

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
CENTRAL VALLEY REGION

ORDER NO. R5-2004-0029

REQUIRING THE CITY OF MANTECA
WASTEWATER QUALITY CONTROL FACILITY
SAN JOAQUIN COUNTY
TO CEASE AND DESIST
FROM DISCHARGING CONTRARY TO REQUIREMENTS

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

1. On 19 March 2004, the Regional Board adopted Waste Discharge Requirements Order No. R5-2004-0028 prescribing waste discharge requirements for the City of Manteca, City of Lathrop, and Dutra Farms at the Manteca Wastewater Quality Control Facility (WQCF) in San Joaquin County. For the purposes of this Order, the City of Manteca is hereafter referred to as "Discharger".
2. WDRs, Order No. R5-2004-0028, contains Effluent Limitation Nos. B.1, B.2 and B.3. For the parameters listed below, the concentration limitations remain the same for B.1, B.2 and B.3, but the load limitations increase with increases in approved discharge rates. Effluent Limitation B.1 reads, in part, as follows:

"B. Effluent Limitations (Discharge to the San Joaquin River):

1. Effluent shall not exceed the following limits:

<u>Constituents</u>	<u>Units</u>	<u>Monthly Average</u>	<u>Daily Maximum</u>
Aluminum	ug/l	71	140
	lb/day ⁽¹⁾	4.1	8.1
Ammonia-N (June-Sept)	mg/l	2.1	4.4
	lb/day ⁽¹⁾	120	260
Ammonia-N (Oct-May)	mg/l	2.8	5.6
	lb/day ⁽¹⁾	160	320
Arsenic	ug/l	10	
	lb/day ⁽¹⁾	0.58	
Copper	ug/l	7.9	10.4
	lb/day ⁽¹⁾	0.46	0.60
Cyanide	ug/l	3.7	10
	lb/day ⁽¹⁾	0.21	0.58
Electrical Conductivity	umhos/cm	1000	--
Iron	ug/l	300	--
	lb/day ⁽¹⁾	17	--

CEASE AND DESIST ORDER NO. R5-2004-0029
 CITY OF MANTECA
 WASTEWATER QUALITY CONTROL FACILITY
 SAN JOAQUIN COUNTY

<u>Constituents</u>	<u>Units</u>	<u>Monthly Average</u>	<u>Daily Maximum</u>
Manganese	ug/l	50	--
	lb/day ⁽¹⁾	2.9	--
Nitrate	mg/l as N	10	--
	lb/day ⁽¹⁾	580	--
Nitrite	mg/l as N	1	--
	lb/day ⁽¹⁾	58	--
Methylene blue active Substances (MBAS)	ug/l	500	--
	lb/day ⁽¹⁾	29	--

⁽¹⁾ Based upon a permitted flow of 6.95 mgd.

3. CWC Section 13385(h) and (i) require the Regional 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.”
4. In accordance with California Water Code Section 13385(j)(3), the Regional Board finds that the Discharger is not able to consistently comply with the effluent limitations for aluminum, ammonia, arsenic, copper, cyanide, iron, manganese, MBAS, nitrate, nitrite, and electrical conductivity. The limitations are new requirements that become applicable after the effective date of adoption of the waste discharge requirements and after July 1, 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.

The effluent limitations specified in Order No. R5-2004-0028 for aluminum, ammonia, MBAS, nitrate, nitrite, and electrical conductivity are based on Basin Plan narrative objectives, and the effluent limitations for arsenic, copper, cyanide, iron and manganese are based on Basin Plan numeric objectives. As these limitations are based on existing Basin Plan water quality objectives that were adopted prior to 25 September 1995, compliance schedules for these effluent limitations must be placed in a Cease and Desist Order.

Facilities can be built to correct the violations that would otherwise be subject to mandatory penalties under CWC Section 13385(h) and (i). The Discharger can take reasonable measures to achieve compliance within five (5) years. Compliance with this Order exempts the Discharger from mandatory penalties for violations of effluent limitations for aluminum, ammonia, arsenic, copper, cyanide, iron, manganese, MBAS, nitrate, nitrite, and electrical conductivity only, in accordance with CWC Section 13385(j)(3).

Since the time schedule for completion of actions necessary to achieve full compliance exceeds one year, with the exception of the schedule for compliance with the ammonia limitations,

interim requirements and dates for their achievement are included in this Order. The time schedule does not exceed five years.

5. The interim limitations in this Order are based on the current treatment plant performance. In developing the interim limitation, where 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*). Therefore, the interim limitations in this Order are established as the mean plus 3.3 standard deviations of the available data. Where actual sampling shows an exceedance of the proposed 3.3-standard deviation interim limit, the maximum detected concentration has been established as the interim limitation. The interim limitations are summarized in the following table.

