY
COLUSA COUNTY

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

1. On 13 May 2013, Colusa Industrial Properties, Inc. submitted a Report of Waste Discharge (RWD) that proposes the year-round discharge of industrial process wastewater and an additional domestic disposal pond at its wastewater treatment facility (WWTF). The WWTF provides industrial and domestic wastewater disposal services for a range of businesses and industries; including manufacturing, process, and distribution companies. Additional information was submitted on 4 September 2013, 15 November 2013, and 24 February 2014.

2. Colusa Industrial Properties, Inc. (hereafter "CIP" or "Discharger") owns and operates the Industrial Park, which includes the domestic wastewater disposal system, the industrial process wastewater land application system, and over 600 acres of land application areas that consist of the Davis Property and Fields 1 through 4. CIP is responsible for compliance with these Waste Discharge Requirements (WDRs).

3. The Industrial Park is located next to Highway 20 on Niagra Road, approximately 1 mile south of the City of Colusa and adjacent to the Colusa County Airport (Section 8, T15N, R1W, MDB&M) as shown on Attachment A, which is attached hereto and made part of this Order by reference. The Industrial Park and its associated land application areas occupy Assessor's Parcel Numbers (APN) 017-03-0-008-3 (Davis property), and APN 017-03-0-083, 017-03-0-084, 017-03-0-085, and 017-030-0-086, as shown on Attachment B, which is attached hereto and made part of this Order by reference.

4. WDRs Order 5-01-250, adopted by the Central Valley Water Board on 19 October 2001, prescribes requirements for the discharge of process wastewater to an evaporation/percolation pond, direct discharge of process wastewater to designated land application areas (LAAs), and for the discharge of domestic wastewater from the industrial complex septic tanks to a lined evaporation pond. WDRs Order 5-01-250 prescribes the following process wastewater flow limits:

    a. The average daily dry weather (ADDW) industrial process wastewater flow to the Davis property LAAs shall not exceed 3.4 million gallons per day (mgd) if planting seed rice and 4.1 mgd if planting sudan grass from April through October.

b. The ADDW flow to the other land application areas shall be limited to 0.69 mgd from April through October.

c. Between the months of November through April, all discharges must be directed to the evaporation/percolation ponds and flows shall not exceed 27,000 gallons per day (gpd).

The Discharger proposes operational changes including a new source of process wastewater, limited year round process wastewater disposal to the LAAs, and additional domestic wastewater disposal capacity. Therefore, Order 5-01-250 will be rescinded and replaced with this Order.

Existing Facility and Discharge

5. CIP operates a separate land application system to manage the discharge of process wastewater that consists of approximately 600 acres of LAAs and an evaporation/percolation pond with approximately 6.7 million gallons (mgal) of storage capacity. The LAAs consist of approximately 500 acres of a 575-acre parcel referred to as the Davis Property and 118 acres of agricultural land referred to as Fields 1 through 4. The Discharger has been using a phased approach for the incorporation of the Davis Property for process wastewater disposal based on crop water demands and the volume of wastewater generated. Phase I of the Davis Property consists of 150 acres. The remainder of the Davis Property has not been used for land application yet, but is available as an LAA as process wastewater flows increase. The LAAs are summarized below along with crop and wastewater application activity during the past five years:

LAAs Designation	Area, acres	Crops	Wastewater Application
Field 1A	20	Fallow	N/A [1]
Field 1B	20	Fallow	N/A [1]
Field 2 North	17	Rice [2]	2008, 2009
Field 2 South	17	Rice [2]	2012
Field 3A	6	Fallow	N/A [1]
Field 3B	18	Rice [2]	2010, 2011
Field 4 North	10	Fallow	N/A [1]
Field South	10	Fallow	N/A [1]
Phase 1 Davis Property	150	Rice [3]	N/A [1]
Remainder of Davis Property	425	Rice [3]	N/A [1]

[1] No land application has occurred in the past 5 years.
[2] Rice did not reach maturity and therefore was not harvested. The field was burned.
[3] Cropped with rice but not irrigated with process wastewater.

6. Discharges of process wastewater from tomato processing and seed washing operations to the 118-acre LAAs began in August 1999. At that time, approximately 96 percent of the industrial process wastewater came from tomato processing and 4 percent from seed washing operations. The tomato processing facility closed in late 2003 and only process wastewater from seed washing operations has been land

applied since then. The current seed processing operations are seasonal, and only generate small amounts of wastewater. Their discharges are intermittent and generally of short duration in the summer. Therefore, only a small portion of the LAAs are used each year, and the remaining fields are fallow.

7. Discharges of process wastewater to the Phase I Davis Property were limited to the 2003 tomato processing season, which corresponds to the last year the tomato processing facility was operating at the Industrial Park. The Discharger continues to grow rice on the entire Davis Property, which is irrigated with water from an agricultural well referred to as the Kalfsbeck Well.

8. The LAAs are typically cropped with rice, but some of them can also be cropped with sudan grass and various row crops. Currently, the entire Davis Property and Field 2 are dedicated to rice growing. The rice fields are typically constructed with a 2-foot berm, are flood irrigated, and operated as a closed loop system. A network of pipes and valves make up the irrigation conveyance system. Water return and recovery systems are in place to recycle the water within each rice field.

9. The current food processing tenants use fresh water from CIP's water supply well. Process wastewater is collected, metered, and conveyed directly to the LAAs from August through November of each year. Any process wastewater generated between November and April is stored in the evaporation/percolation pond and later used to irrigate the LAAs beginning 1 May of each year. However, due to the relatively low industrial process wastewater volumes, no wastewater has been stored in the pond to date.

10. Premier Mushrooms (Premier) is an existing tenant, but they do not discharge any process wastewater to the land application system. Premier operates a closed-loop, zero-discharge facility to grow mushrooms in 48 growing rooms. Aged compost is the growing medium for mushrooms and is produced at the facility. Premier's process wastewater consists of leachate from the composting process and wash-down water from the clean-up activities of the uncovered concrete slab outside the mushroom growing rooms. Premier's process wastewater and storm water runoff from the concrete slabs outside the mushroom growing rooms is collected and stored in a concrete sump and HDPE-lined pond prior to reuse in the composting cycle.

11. Other Industrial Park tenants include rice drying and storage facilities, a milling facility and warehouse, a cold storage facility, and an equipment yard. These tenants are considered dry operations and do not generate industrial process wastewater. The Industrial Park is not fully occupied and the industrial nature of future tenants will vary. Wastewater character and flows from future tenants are unknown. However, the LAAs have capacity for much higher wastewater flows and constituent loading than currently operated.

12. Recent process wastewater flows discharged to the LAAs are summarized below.

	Process Wastewater Discharges to the LAAs							
	2009		2010		2011		2012	
Month	Daily Max, mgd	Monthly Total, mgal	Daily Max, mgd	Monthly Total, mgal	Daily Max, mgd	Monthly Total, mgal	Daily Max, mgd	Monthly Total, mgal
Aug	--	--	--	--	0.007	0.012	0.034	0.128
Sep	0.010	0.020	0.011	0.021	0.028	0.156	0.052	0.237
Oct	0.025	0.038	0.039	0.087	--	--	0.050	0.050
Nov	--	--	--	--	0.020	0.020	--	--
Annual Total:	**--**	**0.058**	**--**	**0.108**	**--**	**0.188**	**--**	**0.415**

Based on the data above, the discharge has been well below the 0.69 mgd flow limit prescribed by WDRs Order 5-01-250.

13. Recent hydraulic and constituent loading rates applied to the LAAs are summarized below.

		LAAs Loading Summary		
Year	Process Wastewater Applied, mgal	Avg. BOD (lb/ac/day)	Total Nitrogen (lb/ac/year)	TDS/FDS (lb/ac/year)
2008	0.29	3	2.8	177
2009	0.06	21	1.7	161
2010	0.11	31	3.7	140
2011	0.19	54	7.5	385
2012	0.41	12	5.0	123

Only TDS was reported for 2008 and 2009. FDS was reported for year 2010 and thereafter.

14. Recent process wastewater quality is summarized below for select constituents. The data are representative of the current seed washing tenants.

	Annual Average Wastewater Quality, mg/L unless specified			
Constituents	2009	2010	2011	2012 [1]
pH, pH units	--	6.8	7.3	7.8
BOD_5	1,020	910	1,490	1,170
EC, µmhos/cm	--	1,080	1,370	1,250
FDS	--	500	900	600
Chloride	--	150	120	130
Sodium	--	150	170	160
Nitrate as N	0.40	0.23	0.25	0.51
TKN	12.0	16.3	16.8	20
Total Nitrogen	--	16.3	17.0	20

"--" denotes data not available.
[1] Flow-weighted average from two processing facilities.

