California Regional Water Quality Control Board
Santa Ana Region

October 26, 2001

ITEM: **7**

SUBJECT: Amending Waste Discharge and Water Reclamation Requirements for Upland Hills Wastewater Reclamation Facility, Order No. 01-100.

DISCUSSION:

On August 25, 2000, the Regional Board adopted Order No. 00-31, prescribing waste discharge requirements for Upland Hills Wastewater Reclamation Facility for the discharge of treated wastewater to a landscape impoundment.

Order No. 00-31 requires the Upland Hills Wastewater Reclamation Facility to conduct effluent monitoring for turbidity and coliform organisms as stipulated in Monitoring & Reporting Program No. 00-31. Findings 11, 12, and 13 contained in the Order support the need for the effluent quality to be equivalent to tertiary treatment. However, limits for turbidity and coliform organisms were inadvertently omitted from Order No. 00-31.

Order No. 01-100 amends Order No. 00-31 by adding Discharge Specification B.4. Furthermore, due to recent changes in Title 22 - Water Recycling Criteria that became effective on December 20, 2000, Finding 11 of Order No. 00-31 is being revised and additional requirements are being added in the Water Reclamation Requirements of the Order.

RECOMMENDATION:

Adopt Order 01-100, as presented.

Comments were solicited from the following agencies:

State Water Resources Control Board, Office of the Chief Counsel – Jorge Leon
State Water Resources Control Board, Division of Water Quality – James Kassel
State Department of Water Resources - Glendale
State Department of Health Services - San Bernardino
San Bernardino County Department of Environmental Health Services – Scott Maass
San Bernardino County Department of Building and Safety – Leon Reed
San Bernardino County Flood Control and Water Conservation District – Naresh Varma
Orange County Water District – Nira Yamachika
Inland Empire Utilities Agency – Douglas Drury
Chino Basin Watermaster

California Regional Water Quality Control Board
Santa Ana Region

ORDER NO. 01-100

Amending Order No. 00-31
Waste Discharge and Water Reclamation Requirements
For the
Upland Hills Wastewater Reclamation Plant
San Bernardino County

The California Regional Water Quality Control Board, Santa Ana Region (hereinafter, Board), finds that:

1. On August 25, 2000, the Board adopted Order No. 00-31, prescribing Waste Discharge and Water Reclamation Requirements for Upland Hills Wastewater Reclamation Plant for the discharge of treated wastewater to a landscape impoundment.

2. Order No. 00-31 contains Findings 11, 12, and 13, which support the need for the effluent quality to be equivalent to tertiary treatment.

3. Turbidity and Coliform Organisms limits (based on Title 22 – Water Recycling Criteria) were inadvertently omitted from Order No. 00-31.

4. Order No. 00-31 needs to be revised to include effluent limits to assure that the effluent quality meets tertiary treatment standards.

5. In accordance with Water Code Section 13389, amending the waste discharge requirements for this discharge is exempt from those provisions of the California Environmental Quality Act contained in Chapter 3 (commencing with Section 21100), Division 13 of the Public Resources Code.

6. The Board has notified the discharger and other interested agencies and persons of its intent to amend waste discharge for the discharge and has provided them with an opportunity to submit their written views and recommendations.

7. The Board, in a public meeting, heard and considered all comments pertaining to the discharge.

IT IS HEREBY ORDERED THAT Order No. 00-31 be amended as follows:

1. Revise Finding 11, as follows:

    11. Article 3, Section 60305, of Title 22 Division 4, Chapter 3, "Water Recycling Criteria" of the California Code of Regulations specifies that recycled water used as a source supply for nonrestricted recreational impoundments shall be disinfected tertiary recycled water that has been subjected to conventional treatment. The degree of treatment specified represents an approximate 5-log reduction in the virus content of the water.

2. Add Discharge Specification B.4, as follows

4. The discharge shall at all times be a filtered and subsequently disinfected wastewater.

a. Filtered wastewater means an oxidized wastewater that meets either (1) or (2):

(1) Has been coagulated and passed through natural undisturbed soils or a bed of filter media pursuant to the following:

(a) At a rate that does not exceed 5 gallons per minute per square foot of surface area in mono, dual or mixed media gravity, upflow or pressure filtration systems, or does not exceed 2 gallons per minute per square foot of surface area in traveling bridge automatic backwash filters, based on peak dry weather design flow; and

(b) The turbidity of the filtered wastewater does not exceed any of the following:

i. An average of 2 Nephelometric Turbidity Unit (NTU) within any calendar day.

ii. 5 NTU more than 5 percent of the time within any calendar day; and

iii. 10 NTU at any time[1].

