CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
CENTRAL VALLEY REGION

ORDER NO. R5-2009-0012-02
REQUIRING
CITY OF LIVE OAK
WASTEWATER TREATMENT PLANT
SUTTER COUNTY

TO CEASE AND DESIST
FROM DISCHARGING CONTRARY TO REQUIREMENTS

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

1. On 9 July 2004, the Central Valley Water Board adopted Waste Discharge Requirements (WDRs) Order No. R5-2004-0096, and Cease and Desist Order (CDO) No. R5-2004-0097 prescribing waste discharge requirements and compliance time schedules for the City of Live Oak (hereafter Discharger) Wastewater Treatment Plant (WWTP). The WDRs allow for a regulated discharge of 1.4 million gallons per day (mgd) of treated domestic wastewater to Reclamation District 777 Lateral Drain No. 1, which is tributary to Main Canal and the Sutter Bypass.

2. WDRs Order No. R5-2004-0096 includes limits for aluminum, ammonia, biochemical oxygen demand (BOD), copper, cyanide, diazinon, organochlorine pesticides, total coliform, total suspended solids (TSS), and turbidity as contained in Effluent Limitations Section B.2., which states in part:

Constituents	Units	Average Monthly	7-Day Median	Average Weekly	Average Daily	Instantaneous Maximum
BOD[1]	mg/l	10[2]	--	15[2]	20[2]	--
	lbs/day[3]	120	--	180	230	--
Total Suspended Solids	mg/l	10[2]	--	15[2]	20[2]	--
	lbs/day	120	--	180	230	--
Total Coliform Organisms	MPN/100 ml	--	2.2	--	--	23[4]
Organochlorine Pesticides	µg/l	--	--	--	--	ND[5]
Turbidity	NTU	--	--	--	2	5[6]

[1] 5-day, 20ºC biochemical oxygen demand (BOD)
[2] To be ascertained by a 24-hour composite
[3] Based upon a design treatment capacity of 1.4 mgd (*x* mg/l X 8.345 X 1.4 mgd = *y* lbs/day)
[4] The total coliform organisms concentration shall not exceed 23 MPN/100 ml more than once in any 30-day period. No sample shall exceed a concentration of 240 MPN/100 ml.
[5] The Non-Detectable (ND) limitation applies to each individual pesticide. No individual pesticide may be present in the discharge at detectable concentrations. The Discharger shall use EPA standard analytical techniques with the lowest possible detectable level for organochlorine pesticides with a maximum acceptable detection level of 0.05 µg/l.
[6] The turbidity shall not exceed 5 NTU more than 5 percent of the time within a 24-hour period. At no time shall the turbidity exceed 10 NTU.

Constituents	Units	Average Monthly	Average 4-Day	Average Daily	Average 1-Hour
Aluminum[1]	µg/l	71[2]	--	140[2]	--
	lbs/day[3]	0.83	--	1.7	--
Ammonia, Total (as N)	mg/l	Attachment B[5]	Attachment C[5]	--	Attachment D[5]
	lbs/day[4]			--	
Copper (total recoverable)	µg/l	Attachment F[2][6]	--	Attachment F[2][6]	--
	lbs/day[3]		--		--
Cyanide (total recoverable)	µg/l	4.3[2]	--	8.5[2]	--
	lbs/day[3]	0.050	--	0.10	--
Diazinon	µg/l	0.04	--	0.08	--
	lbs/day[3]	0.0005	--	0.001	--

[1] Acid-soluble or total
[2] To be ascertained by 24-hour composite
[3] Based upon a design treatment capacity of 1.4 mgd [*x* µg/l x (1 mg/1000 µg) x 8.345 x 1.4 mgd = *y* lbs/day]
[4] Based upon a design treatment capacity of 1.4 mgd (*x* mg/l X 8.345 X 1.4 mgd = *y* lbs/day)
[5] The mass limit (lb/day) for ammonia shall be equal to the concentration limit (from Attachments) multiplied by the design flow of 1.4 mgd and the unit conversion factor of 8.345 (see footnote 3 for equation).
[6] The mass limit (lbs/day) shall be equal to the concentration limit (from corresponding Attachment, for corresponding period) multiplied by the design flow of 1.4 mgd and the unit conversion factor of 8.345 and divided by 1000 µg/l per mg/l (see footnote 3 for equation).

3. WDRs Order No. R5-2004-0096 includes Effluent Limitations B.4., which states:

   "The arithmetic mean of 20˚C BOD (5-day) and of total suspended solids in effluent samples collected over a calendar month shall not exceed 15 percent of the arithmetic mean of the values for influent samples collected at approximately the same times during the same period (85 percent removal) by 1 April 2009."