15. Crop and food processing residual solids include pulp, seeds, and recovered material from wastewater screens. Food processing residual solids generated by the Discharger's tenants are collected and handled at their respective facilities and disposed of off-site. This Order does not regulate those activities and does not allow application of residual solids unless a *Residual Solids Management Plan* is approved by the Executive Officer.

16. The Discharger operates a separate domestic wastewater system to manage domestic wastewater. Domestic wastewater from each tenant is collected in one or more septic tanks, then gravity flows to a 1.12 mgal capacity (with a 2-foot freeboard) domestic wastewater disposal pond. The disposal pond is lined with a 60-mil high density polyethylene (HDPE) synthetic membrane liner and relies on evaporation as the sole means of disposal. No domestic wastewater is discharged to the LAAs.

17. Recent domestic wastewater flows discharged to the domestic disposal pond are summarized in the table below.

	Annual Domestic Wastewater Flows, mgal				
Month	**2008**	**2009**	**2010**	**2011**	**2012**
January	0.032	0.057	0.059	0.077	0.078
February	0.051	0.053	0.058	0.071	0.059
March	--	0.060	0.074	0.087	0.074
April	0.063	0.063	0.073	0.088	0.075
May	--	0.067	0.082	0.104	0.069
June	--	0.073	0.086	0.102	0.074
July	0.050	0.074	0.091	0.112	0.097
August	0.132	0.082	0.101	0.115	0.102
September	0.143	0.087	0.111	0.100	0.103
October	0.148	0.079	0.109	0.098	0.101
November	0.144	0.066	0.067	0.083	0.091
December	0.107	0.061	0.072	0.075	--
Annual Total:	**0.870**	**0.822**	**0.983**	**1.114**	**0.922**

"—" denotes no measurement reported.

Changes in the Facility and Discharge

18. In 2012, the industrial process wastewater percolation/evaporation pond was converted into two separate ponds: Pond 2 for domestic wastewater disposal and Pond 3 for industrial process wastewater storage. Pond 2 has a domestic wastewater disposal capacity of approximately 1.12 mgal with a 2-foot freeboard. Pond 3 has a process wastewater storage capacity of approximately 3.24 mgal with a 2-foot freeboard. Both ponds will be lined with HDPE prior to use.

19. CIP proposes to collect and manage all industrial process wastewater in Pond 3 prior to disposal to the LAAs and cease direct discharge to the LAAs. A process flow

diagram of the industrial process wastewater operations is shown on Attachment C, which is attached hereto and made part of this Order by reference.

20. Winter crops will not be grown on the LAAs, but CIP proposes to extend the land application period during the winter months (November through April) for rice straw decomposition. Rice straw decomposition involves flooding the rice fields with 2 to 6 inches of water immediately after harvest and maintaining the water level during the decomposition period, which occurs typically between November through March. Approximately 50 mgal of water per 100 acres of rice fields would be needed during these months during a normal rainfall year. The water used for irrigation and decomposition infiltrates and the fields will not be drained to surface waters prior to rice planting or harvest.

21. CIP also proposes to collect the storm water runoff from the uncovered concrete slabs outside of Premier Mushrooms' growing rooms during the months of November through April in Pond 3, convey it to the process wastewater pond, and apply it to the LAAs to support rice straw decomposition. During wet weather months, the concrete slabs receive direct precipitation, which is currently collected in a concrete sump and lined pond for reuse in the composting operations. High precipitation events and expansion from 48 to 96 growing rooms (anticipated completion by 2016) would generate more wastewater than Premier could reuse in composting. Based on a 100-year 365-day return period, the Premier facility would generate approximately 2.2 mgal of storm water runoff at full build-out of 96 growing rooms. Approximately 1.9 mgal of storm water runoff would be generated during the months of November through April, which is approximately 4 percent of the water needed per 100 acres for rice decomposition during that period.

22. The quality of Premier's storm water runoff was characterized based on three samples collected within one or two days of a rain event from the concrete slab storm water drain pipe in 2012. The data are summarized below for select parameters:

	Premier Mushrooms' Storm Water Runoff Quality			
	Concentration, mg/L unless specified			
Constituents	**3/15/12**	**3/19/12**	**3/29/12**	**4/5/12**
BOD_5	70	240	30	100
FDS	840	1,640	1,630	1,690
TDS	1,290	2,540	1,890	2,320
Chloride	410	800	470	800
Sodium	--	170	230	150
Total Nitrogen	30	50	30	40

"--" denotes no data available.

Based on a 100-year 365-day return period, approximately 3.29 mgal of direct precipitation will be collected in Pond 3, which will further dilute the stored process wastewater.

23. CIP initially proposed that the WDRs allow the WWTP to accept process wastewater from a planned biomass combustion plant that is currently in the initial planning and permitting stages. As planned, the plant would utilize a 300,000 pound per hour boiler to generate electricity for the electric grid. This process would require a cooling tower/condenser that would generate wastewater. The estimated average daily wastewater outflow from the plant is 1,800 gpd, and the estimated peak daily outflow is 3,000 gpd. The biomass plant would discharge to the process wastewater pond (Pond 3), where the wastewater would be commingled with other process wastewaters prior to being applied to the LAAs.

    However, the Colusa County Department of Planning and Building Administration has not approved a Use Permit for the biomass combustion plant, which means that it is still possible that the design of the plant could change significantly. Though an initial evaluation of wastewater's volume and character indicates that CIP would have the capacity to accept wastewater from the plant without creating any significant threat to water quality, design changes could potentially alter this conclusion. Therefore, until the Colusa County Department of Planning and Building Administration approves a final design for the biomass plant and until the Board receives a RWD that characterizes the volume and character of the wastewater generated by the plant, the Board will prohibit CIP from accepting this waste stream.

24. As with the current WDRs, various other process wastewaters may be added as new tenants come in. Wastewater character and flows for each are unknown. However, the current LAAs have capacity for much higher wastewater flows and constituent loading.

25. The 2001 WDRs prescribe an average daily process wastewater flow of 3.4 mgd (for rice) and 4.1 mgd (for sudan grass) to the Davis Property. During the 2013 processing season from August to October, the daily wastewater flows ranged from 0 to 0.038 mgd, with the majority of the flows below 0.01 mgd. The Discharger's water balance demonstrates that similar wastewater flows to Pond 3 during the months of April and October and would not exceed the flow limits prescribed by the 2001 WDRs.

26. During the wet weather months of November through March, wastewater collected in Pond 3 will primarily be Premier's storm water, limited wet season industrial process wastewater flows from other facilities, and direct precipitation into the pond. The Discharger's water balance demonstrates that a total process wastewater flow of 2.05 mgal into Pond 3 during the months of November through March is a fraction of the total water demand for rice straw decomposition.

27. Based on agronomic best management practices, the crop-specific nitrogen requirements are summarized below:

Crop	Nitrogen Uptake, lbs/ac
Rice [1]	150 - 160
Sudan Grass [2]	200 - 400

[1] Includes growth and decomposition of rice, *"Long-term Studies Find Benefits, Challenges in Alternative Rice Straw Management",* Bird et al, California Agriculture, March – April 2002.

[2] Based on an average 70 lbs/ac per harvest cycle and two to five harvests per year.

28. A revised water balance for the domestic wastewater evaporation ponds was submitted on 18 March 2014. Based on a 100-year return period 365-day precipitation event, the water balance demonstrates that Pond 1 and Pond 2 have adequate capacity for an annual domestic wastewater influent flow of 1.51 mgal, which is equivalent to an average wastewater flow of 4,135gpd.

Site-Specific Conditions

29. The Industrial Park provides domestic and process water supply to its tenants from two onsite groundwater wells, Well 1 and Well 2. The water supply was analyzed for select constituents on 12 December 2013. A summary of the data is shown below.

	2013 Water Supply Quality	
Constituent	**Well 1**	**Well 2**
EC, umhos/cm	776	493
TDS, mg/L	470	330
Chloride, mg/L	114	16
Sodium	121	87
Nitrate nitrogen	< 0.1	< 0.1
Iron	0.13	0.11
Manganese	0.08	0.04

30. Two agricultural wells supply supplemental irrigation water to the LAAs. Wells CRC and Kalfsbeck are located north of Field 1A and the Davis Property Phase 1, respectively. Water sampled from these wells on 31 January 2014 was analyzed for TDS and nitrate nitrogen, as summarized in the table below:

	Supplemental Irrigation Water Quality, mg/L	
Constituent	**Well CRC**	**Well Kalfsbeck**
TDS, mg/L	750	2,410
Nitrate nitrogen, mg/L	0.4	< 0.4

31. The Industrial Park is located on gently sloping agricultural land at approximately 42 to 48 feet above sea level. The Sacramento River is located approximately 1.3 miles from the Industrial Park.