Interim Effluent Limitations

	Number of Samples	Max. Concentration	Mean Concentration	Standard Deviation	Max. Daily Limitation
Aluminum (ug/l)	12	350	150	91	450
Arsenic (ug/l)	12	14	12.5	1.0	16
Copper (ug/l)	12	13	9.0	1.9	15
Cyanide (ug/l)	12	31	7.0	8.0	33
Electrical Conductivity (umhos/cm)	18	1300	1099	119	1500¹
Iron (ug/l)	12	730	428	161	960
Manganese (ug/l)	11	120	43	36	160
MBAS (ug/l)	12	1800	618	451	2100
Nitrate (mg/l)	245	19	2.5	3.2	19
Nitrite (mg/l)	12	1.8	0.7	0.6	2.7

¹ Monthly average limitation

6. WDRs, Order No. R5-2004-0028, contains Effluent Limitation B.11 which reads as follows:

“The maximum temperature of the discharge shall not exceed the natural receiving water temperature by more than 20 degree F.”

7. WDRs, Order No. R5-2004-0028, contains Receiving Water Limitations which read, in part, as follows:

“The discharge shall not cause the following in the receiving water:”

“F.8. The creation of a zone, defined by water temperatures of more than 1° F above natural receiving water temperature, which exceeds 25 percent of the cross-sectional area of the river channel at any point.” and

“F.9. A surface temperature rise greater than 4° F above the natural temperature of the receiving water at any time or place”.

8. Temperature modeling studies published in the “*Draft Environmental Impact Report for the Manteca WQCF Phase III/IV Expansion Project, October 2000*” indicate that the current and expanded continuous discharge is in violation of Effluent Limitation B.11 and causes violations of Receiving Water Limitations F.8 and F.9. To mitigate the receiving water violations, the discharger proposes to implement a timed discharge, where the discharge will occur only on the outgoing tide. Modeling indicates that Receiving Water Limitation F.9 will continue to be exceeded with the timed discharge, but the magnitude of the violation will be less significant. To mitigate the violation of Effluent Limitation B.11, the Discharger has requested a 30-day averaging period for compliance.

The Discharge has requested an exception to the Thermal Plan, which would allow alternative effluent and receiving water limitations to be adopted that can be achieved. An exception cannot be authorized at this time due to a number of factors. First, the accuracy of the temperature model results which are the basis for the receiving water limitation violations are questionable due to a lack of site data to calibrate and validate the model, the lack of accounting for atmospheric heat gains and loss from the proposed holding pond and the river, the lack of accounting for tidal cycles and recirculation from the limited model run time, and the lack of accounting for the Brown Sand, Inc. discharge adjacent to the City’s discharge. Second, the Discharger has not conducted regular monitoring of temperature at the outfall as required in its previous permit, and the available information is based on a limited data set which correlates the temperature at the plant site and at the outfall. Third, the Discharger has not provided adequate evidence that a 30-day averaging period for Effluent Limitation B.11 will not cause adverse impacts to aquatic life. Finally, the Discharger does not currently have the capability to implement a timed discharge on out-going tides.

This Order includes a time schedule to (1) evaluate and implement alternatives to comply with the Thermal Plan or to clearly demonstrate that an exception to the Thermal Plan will not cause

adverse impacts to aquatic life and (2) develop the capability to implement a timed discharge. If, based on the information submitted, the Regional Board determines that an exception to the Thermal Plan is appropriate, this Order may be reopened and modified.

9. WDRs, Order No. R5-2004-0028, contains Receiving Water Limitations which reads as follows:

“The discharge shall not cause the following in the receiving water:”

“F.2. Oils, greases, waxes, or other materials to form a visible film or coating on the water surface or on the stream bottom.” and

“F.3. Oils, greases, waxes, floating material (liquids, solids, foams, and scums) or suspended material to create a nuisance or adversely affect beneficial uses.”

10. Foam has been observed on the receiving water on the surface of the plume formed by the discharge into the San Joaquin River. This is a violation of Receiving Water Limitations F.2 and F.3, and indicates a reasonable potential to violate Effluent Limitations B.1, B.2, and B.3 for MBAS. The Discharger was unable to achieve compliance with previous Receiving Water Limitations in Order No. 5-01-007. As a result, the Regional Board issued a Notice of Violation (NOV), dated 1 April 2003, to the Discharger for violations of Order No. 5-01-007. As the Discharger has not returned to full compliance with Order No. 5-01-007, and since Order No. R5-2004-0028 contains similar requirements to that in Order No. 5-01-007, the Discharger will be in immediate noncompliance with Order No. R5-2004-0028. A time schedule for compliance is included in the Cease and Desist Order.
11. 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, or in accordance with the procedure set forth in Section 13302.”
12. On 19 March 2004, in Sacramento, California, after due notice to the Discharger and all other affected persons, the Regional Board conducted a public hearing at which evidence was received to consider a Cease and Desist Order pursuant to California Water Code Section 13301 to establish a time schedule to achieve compliance with the waste discharge requirements in Order No. R5-2004-0028.