4. WDRs Order No. R5-2004-0096 includes Effluent Limitations B.8., which states:

   "Wastewater shall be oxidized, coagulated, filtered, and disinfected, or equivalent treatment provided by 1 April 2009."

5. WDRs Order No. R5-2004-0096 included time schedules for achieving compliance with Effluent Limitations B.2. for BOD, TSS, total coliform organisms, turbidity, copper, and cyanide by 1 April 2009.

6. CDO No. R5-2004-0097 included a time schedule for achieving compliance with Effluent Limitations B.1. for aluminum, ammonia, diazinon, and organochlorine pesticides by 1 April 2009.

7. WDRs Order No. R5-2011-0034 includes Effluent Limitations IV.A.1.a, b, f, h through j, in part as follows:

Parameter	Units	Effluent Limitations				
		Average Monthly	Average Weekly	Maximum Daily	Instantaneous Minimum	Instantaneous Maximum
Biochemical Oxygen Demand 5-day @ 20°C	mg/L	10	15	20	--	--
	lbs/day[1]	120	180	230	--	--
Total Suspended Solids	mg/L	10	15	20	--	--
	lbs/day[1]	120	180	230	--	--
Ammonia, Total (as N)	mg/L	1.4	--	2.8	--	--
	lbs/day[1]	16	--	33	--	--
Aluminum, Total Recoverable	µg/L	260	--	750	--	--
Arsenic	µg/L	10	--	20.1	--	--
Dibromochloromethane	µg/L	0.41	--	0.82	--	--
Dichlorobromomethane	µg/L	0.56	--	1.2	--	--
Alpha BHC	µg/L	--	--	--	--	ND
4,4'-DDE	µg/L	--	--	--	--	ND
Alpha Endosulfan	µg/L	--	--	--	--	ND
Endrin Aldelhyde	µg/L	--	--	--	--	ND
Nitrate (as N)	mg/L	10	--	--	--	--
Total Trihalomethanes	µg/L	80	--	162	--	--

1 Based on an average dry weather flow of 1.4 mgd.

b. Percent Removal. The average monthly percent removal of 5-day biochemical oxygen demand (BOD_5) and total suspended solids (TSS) shall not be less than 85 percent

f. Total Coliform Organisms. Effluent total coliform organisms shall not exceed:

i. 2.2 most probable number (MPN) per 100 mL, as a 7-day median; and
ii. 23 MPN/100 mL, more than once in any 30-day period, and
iii. 240 MPN/100 mL, instantaneous maximum.

h. Iron. For a calendar year, the annual average effluent total recoverable iron shall not exceed 300 µg/L.

i. Manganese. For a calendar year, the annual average effluent total recoverable manganese shall not exceed 50 µg/L.

j. Aluminum. For a calendar year, the annual average effluent total recoverable aluminum shall not exceed 200 µg/L.

8. Section 13301 of the California Water Code (CWC) states in part, *"When a regional board finds that a discharge of waste is taking place or threatening to take place in violation of requirements or discharge prohibitions prescribed by the regional board or the state board, the board may issue an order to cease and desist and direct that those persons not complying with the requirements or discharge prohibitions (a) comply forthwith, (b) comply in accordance with a time schedule set by the board, or (c) in the event of a threatened*

violation, take appropriate remedial or preventative action. In the event of an existing or threatened violation of waste discharge requirements in the operation of a community sewer system, cease and desist orders may restrict or prohibit the volume, type, or concentration of waste that might be added to such system by dischargers who did not discharge into the system prior to the issuance of the cease and desist order. Cease and desist orders may be issued directly by a board, after notice and hearing,…."

9. Section 13267(b)(1) of the California Water Code provides that: *"In conducting an investigation specified in subdivision (a), the regional board may require that any person who has discharged, discharges, or is suspected of having discharged or discharging, or who proposes to discharge waste within its region, or any citizen or domiciliary, or political agency or entity of this state who has discharged, discharges, or is suspected of having discharged or discharging, or who proposes to discharge, waste outside of its region that could affect the quality of waters within its region shall furnish, under penalty of perjury, technical or monitoring program reports which the regional board requires. The burden, including costs, of these reports shall bear a reasonable relationship to the need for the report and the benefits to be obtained from the reports. In requiring those reports, the regional board shall provide the person with a written explanation with regard to the need for the reports, and shall identify the evidence that supports requiring that person to provide the reports."*