32. The Federal Emergency Management Agency floodplain map included in the RWD, shows the Industrial Park property in the 0.2 percent (or 500-year) Annual Hazard Flood Zone, and therefore outside the 100-year flood zone.

33. The surrounding land uses are agricultural, typically consisting of fields planted to rice, walnuts, tomatoes, and various other field crops. Based on data obtained from weather station Colusa 2 SSW, the 100-year return period annual precipitation is approximately 28.9 inches. Based on data obtained from the California Irrigation Management Information System Station No. 32, the annual average precipitation is approximately 17.1 inches and the reference evapotranspiration rate is approximately 52.3 inches per year.

Groundwater Conditions

34. Based on a site-specific soil investigation performed in 1983, the general soil conditions consist of the Colusa and Marvin Series. The soils are slightly to moderately alkaline, with low permeability, and comprised of poorly drained clay loam and clay soils.

35. Groundwater beneath the CIP site is relatively shallow, approximately 1 to 15 feet below ground surface, and generally flows towards the north. Nine groundwater monitoring wells monitor shallow groundwater: well MW-1 through MW-6 (installed before 1999), MW-7 and MW-8 (installed in 2002), and MW-9 and MW-10 (installed in 2004). MW-2 was abandoned in 2000 due to its proximity to the on-site irrigation canal. MW-4 is at the cross-gradient boundary of LAA Field 1A and is primarily influenced by agricultural lands that do not and will not receive any discharge; therefore is not suitable for use as a compliance monitoring well. MW-8 is located upgradient of the LAAs and is not suitable for use as a compliance monitoring well. MW-9 is at the cross-gradient boundary of the Davis Property Phase I LAAs and is not suitable for use as a compliance monitoring well until such time when wastewater is applied to the remaining Davis Property. Well locations are shown on Attachment B.

36. Groundwater has been monitored since just prior to the first application of process wastewater in certain monitoring wells. Pre-discharge groundwater quality was established for wells MW-1, MW-3, MW-4, MW-5, MW-6, MW-7, and MW-8 for TDS and nitrate nitrogen only as summarized in the table below.

	Average Pre-Discharge Groundwater Quality, mg/L unless specified						
Constituents	**MW-1**	**MW-3**	**MW-4**	**MW-5**	**MW-6**	**MW-7**	**MW-8**
TDS	1,410[1]	1,370[2]	2,160[3]	1,280[3]	1,000[3]	1,030[4]	3,330[4]
Nitrate Nitrogen	2.3[3]	1.4[3]	2.7[3]	4.6[3]	2.2[3]	0.5[4]	0.5[4]

[1] Data from February 1996 to July 1999.
[2] Data from August 1996 to July 1999.
[3] Data from March and July 1999.
[4] Data from April 2002 to December 2002.

These data show that pre-discharge groundwater quality was highly spatially variable between the wells. Based on the data above, groundwater TDS concentrations were typically high and in some wells exceeded the short-term level secondary MCL of

1,500 mg/L, indicating poor groundwater quality prior to any discharge. Pre-discharge TDS concentrations in MW-4 and MW-8 are particularly higher than those observed in the other wells. Pre-discharge nitrate nitrogen concentrations in all the wells were below 5 mg/L.

37. The Discharger continues to monitor groundwater quality. The groundwater monitoring data from 2008 through 2012 are summarized below for select constituents:

Monitoring Well	2008-2012 Average Groundwater Quality, mg/L					
	TDS	Na	Cl	Nitrate Nitrogen	Fe	Mn
MW-1	1,220	420	160	0.1	0.7	0.2
MW-3	1,240	500	270	4.2	0.1	0.01
MW-4	2,430	810	380	2.9	0.2	0.01
MW-5	1,470	460	140	16	0.1	0.4
MW-6	770	220	75	0.4	1.2	0.4
MW-7	1,290	210	190	0.1	0.3	0.2
MW-8	3,460	540	230	0.1	0.2	0.2
MW-9	3,310	810	240	0.2	0.1	0.02
MW-10	1,950	450	220	0.2	0.1	0.3
WQO	**450 [1] – 1,500 [4]**	**69 [1]**	**106 [1]- 250 [3]**	**10 [2]**	**0.3 [3]**	**0.05 [3]**

"WQO" denotes Water Quality Objective. "TDS" denotes total dissolved solids. "Na" denotes sodium. "Cl" denotes chloride. "Fe" denotes iron. "Mn" denotes manganese.

[1] Lowest agricultural water quality goal.
[2] Primary Maximum Contaminant Level.
[3] Secondary Maximum Contaminant Level.
[4] Secondary Maximum Contaminant Level range.

The historical groundwater monitoring data show that:

a. TDS. TDS concentrations have continued to be spatially variable and, for the most part, have been relatively constant over time in each well. TDS concentrations are typically high and in some cases exceed the short-term maximum secondary MCL of 1,500 mg/L, indicating poor quality groundwater. This is evident in wells MW-4, MW-8, MW-9, and MW-10 with TDS concentrations ranging from 2,000 to 3,500 mg/L. Although pre-discharge quality is unknown in wells MW-9 and MW-10, based on the limited wastewater discharges to the Davis Property, it appears that the existing TDS groundwater quality is naturally poor and not the result of the discharge.

b. Chloride. Chloride concentration trends are similar to those of TDS, which is a surrogate for all salinity constituents. Concentrations have been relatively constant over time with a few exceptions. Chloride concentrations in MW-3 and MW-4 indicate an upward trend beginning in 2008 and 2006, respectively. However, there have been no discharges to the adjacent LAAs in the last five years.

c. Nitrate nitrogen. Nitrate nitrogen has been relatively constant over time, with the exception of MW-5. Concentrations in MW-5 have exceeded the primary MCL of 10 mg/L since 2003. Because MW-5 is surrounded by the LAAs and pre-discharge concentrations were below 10 mg/L, it appears that groundwater at this single location has been degraded by the discharge.

d. Iron. Based on nature of typical food processing operations, the process wastewater is not expected to contain significant iron concentrations. However, excessive BOD loading rates can deplete oxygen, resulting in anoxic conditions that can solubilize naturally occurring metals in soil; therefore resulting in reducing conditions that favor dissolution of iron from native soil. In general, iron concentrations in groundwater have been spatially variable but relatively constant within each monitoring well, with a few exceptions. Iron concentrations in MW-1 exceeded the secondary MCL, which is 0.3 mg/L on two occasions in November 2008 and February 2009. Iron concentrations in MW-6 have consistently exceeded the secondary MCL for iron. However, MW-6 data does indicate a decreasing trend, with concentrations below the secondary MCL beginning in 2011. Analysis for iron began in 2004 after the first discharge to the LAAs. Based on the limited discharges, there appears to be no correlation with discharge activities and high iron concentrations observed in some of the compliance wells. Therefore, the high iron concentrations are likely naturally occurring and not the result of discharges to the LAAs.

e. Manganese. Similar to iron, the process wastewater is not expected to contain significant manganese concentrations. Current groundwater quality in MW-1, MW-5, MW-6, MW-7, MW-8, and MW-10 exceed 0.05 mg/L, the secondary MCL for manganese. Analysis for manganese began in 2004 after the first discharge to the LAAs. There appears to be no correlation with discharge activities and the high manganese concentrations observed in the compliance wells. Therefore, the high manganese concentrations are likely naturally occurring and not the result of the discharges to the LAAs.

Basin Plan, Beneficial Uses, and Regulatory Considerations

38. The *Water Quality Control Plan for the Sacramento River and San Joaquin River Basins,* Fourth Edition (hereafter Basin Plan) designates beneficial uses, establishes water quality objectives, contains implementation plans and policies for protecting waters of the basin, and incorporates by reference plans and policies adopted by the State Water Board. Pursuant to Water Code section 13263(a), waste discharge requirements must implement the Basin Plan.

39. Local drainage is to the Colusa Basin Drain. The beneficial uses of the Colusa Basin Drain, as stated in the Basin Plan, are municipal and domestic supply; agricultural supply; water contact recreation; non-contact water recreation; commercial and sport fishing; aquaculture; warm freshwater habitat; cold freshwater habitat; migration of aquatic organisms; spawning, reproduction, and/or early development; and wildlife habitat.