13. Issuance of this Order is exempt from the provisions of the California Environmental Quality Act (Public Resources Code Section 21000, et seq.), in accordance with California Water Code Section 15321 (a)(2), Title 14, of the California Code of Regulations.
14. Any person adversely affected by this action of the Regional Board may petition the State Water Resources Control Board to review this action. The petition must be received by the State Water Resources Control Board, Office of the Chief Counsel, P.O. Box 100, Sacramento, CA 95812-0100, within 30 days of the date on which this action was taken. Copies of the law and regulations applicable to filing petitions will be provided on request.

IT IS HEREBY ORDERED THAT:

1. The Discharger shall comply with the following time schedule to assure compliance with Effluent Limitations B.1, B.2, and B.3 for ammonia contained in Waste Discharge Requirements Order No. R5-2004-0028, as described in the above Findings.

<u>Task</u>	<u>Compliance Date</u>
Achieve Full Compliance	31 March 2004

2. The Discharger shall comply with the following time schedule to assure compliance with Effluent Limitations B.1 through B.3 for aluminum, arsenic, copper, cyanide, iron, manganese, MBAS, nitrate, and nitrite and Receiving Water Limitations F.2 and F.3 contained in Waste Discharge Requirements Order No. R5-2004-0028, as described in the Findings of this Order:

<u>Task</u>	<u>Compliance Date</u>	<u>Report Due</u>
Submit Implementation Schedule		1 September 2004
Submit Pollution Prevention Plan ¹		1 December 2004
Progress Reports ²		1 July and 1 January of each year
<u>Full Compliance</u>	1 February 2009	1 April 2009

¹ The Pollution Prevention Plan shall meet the requirements specified in California Water Code Section 13263.

² The progress reports shall detail what steps have been implemented towards achieving compliance with waste discharge requirements, including construction progress, evaluate the effectiveness of the implemented measures and assess whether additional measures are necessary to meet the time schedule.

The Discharger shall submit to the Regional Board on or before each compliance report 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, plus an estimate of the date when the Discharger will be in compliance. The Discharger shall notify the Regional Board by letter when it returns to compliance with the time schedule.

3. The Discharger shall comply with the following time schedule to assure compliance with Effluent Limitations B.1, B.2, and B.3 for electrical conductivity contained in Waste Discharge Requirements Order No. R5-2004-0028, as described in the Findings of this Order:

<u>Task</u>	<u>Compliance Date</u>	<u>Report Due</u>
Submit Implementation Schedule		1 July 2005
Submit Pollution Prevention Plan ¹		1 September 2005
Progress Reports ²		1 July and 1 January of each year 1 March 2009
<u>Full Compliance</u>	1 February 2009	

¹ The Pollution Prevention Plan shall meet the requirements specified in California Water Code Section 13263.

² The progress reports shall detail what steps have been implemented towards achieving compliance with waste discharge requirements, including construction progress, evaluate the effectiveness of the implemented measures and assess whether additional measures are necessary to meet the time schedule.

The Discharger shall submit to the Regional Board on or before each compliance report 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, plus an estimate of the date when the Discharger will be in compliance. The Discharger shall notify the Regional Board by letter when it returns to compliance with the time schedule.

4. The interim effluent limitations of this Order are effective immediately. The final water quality based effluent limitations for aluminum, arsenic, copper, cyanide, iron, manganese, MBAS, nitrate and nitrite will become effective on **1 February 2009**. The final water quality based effluent limitations for electrical conductivity will become effective on **1 February 2009**. The maximum daily limitations cited in Interim Effluent Limitations table below will be the enforceable interim limitations until that time.

	Max. Daily Limitation
Aluminum (ug/l)	450
Arsenic (ug/l)	16
Copper (ug/l)	15
Cyanide (ug/l)	33
Elect. Conductivity (umhos/cm)	1500¹
Iron (ug/l)	960

	Max. Daily Limitation
Manganese (ug/l)	160
MBAS (ug/l)	2100
Nitrate (mg/l)	19
Nitrite (mg/l)	2.7

¹ Monthly average limitation

5. The Discharger shall comply with the following time schedule to assure compliance with Effluent Limitation B.11 and Receiving Water Limitations F.8 and F.9 contained in Waste Discharge Requirements Order No. R5-2004-0028, as described in the Findings of this Order:

<u>Task</u>	<u>Compliance Date</u>	<u>Report Due</u>
Submit Plans and Implementation Schedule Progress Reports ¹		1 July 2004 1 July and 1 January of each year
Submit Thermal Plan Exception Report		1 October 2005
<u>Full Compliance</u>	1 February 2009	1 March 2009

¹ The progress reports shall detail what steps have been implemented towards achieving compliance with waste discharge requirements, including construction progress, evaluate the effectiveness of the implemented measures and assess whether additional measures are necessary to meet the time schedule.

The Discharger shall submit to the Regional Board on or before each compliance report 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, plus an estimate of the date when the Discharger will be in compliance. The Discharger shall notify the Regional Board by letter when it returns to compliance with the time schedule.

6. 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.

I, THOMAS R. PINKOS, 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 19 March 2004.

 THOMAS R. PINKOS, Executive Officer