10. In accordance with California Water Code (CWC) Section 13385(j)(3), the Central Valley Water Board finds that the Discharger is not able to consistently comply with WDRs Order No. R5-2011-0034, Effluent Limitations IV.A.1. for aluminum, ammonia, alpha-BHC, BOD, 4,4'-DDE, dibromochloromethane, dichlorobromomethane, alpha endosulfan, endrin aldehyde, iron, manganese, nitrate, total coliform, and TSS. Additional time is necessary to finalize onsite plant upgrades. New time schedules are necessary in a CDO for aluminum, ammonia, alpha-BHC, BOD, 4,4'-DDE, dibromochloromethane, dichlorobromomethane, alpha endosulfan, endrin aldehyde, iron, manganese, nitrate, total coliform, and TSS. Effluent limitations for these constituents are new requirements that became applicable to the Orders after the effective waste discharge requirements adoption date and/or after 1 July 2000, for which new or modified control measures are necessary in order to comply with the limitation, and the new or modified control measures cannot be designed, installed, and put into operation within 30 calendar days.

11. Since the time schedules for completion of actions necessary to bring the waste discharge into compliance exceeds one year, this Order includes interim requirements and dates for their achievement.

12. The compliance time schedule in this Order includes interim effluent limitations for aluminum, ammonia, alpha-BHC, BOD, 4,4'-DDE, dibromochloromethane, dichlorobromomethane, alpha endosulfan, endrin aldehyde, iron, manganese, nitrate, total coliform organisms, and TSS. Interim effluent limitations typically consist of a daily effluent concentration derived using sample data provided by the Discharger demonstrating actual treatment plant performance. In developing the interim limitations, when there are ten sampling data points or more, sampling and laboratory variability is accounted for by establishing interim limits that are based on normally distributed data where 99.9% of the data points will lie within 3.3 standard deviations of the mean (*Basic Statistical Methods for*

Engineers and Scientists, Kennedy and Neville, Harper and Row). When there are less than ten sampling data points available, the *Technical Support Document for Water Quality- Based Toxics Control* (EPA/505/2-90-001) (TSD) recommends a coefficient of variation of 0.6 be utilized as representative of wastewater effluent sampling. The TSD recognizes that a minimum of ten data points is necessary to conduct a valid statistical analysis. The multipliers contained in Table 5-2 of the TSD are used to determine a daily limitation based on a long-term average objective. In this case, the long-term average objective is to maintain, at a minimum, the current plant performance level. Thus, when there are less than ten sampling points for a constituent, interim limitations are based on 3.11 times the maximum observed effluent concentration to obtain the daily interim limitation (TSD, Table 5-2). If the statistically-projected interim limitation is less than the maximum observed effluent concentration, the interim limitation is established as the maximum observed concentration. The following table summarizes the calculations of the daily maximum interim effluent limitations for these constituents:

Parameter	Units	MEC	Mean (x)	Std. Dev. (sd)	Formula Used	Interim Limitation Maximum Daily
Aluminum	µg/L	--	--	--	Previous CDO	7300
Ammonia	mg/L	--	--	--	Previous CDO	23.7
Alpha-BHC	µg/L	0.022	--	--	3.11*MEC	0.068
BOD	mg/L	--	--	--	Previous CDO	See Table Below
4,4'-DDE	µg/L	0.012	--	--	3.11*MEC	0.037
Dibromochloromethane	µg/L	4.2	3.6	0.67	3.11*MEC	13.1
Dichlorobromomethane	µg/L	28.2	21.7	7.24	3.11*MEC	87.7
Alpha-Endosulfan	µg/L	0.01	--	--	3.11*MEC	0.031
Endrin Aldeyhyde	µg/L	0.01	--	--	3.11*MEC	0.031
Iron	µg/L	1210	719.5	254.9	3.11*MEC	3763
Manganese	µg/L	43.2	36.9	7.13	3.11*MEC	134.4
Nitrate	mg/L	13.8	6.97	4.33	3.11*MEC	42.9
Total Coliform	MPN/100 ml	--	--	--	Previous CDO	See Table Below
TSS	mg/L	--	--	--	Previous CDO	See Table Below

13. Issuance of this Order is exempt from the provisions of the California Environmental Quality Act (Public Resources Code, Section 21000, et seq.) ("CEQA"), under Water Code Section 13389, since any adoption or modification of a NPDES Permit for an existing source is exempt and this order only serves to implement such a NPDES permit. This Order is also exempt from CEQA in accordance with Section 15321(a)(2), Title 14, California Code of Regulations. This Order is not subject to the limitations of Government Code section 65962.5(c)(3) [Cortese List] on use of categorical exemptions because it does not involve the discharge of "hazardous" materials as used in that statute, but rather involves the discharge of domestic sewage; and because the Cortese List exception was not intended to apply to cease and desist orders to existing facilities. In addition, adoption of this Order is not subject to CEQA because this Order does not have the potential to cause a significant impact on the environment (Title 14 CCR section 15061(b)(3)) as it is intended to enforce preexisting requirements to improve the quality of ongoing discharges that are part of the CEQA "baseline". Any plant upgrades or replacement are the result of WDRs Order No. R5-2011-0034 and not this Order.