40. The beneficial uses of underlying groundwater as set forth in the Basin Plan are municipal and domestic supply, agricultural supply, industrial service supply and industrial process supply.

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

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

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

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

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

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

Antidegradation Analysis

47. State Water Resources Control Board Resolution 68-16 ("Policy with Respect to Maintaining High Quality Waters of the State") (hereafter Resolution 68-16) prohibits degradation of groundwater unless it has been shown that:

a. The degradation is consistent with the maximum benefit to the people of the state.

b. The degradation will not unreasonably affect present and anticipated future beneficial uses.

c. The degradation does not result in water quality less than that prescribed in state and regional policies, including violation of one or more water quality objectives, and

d. The discharger employs best practicable treatment or control (BPTC) to minimize degradation.

48. Degradation of groundwater by some of the typical waste constituents associated with discharges from food processing facilities, after effective source control, treatment, and control measures are implemented, is consistent with the maximum benefit to the people of the state. The Discharger aids in the economic prosperity of the community by direct employment of full-time and part-time personnel at the Industrial Park. In addition, the Discharger provides a needed service for a range of businesses and industries; including manufacturing, process, and distribution companies, as well as those that produce materials and equipment used at these businesses. The economic prosperity of valley communities and associated industry is of maximum benefit to the people of the State, and provides sufficient justification for allowing the limited groundwater degradation that may occur pursuant to this Order.

49. The Discharger has been monitoring groundwater quality at the site since 1999. Based on the data available, it is not possible to determine pre-1968 groundwater quality. Therefore, determination of compliance with Resolution 68-16 for this facility must be based on pre-discharge background groundwater quality established prior to discharge operations that began in 1999.

50. Constituents of concern that have the potential to degrade groundwater include salts (primarily TDS, sodium, and chloride), and nutrients, as discussed below:

Constituents	Average Concentrations, mg/L unless specified			Potential WQO
	Industrial Process Wastewater [1]	Pre-discharge Groundwater [2]	Current Groundwater [3]	
TDS	--	1,000 - 3,300	1,200 - 3,500	450 [4] -1,500 [7]
FDS	600	--	--	--
Sodium	160	--	200 - 800	69 [4]
Chloride	130	--	75 - 380	106 [4] – 600 [7]
Nitrate nitrogen	24 [8]	0.5 – 4.6	0.1 - 16	10 [5]
Iron	--	--	0.1 – 1.2	0.30 [6]
Manganese	--	--	0.01 – 0.4	0.05 [6]

"—"No data available.

[1] Flow-weighted average concentrations based on 2012 process wastewater quality from two seasonal seed processing facilities.
[2] Based on range of data prior to the first discharge to the LAAs from select wells MW-1, MW-3, MW-4, MW-5, MW-6, MW-7, and MW-8.
[3] Based on range of data during 2008 to 2012 from all wells MW-1, MW-3, MW-4, MW-5, MW-6, MW-7, MW-8, MW-9, and MW-10.
[4] Lowest agricultural water quality goal.
[5] Primary Maximum Contaminant Level.
[6] Secondary Maximum Contaminant Level.
[7] Secondary Maximum Contaminant Level range.
[8] Representative of total nitrogen, which is the best indicator of the potential for nitrate groundwater degradation.

a. **Total Dissolved Solids.** Since 2010, the process wastewater has been analyzed for FDS. The average wastewater FDS concentration is 600 mg/L, based on 2012 wastewater characteristics from two seasonal seed processing facilities. However, in previous years, the FDS concentration ranged from 500 to 900 mg/L, based on a single operating seasonal seed processing facility. Pre-discharge groundwater TDS concentrations were spatially variable and high, ranging from 1,000 to 3,300 mg/L. In some wells, pre-discharge concentrations exceeded the least stringent potential water quality objective for protection of MUN beneficial uses, which is the short-term maximum secondary MCL of 1,500 mg/L, indicating poor groundwater quality. This is true for groundwater in wells MW-4, MW-8, MW-9, and MW-10. Since discharge operations began, groundwater TDS concentrations have been fairly constant within each well. In the case of MW-4, TDS concentrations have increased in recent years, despite no discharges to adjacent LAAs in the last five years. As stated in Finding 36, MW-4 is not suitable for use as a compliance monitoring well.

   Because pre-discharge groundwater quality for TDS exceeds the water quality objective, the shallow groundwater at this site is considered not “high quality water”, and the Antidegradation Policy does not apply. Based on the limited discharges to the LAAs, and in some cases where the LAAs fields have not received any wastewater in the last five years, the spatial and temporal variability in the adjacent compliance wells is likely not due to the discharge. In consideration of the relatively low salinity of the wastewater and pre-discharge groundwater quality, it appears that the discharge does not pose a threat of degradation with respect to TDS. This Order does impose a numeric groundwater limitation for TDS and includes a performance-based FDS effluent limit that will not cause groundwater quality to get any worse.

b. **Sodium.** Pre-discharge groundwater sodium concentrations are unknown. The average sodium concentration in the process wastewater is 160 mg/L and sodium is known to be a key salinity constituent in food processing wastewater. The average groundwater sodium concentrations range from 200 to 800 mg/L, which exceeds the most stringent potential water quality objective for sodium, the agricultural water quality goal of 69 mg/L. However, that goal is intended to

protect the most salt sensitive crops, such as beans, nuts, and deciduous fruits. There is a taste and odor threshold for sodium, which ranges from 300 to 600 mg/L. Groundwater sodium concentrations that exceed the taste and odor threshold are observed in MW-1, MW-3, MW-5, MW-8, MW-9, and MW-10.

For the most part, groundwater quality data from 2005 through 2012 show increasing sodium concentrations in all the wells with the exception of MW-7, MW-8, and MW-9, which are located along the perimeter of the Davis Property Phase 1. Based on the small volumes of wastewater generated each processing season, only a few acres of a specified LAA field have been irrigated with wastewater. Between 2008 and 2012, wastewater discharges occurred on LAA Fields 2 North, 2 South, and 3B. Approximately 0.5 to 2.2 inches of wastewater have been applied on these fields. The compliance wells that show increases in sodium concentrations are not adjacent to the LAAs that have received wastewater. Therefore, it appears that the discharge does not pose a threat of degradation with respect to sodium. This Order does impose a numeric groundwater limitation for sodium and includes a performance-based FDS effluent limit that will effectively restrict the sodium concentration of the process wastewater so that the discharge will not cause groundwater quality to get any worse.

c. **Chloride.** Pre-discharge groundwater chloride concentrations are unknown. Chloride concentrations in shallow groundwater at the site are spatially variable, ranging from 75 to 375 mg/L. Chloride concentrations have been fairly constant over time and below the secondary MCL of 250 mg/L within each well with a few exceptions. MW-3 groundwater data from 2009 and 2012 indicate elevated chloride concentrations that exceed 250 mg/L. MW-3 is located downgradient of LAA Field 4 north, which has not received wastewater in the last five years. MW-4 groundwater data from 2004 and 2012 indicate an increasing trend with concentrations in the upwards of 400 mg/L. However, MW-4 is not suitable for use as a compliance monitoring well. Chloride concentrations in the process wastewater range from 100 to 150 mg/L.

It appears that there is no correlation between discharge activities and chloride concentrations observed in some of the compliance wells. Therefore, the discharge does not pose a threat of degradation with respect to chloride. This Order does impose a numeric groundwater limitation for chloride and includes a performance-based FDS effluent limit that will effectively restrict the chloride concentration of the process wastewater so that the discharge will not cause groundwater quality to get any worse.

d. **Nitrate.** For nutrients such as nitrate, the potential for groundwater degradation depends on wastewater quality; crop uptake, and the ability of the vadose zone below the LAAs to support nitrification and denitrification to convert the nitrogen to nitrogen gas before it reaches the water table. Most of the nitrogen in the

process wastewater is present as TKN, which can readily mineralize and convert to nitrate (with some loss via ammonia volatilization) in the LAAs. The average total nitrogen concentration in the process wastewater is 24 mg/L. Pre-discharge nitrate nitrogen concentrations in shallow groundwater were spatially variable, ranging from 0.5 to 5.0 mg/L and do not exceed the primary MCL for nitrate, which is 10 mg/L. Groundwater nitrate nitrogen concentrations have been relatively constant, with the exception of MW-5, which has exhibited concentrations exceeding the primary MCL since 2003. Because MW-5 is surrounded by land application areas, it appears that the discharge is the only potential source of this limited pollution.

This Order requires that nutrients associated with the wastewater and other sources be applied to the LAAs at rates consistent with crop demand, and prohibits any statistically significant increase in groundwater nitrate concentrations due to the discharge. The provisions of this Order require best practicable treatment and control measures.

e. **Manganese**. The current monitoring program does not require analysis of manganese in wastewater. Based on the character of the process water supply and nature of food processing operations, wastewater at the site is not expected to contain significant manganese concentrations. However, excessive BOD loading rates can deplete oxygen, resulting in anoxic conditions that can solubilize naturally occurring metals in soil. Groundwater monitoring for manganese began in 2004 after discharge operations began. Groundwater manganese concentrations are spatially and temporally variable. Average manganese concentrations in MW-1, MW-5, MW-6, MW-7, MW-8, and MW-10 exceed the secondary MCL of 0.05 mg/L. An increasing trend is observed in MW-7, MW-8, and MW-10. However, these wells are located along the perimeter of the Davis Property Phase 1, which has not received any wastewater since 2003. Although pre-discharge quality is unknown, based on limited discharge activity, including low wastewater application rates (0.5 to 2 in/ac), and low BOD loading rates (10 to 55 lbs/ac/day), it appears unlikely that the discharge caused or contributed to the high groundwater manganese concentrations.

It appears that there is no correlation with discharge activities and manganese concentrations observed in some of the compliance wells. Therefore, the discharge does not pose a threat of degradation with respect to manganese. This Order does impose a numeric groundwater limitation for manganese and includes BOD effluent and mass loading limits that will effectively prevent reducing conditions so that the discharge will not cause groundwater quality to get any worse.

f. **Iron.** The current monitoring program does not require analysis of iron in wastewater. Based on the character of process water supply and nature of food

processing operations, wastewater at the site is not expected to contain significant iron concentrations. However, excessive BOD loading rates can deplete oxygen, resulting in anoxic conditions that can solubilize naturally occurring metals in soil. Groundwater monitoring for iron began after the first discharge. In general, groundwater iron concentrations have been relatively constant and below the secondary MCL of 0.3 mg/L with the exception of MW-6. MW-6 is located approximately 1,000 feet downgradient of the nearest land application area, Field 3B, which has received wastewater in 2010 and 2011. Although iron concentrations in MW-6 have generally been high since the first sampling event; groundwater data does indicate a decreasing trend. More recent data indicate concentrations below the secondary MCL beginning in mid-2011.

Similar to iron, it appears that there is no correlation with discharge activities and high iron concentrations observed in the compliance wells. Therefore, the discharge does not pose a threat of degradation with respect to iron. This Order does impose a groundwater limitation for iron and includes BOD effluent and mass loading limits that will not cause groundwater quality to get any worse.

51. Due to the spatial variability of groundwater quality below the facility, the numeric Groundwater Limitations of this Order were established based on groundwater data from wells MW-7 through MW-10, which are located around the Davis Property Phase I LAAs. Wastewater was only applied to those LAAs during the 2003 processing season and no wastewater discharges have taken place since then. Additionally, all four wells are upgradient of the LAAs that have been regularly used. These data were therefore used as representative of background groundwater to establish numeric limits. All data from these well locations were analyzed together to determine a 95 percent upper tolerance limit (UTL) for specific constituents of concern as shown in the table below. Non-detects were substituted using a random number less than the detection limit. Outliers were determined using the modified Thompson Tau technique, a statistical method for deciding whether to keep or discard suspected outliers in a sample of a single variable. A normality test using the Shapiro-Wilk test was used to determine if the data set is well-modeled by a normal distribution. This test showed that the data were not normally distributed (except for iron); therefore it is appropriate to set site-specific groundwater limitations at either the nonparametric 95 percent UTL or the water quality objectives set forth in the Basin Plan, whichever is greater. The calculated 95 percent UTL values are tabulated below.

Constituent	Units	95 Percent Upper Tolerance Limit
TDS	mg/L	4,080
Chloride	mg/L	290
Sodium	mg/L	980
Iron	mg/L	0.23[1]
Manganese	mg/L	0.39

[1] Parametric UTL

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

    For TDS, chloride, sodium, manganese, and iron, current groundwater monitoring data indicates that groundwater is not high quality water and therefore the Antidegradation Policy does not apply to these constituents. However, the requirements of this Order require the Discharger to implement best efforts, which will prevent further degradation of groundwater quality due to the discharge

    For nitrate, current groundwater monitoring data indicates that the discharge has caused (or contributed to) exceedance of a water quality objective in MW-5. The provisions of this Order require that the Discharger implement BPTC and contain a time schedule to bring the discharge into compliance with water quality objectives.

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

    a. Screening to reduce the BOD concentration of food processing wastewater;

    b. HDPE lined ponds for both process and domestic wastewater;

    c. Nitrogen and BOD loading rate control for the LAAs;

    d. Up to 600 acres of LAAs available for industrial process wastewater disposal; and

    e. Tailwater return and recovery systems to recycle the wastewater within each designated LAA.

    With respect to nitrate nitrogen, an unacceptable degree of groundwater degradation has occurred in the limited area monitored by MW-5. Therefore, this Order does not authorize any continued degradation beyond that which exists today in that well. The Groundwater Limitations are effective immediately and allow no degradation beyond existing groundwater quality in any compliance monitoring well and this Order requires intra-well analysis of compliance well groundwater monitoring data to determine compliance with the Groundwater Limitations. If groundwater quality in MW-5 with respect to nitrate is not significantly improved within **five** years of adoption of this Order, the Provisions require that the Discharger implement additional treatment or control as necessary to bring the discharge into compliance with the Basin Plan water quality objective.

54. This Order imposes effluent and mass loading rate limitations to ensure that the highest water quality consistent with the maximum benefit to the people of the State will be achieved. Based on the existing record, the discharge authorized by this Order is consistent with the antidegradation provisions of Resolution 68-16 and the

controllable factors policy to the extent that each is applicable.

Other Regulatory Considerations

55. In compliance with Water Code section 106.3, it is the policy of the State of California that every human being has the right to safe, clean, affordable, and accessible water adequate for human consumption, cooking, and sanitary purposes. This order promotes that policy by requiring discharges to meet maximum contaminant levels designed to protect human health and ensure that water is safe for domestic use.

56. Title 27 of the California Code of Regulations (hereafter Title 27) contains regulatory requirements for the treatment, storage, processing, and disposal of solid waste. However, Title 27 exempts certain activities from its provisions. Discharges regulated by this Order are exempt from Title 27 pursuant to provisions that exempt domestic sewage, wastewater, and reuse. Title 27, section 20090 states in part:

> The following activities shall be exempt from the SWRCB-promulgated provisions of this subdivision, so long as the activity meets, and continues to meet, all preconditions listed:
>
> (a) Sewage - Discharges of domestic sewage or treated effluent which are regulated by WDRs issued pursuant to Chapter 9, Division 3, Title 23 of this code, or for which WDRs have been waived, and which are consistent with applicable water quality objectives, and treatment or storage facilities associated with municipal wastewater treatment plants, provided that residual sludges or solid waste from wastewater treatment facilities shall be discharged only in accordance with the applicable SWRCB-promulgated provisions of this division.
>
> (b) Wastewater - Discharges of wastewater to land, including but not limited to evaporation ponds, percolation ponds, or subsurface leach fields if the following conditions are met:
>
> (1) the applicable RWQCB has issued WDRs, reclamation requirements, or waived such issuance;
>
> (2) the discharge is in compliance with the applicable water quality control plan; and
>
> (3) the wastewater does not need to be managed according to Chapter 11, Division 4.5, Title 22 of this code as a hazardous waste…

57. The discharge authorized herein, and the treatment and storage facilities associated with the discharge, are exempt from the requirements of Title 27. The domestic wastewater ponds are exempt pursuant to Title 27, section 20090(a) because they are facilities associated with a discharge of domestic sewage regulated under waste discharge requirements.

The process wastewater pond and LAAs are exempt pursuant to Title 27, section 20090(b) because they are discharges of wastewater to land and:

a. The Central Valley Water Board is issuing WDRs;

b. This Order prescribes requirements that will ensure compliance with the Basin Plan; and

c. The wastewater discharged to the LAAs does not need to be managed as hazardous waste.

58. The U.S. EPA published *Statistical Analysis of Groundwater Monitoring Data at RCRA Facilities, Unified Guidance* (hereafter "Unified Guidance") in 2009. As stated in the Unified Guidance, the document:

> …is tailored to the context of the RCRA groundwater monitoring regulations … [however, t]here are enough commonalities with other regulatory groundwater monitoring programs … to allow for more general use of the tests and methods in the Unified Guidance… Groundwater detection monitoring involves either a comparison between different monitoring stations … or a contrast between past and present data within a given station… The Unified Guidance also details methods to compare background data against measurements from regulatory compliance points … [as well as] techniques for comparing datasets against fixed numerical standards … [such as those] encountered in many regulatory programs.