14. Any person adversely affected by this action of the Central Valley Water Board may petition the State Water Resources Control Board (State Water Board) to review the action.

The petition must be received by the State Water Board Office of Chief Counsel, P.O. Box 100, Sacramento CA 95812-0100, within 30 days of the date in which the action was taken. Copies of the law and regulations applicable to filing petitions will be provided on request.

15. CWC section 13385(h) and (i) require the Central Valley Water Board to impose mandatory minimum penalties upon dischargers that violate certain effluent limitations. CWC section 13385(j) exempts certain violations from the mandatory minimum penalties. CWC section 13385(j)(3) exempts the discharge from mandatory minimum penalties "*where the waste discharge is in compliance with either a cease and desist order issued pursuant to Section 13301 or a time schedule order issued pursuant to Section 13300, if all the [specified] requirements are met…For the purposes of this subdivision, the time schedule may not exceed five years in length…*"

16. In accordance with CWC section 13385(j)(3), the Central Valley Water Board finds that, based upon results of effluent monitoring, the Discharger is not able to consistently comply with the new effluent limitations for BOD and TSS, aluminum, ammonia, alpha-BHC, 4,4'-DDE, dibromochloromethane, dichlorobromomethane, alpha-endosulfan, endrin aldehyde, iron, manganese, nitrate, and total coliform. The final effluent limitations for BOD, TSS, aluminum, ammonia, alpha-BHC, 4,4'-DDE, dibromochloromethane, dichlorobromomethane, alpha-endosulfan, endrin aldehyde, iron, manganese, nitrate, and total coliform are new, or more stringent, requirements included in Cease and Desist Order No. R5-2009-0012-02 and WDR Order No. R5-2011-0034, which become effective on 30 July 2011, and for which new or modified control measures are necessary in order to comply with the limitations, and the new or modified control measures cannot be designed, installed, and put into operation within 30 calendar days.

17. By statute, a Cease and Desist Order or Time Schedule Order may provide protection from MMPs for no more than five years. This Order provides protection from MMPs for the following constituents for the following periods:

    • BOD, Total Suspended Solids and Total Coliform Organisms: MMP protection began with adoption of CDO R5-2009-0012 on 5 February 2009. The effluent limits in WDRs Order R5-2011-0034 are the same as those in WDRs Order R5-2004-0096, and therefore MMP protection may not extend beyond the compliance date of this Order or 5 February 2014, whichever is shorter.

    • Ammonia: The effluent limits in WDRs Order R5-2011-0034 are lower than the limit in the previous Order. Therefore MMP protection begins with adoption of this Order on 10 June 2011 and may not extend beyond the compliance date of this Order or five years from adoption of Order No. R5-2009-0012-02, whichever is shorter.

    • Dibromochloromethane, Dichlorobromomethane, Iron, Manganese, and Nitrate. These constituents did not previously have MMP protection. Therefore MMP protection begins with adoption of this Order on 10 June 2011 and may not extend beyond the compliance date of this Order or five years from adoption of this Order, whichever is shorter.

18. By statute, a Cease and Desist Order or Time Schedule Order may provide protection from MMPs for no more than five years. This Order *does not* provide protection from MMPs for the following constituents:

    • Aluminum (CDO No. R5-2004-0097 provided almost five years to comply with the effluent limitation found in WDRs Order R5-2004-0096. The limitation in Order R5-2011-0034 is higher than the previous limit. Therefore the Discharger is not protected from MMPs for this constituent).

    • Alpha BHC, 4,4'-DDE, Alpha Endosulfan, and Endrin Aldelhyde (CDO No. R5-2004-0097 provided almost five years to comply with the effluent limitation found in WDRs Order R5-2004-0096 for organochlorine pesticides. The limitation in Order R5-2011-0034 is the same as the previous limit. Therefore the Discharger is not protected from MMPs for this constituent).