The statistical data analysis methods in the Unified Guidance are appropriate for determining whether the discharge complies with Groundwater Limitations of this Order.

59. The State Water Board adopted Order 97-03-DWQ (NPDES General Permit CAS000001) specifying waste discharge requirements for discharges of storm water associated with industrial activities, and requiring submittal of a Notice of Intent by all affected industrial dischargers. The Discharger is exempt from coverage under NPDES General Permit CAS000001. However, the Discharger's tenants are required to obtain coverage under the NPDES General Permit CAS000001 based on their Standard Industrial Classification (SIC) codes.

60. Water Code section 13267(b) states:

> In conducting an investigation specified in subdivision (a), the regional board may require that any person who has discharged, discharges, or is suspected of discharging, or who proposes to discharge within its region … 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.

The technical reports required by this Order and the attached Monitoring and Reporting Program R5-2014-_____ are necessary to ensure compliance with these waste discharge requirements. The Discharger owns and operates the facility that discharges the waste subject to this Order.

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

62. On 27 October 1999, Colusa County Department of Planning and Building approved a Negative Declaration for the proposed expansion of 575 acres known as the Davis property as a land treatment area for industrial process wastewater to Colusa Industrial Properties in accordance with the provisions of the California Environmental Quality Act (CEQA)(Pub. Resources Code, § 21000 et seq.) and the State CEQA Guidelines.

63. On 7 August 2000, Colusa County Department of Planning and Building certified a Negative Declaration for the land application of increased flows of tomato processing wastewater generated at Colusa Industrial Properties in accordance with the provisions of CEQA.

64. On 11 June 2001, the Colusa County Planning Commission held a public hearing for the proposed amendment to the Use Permit clarifying the intent of the use of the Davis Property for the disposal of wastewater changing from disposal of tomato process wastewater to industrial process wastewater. Colusa County as Lead Agency determined that since a negative declaration had already been prepared and adopted, there is no substantive evidence in the record that would require a new environmental document.

65. The action to adopt revised waste discharge requirements for this existing facility is exempt from the provisions of the California Environmental Quality Act (CEQA), in accordance with the California Code of Regulations, title 14, section 15301 because this Order does not authorize any change in the discharge envisioned in the prior analyses other than the minor addition of limited rainy season discharges of process wastewater to LAAs for the purpose of rice straw decomposition.

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

Public Notice

67. All the above and the supplemental information and details in the attached Information Sheet, which is incorporated by reference herein, were considered in establishing the following conditions of discharge.

68. 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.

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

IT IS HEREBY ORDERED that Order 5-01-250 is rescinded and, pursuant to Water Code sections 13263 and 13267, CIP, its agents, successors, and assigns, in order to meet the provisions contained in Division 7 of the Water Code and regulations adopted hereunder, shall comply with the following:

A. Discharge Prohibitions

1. Discharge of wastes to surface waters or surface water drainage courses, including irrigation ditches outside the control of the Discharger, is prohibited.

2. Discharge of waste classified as 'hazardous', as defined in the California Code of Regulations, title 23, section 2510 et seq., is prohibited.

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

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

5. Discharge of toxic substances into the wastewater treatment system or land application areas such that biological treatment mechanisms are disrupted is prohibited.

6. Application of crop and food processing residual solids to the LAAs is prohibited unless and until the Executive Officer approves a *Residual Solids Management Plan* submitted pursuant to Provision I.2 of this Order.

7. Storage of residual solids from crop and food processing on areas not equipped with means to prevent storm water infiltration, or a paved leachate collection system, is prohibited.

8. Discharge of process wastewater to the domestic wastewater evaporation ponds is prohibited.

9. Discharge of domestic wastewater to the process wastewater storage pond, land application area or any surface waters is prohibited.

10. The Discharger is prohibited from accepting flows from the planned biomass plant.

B. Flow Limitations

1. **Effective immediately**, domestic flows to the domestic disposal Pond 1 shall not exceed the following limits:

Flow Measurement	Flow Limit
Average Daily Flow [1]	3,700 GPD
Annual Flow [2]	1.01 MG

[1] As determined by the total flow during the calendar month divided by the number of days in the month.
[2] As determined by the total flow during the calendar year.

2. **Effective on the date** of the Executive Officer's approval of the certification completion report for the installation of the HPDE liner in domestic disposal Pond 2, the total combined domestic flow to Ponds 1 and 2 shall not exceed the following limits:

Flow Measurement	Flow Limit
Average Daily Flow [1]	5,500 GPD
Annual Flow [2]	1.51 MG

[1] As determined by the total flow during the calendar month divided by the number of days in the month.
[2] As determined by the total flow during the calendar year.

3. Effective immediately, industrial process wastewater flows to Pond 3 from **1 November through 31 March** shall not exceed the following limits:

Flow Measurement		Flow Limit
Average Daily Influent Flow [1] to Pond 3		0.02 MGD

[1] As determined by the total flow during the calendar month divided by the number of days in that month.

4. **Effective immediately**, industrial process wastewater flows from Pond 3 to the land application areas from **1 April through 31 October** each year shall not exceed the following limits:

Flow Measurement		Flow Limit
Average Daily Flow [1] to the 118-acre LAAs		0.69 MGD
Average Daily Flow [1] to the Davis Property (cropped with rice)		4.10 MGD
Average Daily Flow [1] to the Davis Property (cropped with sudan grass)		3.40 MGD

[1] As determined by the total flow during the calendar month divided by the number of days in that month.

C. Effluent and Mass Loading Limitations

1. Process wastewater applied to the LAAs cropped with rice shall not exceed the following effluent and mass loading limits:

Constituent	Units	Annual Maximum
Average FDS Concentration	mg/L	960 [1]
Average BOD Concentration	mg/L	100 [2]
Total Nitrogen Mass Loading	lb/ac/year	Crop Demand

[1] Flow-weighted annual average based on total flow (from all sources including supplemental irrigation water) and concentration of blended wastewater discharged.
[2] Flow-weighted annual average based on total flow (from all sources including supplemental irrigation water) and concentration of blended wastewater discharged.

2. Process wastewater applied to the LAAs cropped with sudan grass or row crops shall not exceed the following effluent and mass loading limits:

Constituent	Units	Cycle Average	Annual Maximum
Average FDS Concentration	mg/L	--	960 [1]
BOD Mass Loading	lb/ac/day	100	--
Total Nitrogen Mass Loading	lb/ac/year	--	Crop Demand

[1] Flow-weighted annual average based on total flow (from all sources including supplemental irrigation water) and concentration of blended wastewater discharged.

3. Compliance with the above requirements shall be determined as specified below:

   a. For all LAAs, the flow-weighted annual average FDS concentration shall be calculated using the following formula:

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

   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 LAAs during calendar month *i* in million gallons

   V_{Si} = Volume of supplemental irrigation water applied to LAAs during calendar month *i* in million gallons (considering each supplemental source separately)

   b. For LAAs cropped with rice, the flow-weighted annual average BOD concentration shall be calculated using the following formula:

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

   Where: C_a = Flow-weighted average annual BOD concentration in mg/L

   $_i$ = the number of the month (e.g., January = 1, February = 2, etc.)

   C_{Pi} = Monthly average process wastewater BOD concentration for calendar month *i* in mg/L

   C_{Si} = Monthly average supplemental irrigation water BOD concentration for calendar month *i* in mg/L (considering each supplemental source separately)

   V_{Pi} = Volume of process wastewater applied to LAAs during calendar month *i* in million gallons

V_{Si} = Volume of supplemental irrigation water applied to LAAs during calendar month *i* in million gallons (considering each supplemental source separately)

c. For LAAs cropped with sudan grass or row crops, the mass of BOD applied to each LAA as an irrigation cycle average shall be calculated using the following formula:

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

Where:
M = mass of BOD applied to a LAA in lb/ac/irrigation cycle
C = concentration of BOD in mg/L based on the most recent wastewater monitoring results
V = volume of wastewater applied to the LAA field in millions of gallons per day during the irrigation cycle
A = area of the LAA field irrigated in acres
CT = Cycle time (i.e., irrigation cycle length in days)
M_x = BOD mass from other sources (e.g., cattle manure, residual solids, etc.) in ponds
8.345 = unit conversion factor

d. For all LAAs, the mass of total nitrogen applied to each LAA field on an annual basis shall be calculated using the following formula and compared to published crop demand for the crops actually grown within that field:

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

Where:
M = mass of nitrogen applied to LAA in lb/ac/yr
C_i = Monthly average concentration of total nitrogen for month *i* in mg/L
V_i = volume of wastewater applied to the LAA during calendar month *i* in million gallons
A = area of the LAA irrigated in acres
i = the number of the month (e.g., January = 1, February = 2, etc.)
M_x = nitrogen mass from other sources (e.g., fertilizer and compost) in pounds
8.345 = unit conversion factor

D. Discharge Specifications

1. No waste constituent shall be released, discharged, or placed where it will be released or discharged, in a concentration or in a mass that causes violation of the Groundwater Limitations of this Order.

2. The discharge shall not cause degradation of any water supply.

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

4. The discharge shall remain within the permitted waste treatment/containment structures and land application areas at all times.

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

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

7. 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.

8. As a means of discerning compliance with Discharge Specification D.7, 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 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 Regional Water Board in writing within 10 days and shall include a specific plan to resolve the low DO results within 30 days.

9. 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.

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

11. On or about **1 October** of each year, available capacity shall at least equal the volume necessary to comply with Discharge Specifications D.9 and D.10.

12. 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.

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

14. Wastewater contained in any unlined pond shall not have a pH less than 6.0 or greater than 9.0.

15. The Discharger shall monitor sludge accumulation in each domestic wastewater disposal pond at least every five years beginning in **2019** and shall periodically remove sludge as necessary to maintain adequate storage capacity. Specifically, if the estimated volume of sludge in any pond exceeds ten percent of the permitted reservoir capacity, the Discharger shall complete sludge cleanout for that pond within **12 months** after the date of the estimate.

16. The Discharger shall monitor sludge accumulation in each process wastewater storage pond at least every five years beginning in **2019** and shall periodically remove sludge as necessary to maintain adequate storage capacity. Specifically, if the estimated volume of sludge in any pond exceeds five percent of the permitted reservoir capacity, the Discharger shall complete sludge cleanout for that pond within **12 months** after the date of the estimate.

E. Groundwater Limitations

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

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

Constituent	Units	Maximum Allowable Concentration	Effective Dates
TDS	mg/L	4,080	• Effective immediately for all compliance wells.
Chloride	mg/L	290	• Effective immediately for all compliance wells.
Sodium	mg/L	980	• Effective immediately for all compliance wells.
Iron	mg/L	0.30	• Effective immediately for all compliance wells.
Manganese	mg/L	0.39	• Effective immediately for all compliance wells.
Nitrate nitrogen	mg/L	10	• Effective immediately for all compliance wells, except for Well MW-5. • Effective 30 December 2019 for Well MW-5.

2. Except as specified in Groundwater Limitation E.1 above, contain constituents in concentrations that exceed either the Primary or Secondary MCLs established in Title 22 of the California Code of Regulations.

3. Except as specified in Groundwater Limitation E.1 above, contain taste or odor-producing constituents, toxic substances, or any other constituents in concentrations that cause nuisance or adversely affect beneficial uses.

Compliance with these limitations shall be determined annually based on intra-well analysis of data from the monitoring wells specified in the Monitoring and Reporting Program, using approved statistical methods.

F. Land Application Area Specifications

1. Crops and vegetation shall be grown in each LAA that receives wastewater discharges.

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

3. The LAAs shall be managed to prevent breeding of mosquitoes. In particular:

   a. With the exception of LAAs cropped with rice, there shall be no standing water 48 hours after irrigation ceases

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 recycled water.

4. LAAs shall be designed, maintained, and operated to comply with the following setback requirements:

Setback Definition	Minimum Irrigation Setback (feet)
Edge of LAA to property boundary	25
Edge of LAA to manmade or natural surface water drainage course	25
Edge of LAA to domestic water supply well	100

5. Irrigation of the LAAs shall occur only when appropriately trained personnel are on duty.

6. LAAs shall be inspected as frequently as necessary to ensure continuous compliance with the requirements of this Order.

7. Any irrigation runoff (tailwater) shall be confined to the LAAs or returned to the industrial process wastewater storage pond and shall not enter any surface water drainage course or storm water drainage system.

8. Irrigation using process wastewater shall not be performed during rainfall or when the ground is saturated, except when applied for rice straw decomposition.

9. Discharge of storm water runoff from the LAAs to off-site land or surface water drainage courses is prohibited.

G. Crop and Food Processing Residual Solids Disposal Specifications

Sludge, as used in this document, means the solid, semisolid, and liquid organic matter removed from wastewater treatment, settling, and storage vessels or ponds. Solid waste refers to solid inorganic matter removed by screens and soil sediments from washing of unprocessed fruit or vegetables. Except for waste solids originating from meat processing, residual solids means organic crop or food processing byproducts such as culls, pulp, stems, leaves, and seeds that will not be subject to treatment prior to disposal or land application.

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

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

3. Upon the Executive Officer's approval of the *Residual Solids Management Plan* pursuant to Provision I.2, residual solids may be discharged to land in accordance with the Land Application Area Specifications of this Order.

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

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

H. Sewage Sludge Disposal Specifications

The following specifications apply to biosolids and domestic wastewater treatment sludge.

1. Sewage sludge shall be removed from the domestic wastewater evaporation ponds as needed to comply with this Order.

2. Sewage sludge removed from the domestic wastewater evaporation ponds shall be disposed of in a manner approved by the Executive Officer and consistent with Title 27, division 2. Removal for further treatment, disposal, or reuse at disposal sites (i.e., landfills, WWTFs, composting sites, soil amendment sites) operated in accordance with valid waste discharge requirements issued by a Regional Water Board will satisfy this specification.

I. Provisions

1. The following reports shall be submitted pursuant to Water Code section 13267 and shall be prepared as described in Provision I.9:

    a. By **1 May** each year, the Discharger shall submit a *Cropping Plan*. The plan shall identify the crops to be grown on the LAAs and how they will be managed such that use of the available cropland is maximized and the discharge complies with all requirements of this Order. The plan shall evaluate the effect of applying wastewater to the land application areas. The evaluation shall include a description of the irrigation schedule, water usage of recommended crops, quality of the wastewater application, evapotranspiration rates, infiltration

rates, planting/harvesting schedules, and the long term impact to soil. Loadings for the following shall be calculated for both the processing season and on an annual basis for each land application area field, and shall include all supporting calculations:

i. Hydraulic loading (gpd, inches/month), including evapotranspiration rates, wastewater flows, freshwater flows, and tailwater return;

ii. Maximum and average BOD_5 loadings (lbs/acre/day) using actual acreage and wastewater volumes applied on each day of discharge; and

iii. Nitrogen loading (lbs/acre/year) using actual acreage and wastewater volumes applied on each day of discharge, assuming no denitrification and including the use of any commercial fertilizers.

iv. Total dissolved solids (TDS) loading (lbs/ac/yr) using actual acreage and wastewater volumes applied on each day of discharge.

b. By **1 November 2014,** the Discharger shall submit a *Groundwater Limitations Compliance Assessment Plan*. The plan shall describe and justify the statistical methods used to evaluate compliance with the Groundwater Limitations of this Order for the compliance wells and constituents listed in the groundwater monitoring section of the Monitoring and Reporting Program. Compliance shall be determined annually based on an intra-well statistical analysis that conforms to the U.S. EPA Unified Guidance document cited in Finding 58 of this Order to compare monitoring data collected at each compliance well to the groundwater limitations of this Order.

c. By **1 December 2014**, the Discharger shall submit a *Wastewater Pond Design and Pond Liner Construction Quality Assurance (CQA) Plan.* The plan shall specify the final design of the new domestic wastewater pond and industrial wastewater storage pond and liner systems, including complete pond geometry, liner materials, liner thickness, seaming methods, and details of anchorage and typical penetrations. The CQA plan shall describe the specific construction quality assurance procedures and test methods that the Discharger proposes to ensure and verify that the liner subgrade preparation, installation and seaming will comply with the specifications; the entire liner is tested following installation to verify that all seams and liner penetrations are leak-free at the time of acceptance; and the entire liner is inspected for visible material defects and construction damage such as holes or tears prior to acceptance.

d. By **1 January 2015**, the Discharger shall submit a *Wastewater System Improvements Completion Report* that documents the construction of the domestic and industrial process wastewater ponds and installation of the pond liners, and certifies that the ponds are fully functional and ready to receive wastewater in compliance with the requirements of this Order. The report shall include final dimensions and liner specifications of the new domestic

evaporation pond and industrial wastewater storage pond and a *Liner Construction Quality Assurance (CQA) Report* that documents all construction observation, testing, and test results for the pond lining system.