IT IS HEREBY ORDERED that CDO No.R5-2004-0097 is rescinded, and, pursuant to CWC section 13301:

1. The Discharger shall comply with the following time schedule to assure compliance with WDRs Order No. R5-2011-0034, Effluent Limitations IV.A.1, in part, for aluminum, ammonia, alpha-BHC, BOD, 4,4'-DDE, dibromochloromethane, dichlorobromomethane, alpha endosulfan, endrin aldehyde, iron, manganese, nitrate, total coliform, TSS, for 85 percent BOD and TSS removal, and the provisional requirement for Title 22 tertiary treatment, or equivalent:

Task	**Compliance Date**
Implement PPP[1]	**Ongoing**
Progress Reports[2]	**1 March and 1 September of each year**
Achieve full compliance with Effluent Limitations IV.A.1.a. for alpha BHC, alpha endosulfan, endrin aldehyde, and 4,4'-DDE.	**30 September 2012**
Achieve full compliance with Effluent Limitations IV.A.1.a., b., and f. for BOD, TSS, and total coliform, and implementation of Title 22 tertiary, or equivalent, treatment system.	**2 years from the effective date of this Order**
Achieve full compliance with Effluent Limitations IV.A.1.a. for dibromochloromethane and dichlorobromomethane.	**3 years from the effective date of this Order**
Achieve full compliance with Effluent Limitations IV.A.1.a., h., i., and j. for aluminum, ammonia, iron, manganese, and nitrate.	**5 years from the effective date of this Order**

[1] The Discharger shall implement new or existing Pollution Prevention Plans for all constituents listed in Provision 1 above and shall meet the requirements specified in California Water Code Section 13263.

[2] The progress reports shall detail steps implemented towards achieving compliance with waste discharge requirements, including construction progress regarding onsite WWTP improvements, whichever is applicable. The progress reports shall also evaluate the effectiveness of the implemented treatment and pollution prevention measures and assess whether additional measures are necessary to comply with final effluent limits.

2. For the compliance schedules required by this Order, the Discharger shall submit to the Central Valley Water Board on or before each compliance due date, the specified document or, if appropriate, a written report detailing compliance or noncompliance with the specific schedule date and task. If noncompliance is being reported, the reasons for such noncompliance shall be stated, and shall include an estimate of the date when the Discharger will be in compliance. The Discharger shall notify the Central Valley Water Board by letter when it returns to compliance with the time schedule.

3. The following interim effluent limitations for aluminum, ammonia, alpha-BHC, 4,4'-DDE, dibromochloromethane, dichlorobromomethane, alpha endosulfan, endrin aldehyde, iron, manganese, and nitrate shall be effective immediately, and shall remain in effect until the final compliance date, in accordance with Provision 1 above, or when the Discharger is able to come into compliance with the final effluent limitations, whichever is sooner.

Parameter	Average Daily Effluent Limitation
Aluminum	7300 µg/L
Ammonia	23.7 mg/L
alpha-BHC	0.068 µg/L
4,4'-DDE	0.037 µg/L
Dibromochloromethane	13.1 µg/L
Dichlorobromomethane	87.7 µg/L
alpha-Endosulfan	0.031 µg/L
Endrin Aldehyde	0.031 µg/L
Iron	3763 µg/L
Manganese	134.4 µg/L
Nitrate	42.9 mg/L

The following interim effluent limitations for BOD, Total Suspended Solids (TSS), and coliform shall be effective immediately, and shall remain in effect until the final compliance date, in accordance with Provision 1 above, or when the Discharger is able to come into compliance with the final effluent limitations, whichever is sooner.

Constituents	Units	Average Monthly	7-Day Median	Average Weekly	Average Daily	Instantaneous Maximum
BOD[1]	mg/l	45[2]	--	65[2]	90[2]	--
	lbs/day[3]	530	--	760	1,100	--
Total Suspended Solids	mg/l	70[2]	--	110[2]	140[2]	--
	lbs/day[3]	820	--	1300	1600	--
Total Coliform Organisms	MPN/100 ml	--	23	--	--	500

[1] 5-day, 20ºC biochemical oxygen demand (BOD)
[2] To be ascertained by 24-hour composite
[3] Based upon a design treatment capacity of 1.4 mgd [*x* µg/l x (1 mg/1000 µg) x 8.345 x 1.4 mgd = *y* lbs/day]

4. If, in the opinion of the Executive Officer, the Discharger fails to comply with the provisions of this Order, the Executive Officer may apply to the Attorney General for judicial enforcement or issue a complaint for Administrative Civil Liability.

5. Any person signing a document submitted under this Order shall make the following certification:

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

I, PAMELA C. CREEDON, Executive Officer, do hereby certify the foregoing is a full, true, and correct copy of an Order adopted by the California Regional Water Quality Control Board, Central Valley Region, on 24 April 2009 and as amended on 10 June 2011.

Original Signed by

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PAMELA C. CREEDON, Executive Officer