e. By **1 March 2015**, the Discharger shall submit and implement a *Salinity Source Control Evaluation and Minimization Plan* to address the sources of salinity discharged to the wastewater treatment system. At a minimum, the plan shall meet the following requirements outlined in Water Code section 13263.3(d)(3):

   i. An estimate of all of the sources of pollutants contributing, or potentially contributing, to the loadings of salinity in the treatment plant influent including water supply, water softeners, and other residential, commercial and industrial salinity sources.

   ii. An analysis of the methods that could be used to prevent the discharge of salinity into the facility, including application of local limits to industrial or commercial dischargers regarding pollution prevention techniques, public education and outreach, or other innovative and alternative approaches to reduce discharges of the pollutant to the facility. The analysis shall also identify sources, or potential sources, not within the ability or authority of the Discharger to control.

   iii. An estimate of salinity load reductions that may be identified through the methods identified in Water Code section 13263.3(d)(3)(ii).

   iv. A plan for monitoring the results of the salinity pollution prevention program.

   v. A description of the tasks, costs, and time required to investigate and implement various elements in the salinity pollution prevention plan.

   vi. A statement of the Discharger's salinity pollution prevention goals and strategies, including priorities for short-term and long-term action, and a description of the Discharger's intended pollution prevention activities for the immediate future.

   vii. A description of the Discharger's existing salinity pollution prevention programs.

   viii. An analysis, to the extent feasible, of any adverse environmental impacts, including cross-media impacts or substitute chemicals that may result from the implementation of the pollution prevention program.

   ix. An analysis, to the extent feasible, of the costs and benefits that may be incurred to implement the pollution prevention program.

   x. Progress to date in reducing the concentration and/or mass of salinity in the discharge.

   xi. If this report is required, progress in implementation of the plan shall be reported each year in the Annual Monitoring Report required pursuant to Monitoring and Reporting Program R5-2014-____.

2. If the Discharger wishes to accept wastewater from the biomass combustion plant for application to the LAAs, the Discharger shall submit a Report of Waste Discharge (RWD) **at least 6 months prior to the planned application of biomass wastewater to the LAAs**. The RWD shall include a completed Form 200; a demonstration that the requirements of CEQA have been met by a lead agency; a characterization of the expected wastewater flows and quality; and a process wastewater flow schematic showing all of the biomass wastewater waste streams and daily flow rates. The biomass wastewater streams shall each be characterized with respect to total dissolved solids, total nitrogen, sodium, chloride, iron, manganese, and any other constituents that may be present. The RWD shall include a description and analysis demonstrating that the new wastewater source will not cause violation of this Order including the groundwater limitations. The Discharger may not accept wastewater from the biomass combustion plant for application to the LAAs unless and until the Board revises these WDRs, either by adding additional substantive provisions or by removing Prohibition 10, should additional modifications prove unnecessary to mitigate any threat to water quality.

3. If the Discharger wishes to apply crop and food processing residual solids to the LAAs, the Discharger shall submit a *Residual Solids Management Plan* to the Board's Executive Officer **at least 90 days prior to the planned application of residual solid waste to the LAAs**. The Plan shall describe the specific mass, BOD, and nitrogen loading rates, temporary storage, management and application practices, application area(s), and operational procedures that will be used to ensure that the land application of residual solids does not cause nutrient overloading, nuisance odors, or promote vector breeding. Consistent with Prohibition A.6 and Crop and Food Processing Residual Solids Disposal Specification G.3, the application of residual solids to LAAs is prohibited unless and until the Executive Officer provides written approval of this *Residual Solids Management Plan.*

4. At least **180 days** prior to any process wastewater pond sludge removal and disposal, the Discharger shall submit a *Process Wastewater Pond Sludge Cleanout Plan*. The plan shall include a detailed plan for sludge removal and disposal. The plan shall describe the phasing of the project, measures to be used to control runoff or percolate from the sludge if it will be dried on site, and a schedule that shows how all dried sludge will be removed from the site prior to the onset of the rainy season (1 October).

5. At least **180 days** prior to any domestic wastewater pond sludge removal and disposal, the Discharger shall submit a *Domestic Pond Sludge Cleanout Plan*. The plan shall include a detailed plan for sludge removal and disposal. The plan shall describe the phasing and schedule of the project that shows how the accumulated sludge will be removed and transported to an offsite permitted facility. The plan shall include the name of the hauling company and the facility that will receive the solids.

6. If groundwater monitoring indicates that the discharge is not in compliance with the Groundwater Limitations of this Order, then the Discharger shall submit an *Action Workplan* to the Board's Executive Officer **within 120 days of receiving notice that the Facility is out of compliance**. The *Action Workplan* must set forth a schedule for the Discharger to conduct a comprehensive technical evaluation of each component of the facility's waste treatment and disposal system along with proposals for additional treatment or control measures for each waste constituent that exceeds a Groundwater Limitation. The *Action Workplan* must not only provide for the evaluation of the ability of additional treatment or control measures to achieve compliance with the applicable groundwater limitation, but must also provide for the evaluation of the practicability of installing or implementing the additional treatment or control measure(s) and a time schedule under which those measure(s) could be installed or implemented. The schedule proposed in the *Action Workplan* shall not exceed one year. The Discharger must begin the evaluation delineated in the *Action Workplan* immediately upon the Executive Officer's approval of the workplan. The results of the studies conducted pursuant to the *Action Workplan* will be used by the Board to modify these WDRs or take other action, as appropriate, to ensure that discharges from the Facility comply with the Basin Plan on a time schedule that is as short as practicable.

7. If concentrations of nitrate-nitrogen in the wells specified in Groundwater Limitation E.1 have not decreased to levels below the respective water quality objectives by **30 December 2019**, the *Action Workplan* described in Provision 5 shall be submitted by **30 June 2020**.

8. A discharger whose waste flow has been increasing, or is projected to increase, shall estimate when flows will reach hydraulic and treatment capacities of its treatment, collection, and disposal facilities. The projections shall be made in January, based on the last three years' average dry weather flows, peak wet weather flows and total annual flows, as appropriate. When any projection shows that capacity of any part of the facilities may be exceeded in four years, the discharger shall notify the Central Valley Water Board by **31 January**.

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

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

11. The Discharger shall comply with Monitoring and Reporting Program (MRP) R5-2014-____, which is part of this Order, and any revisions thereto as ordered by the Executive Officer. The submittal dates of Discharger self-monitoring reports shall be no later than the submittal date specified in the MRP.

12. The Discharger shall comply with the "Standard Provisions and Reporting Requirements for Waste Discharge Requirements", dated 1 March 1991, which are attached hereto and made part of this Order by reference. This attachment and its individual paragraphs are commonly referenced as "Standard Provision(s)."

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

14. 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 includes adequate laboratory controls and appropriate quality assurance procedures. This provision requires the operation of back-up or auxiliary facilities or similar systems that are installed by the Discharger when the operation is necessary to achieve compliance with the conditions of this Order.

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

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

17. The Discharger shall report to the Central Valley Water Board any toxic chemical release data it reports to the State Emergency Response Commission within

15 days of reporting the data to the Commission pursuant to section 313 of the "Emergency Planning and Community Right to Know Act of 1986."

18. 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.

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

20. To assume operation as Discharger under this Order, the succeeding owner or operator must apply in writing to the Executive Officer requesting transfer of the Order. The request must contain the requesting entity's full legal name, the state of incorporation if a corporation, the name and address and telephone number of the persons responsible for contact with the Central Valley Water Board, and a statement. The statement shall comply with the signatory paragraph of Standard Provision B.3 and state that the new owner or operator assumes full responsibility for compliance with this Order. Failure to submit the request shall be considered a discharge without requirements, a violation of the 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.

21. A copy of this Order including the Monitoring and Reporting Program, Information Sheet, Attachments, and Standard Provisions, shall be kept at the discharge facility for reference by operating personnel. Key operating personnel shall be familiar with its contents.

22. 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, sections 2050 and following. The State Water Board must receive the petition by 5:00 p.m., 30 days after the date of this Order, except that if the thirtieth day following the date of this Order falls on a Saturday, Sunday, or state holiday, the petition must be received by the State Water Board by 5:00 p.m. on the next business day. Copies of the law and regulations applicable to filing petitions may be found on the Internet at:

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

or will be provided upon request.

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

_____
PAMELA C. CREEDON, Executive Officer

LLA: 050614