(2) Has been passed through a microfiltration, ultrafiltration, nanofiltration, or reverse osmosis membrane so that the turbidity of the filtered wastewater does not exceed any of the following:

(a) 0.2 NTU more than 5 percent of the time within any calendar day; and

(b) 0.5 NTU at any time.

b. Disinfected wastewater shall mean a filtered wastewater that has been disinfected and meets the following criteria:

(1) The filtered wastewater has been disinfected by either:

[1] See Provisions D.15

(a) A chlorine disinfection process following filtration that provides a CT (the product of total chlorine residual and modal contact time measured at the same point) value of not less than 450 milligram-minutes per liter at all times with a modal contact time of at least 90 minutes, based on peak dry weather design flow; or

(b) A disinfection process that, when combined with the filtration process, demonstrates inactivation and/or removal of 99.999 percent of the plaque-forming units of F-specific bacteriophage MS2, or polio virus in the wastewater. A virus that is at least as resistant to disinfection as polio virus may be used for purposes of the demonstration. Where ultraviolet (UV) disinfection is used for disinfection, UV disinfection shall deliver under worst operating conditions a minimum UV dose of 140 milli-watts seconds per square centimeter (mW-s/cm2) at maximum weekly flow and 100 mW-s/cm2 at peak flow (maximum day), unless otherwise approved by the Department of Health Services.

(1) The average weekly concentration of total coliform bacteria measured in the disinfected effluent shall not exceed an MPN of 2.2 per 100 milliliters. The average weekly concentration shall be evaluated using the median of the bacteriological results of the last seven days[2].

(2) The number of total coliform bacteria shall not exceed an MPN of 23 per 100 milliliters in more than one sample in any calendar month.

(3) The number of total coliform bacteria shall not exceed an MPN of 240 per 100 milliliters in any sample.

3. Add Water Reclamation Requirement 1, as follows:

1. Recycling of treated effluent wastewater is prohibited when any of the following conditions occur:

a. Failure of chlorination equipment.
b. Effluent total coliform MPN is greater than 240/100 milliliters.
c. Turbidity of treated effluent is greater than 10 NTU.
d. The chlorine contact time is less than 450 (mg-min)/l.

4. Add the following sub-paragraphs to Water Reclamation Requirement 3:

a. Use of recycled water by the discharger shall be consistent with the discharger's Rules and Regulations for Recycled Water Use.

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[2] See Provisions D.16

b. Any revisions made to the Rules and Regulations shall be subject to the review of the Regional Board, the State Department of Health Services, and the County of San Bernardino Department of Environmental Health. The revised Rules and Regulations or a letter certifying that the discharger's Rules and Regulations contain the updated provisions in this Order, shall be submitted to the Regional Board within 60 days of adoption of this Order by the Regional Board.

5. Renumber Water Reclamation Requirements numbers 1, 2, 3, and 4 of Order No. 00-31 to 2, 3, 4, and 6, respectively.

6. Add Provision D.15, as follows:

15. Exceedances of the "10 NTU at any time" turbidity requirement referenced in Discharge Specifications A.2.(1)(b)iii. shall not be considered a violation of these waste discharge requirements if such exceedance does not exceed a duration of one minute. The discharger shall not be considered to be in violation of this requirement if the apparent exceedance was caused by interference with, or malfunction of, the monitoring instrument. If the discharger is using a properly operating backup turbidimeter, the reading of the backup turbidimeter shall be considered in determining whether there has been an actual noncompliance.

7. Add Provision D.16, as follows:

16. Compliance with the weekly average total coliform limit shall be based on a running median of the test results from the previous 7 days. To comply with the weekly average limit, the 7-day median MPN must not exceed 2.2 per 100 milliliters on any day during the week. However, only one violation is recorded for each week, even if the 7-day median MPN value is greater than 2.2 for more than one day in the week.

8. Revise Effluent Monitoring D.2, as follows:

Constituent	Unit	Type of Sample	Minimum Frequency of Analysis
Flow	mgd	Recorder/Totalizer	Continuous
Turbidity (see note (1), below) Four-hour Results Daily Average Daily 95th Percentile	NTU[3]	"	See note (1), below
Coliform Organisms	MPN per 100 ml[4]	Grab	Daily (see note (2), below)

[3] NTU = Nephelometric Turbidity Units

[4] MPN/100mL = Most Probable Number per 100 milliliters

Constituent	Unit	Type of Sample	Minimum Frequency of Analysis
CT Value	Mg-min/l[5]	Calculation	Daily (see note (3), below)
BOD	mg/l	24-hour Composite	Weekly
PH	pH units	"	"
Suspended Solids	mg/l	"	"
Chloride	"	"	Monthly
Total Dissolved Solids	"	"	"
Sodium	"	"	"
Sulfate	"	"	"
Total Hardness	"	"	"
Total Inorganic Nitrogen	"	"	"
EPA Priority Pollutants (See Attachment "A")	µg/l	"	Annual

Notes:

(1) Turbidity analysis shall be continuous, performed by a continuous recording turbidimeter. Compliance with the daily average operating filter effluent turbidity shall be determined by averaging the levels of recorded turbidity taken at a minimum of four-hour intervals over a 24-hour period. The results of the daily average turbidity determinations shall be reported monthly.

(2) Samples for total coliform bacteria shall be collected at least daily. Samples shall be taken from the disinfected effluent.

(3) Compliance with CT requirements shall be determined daily based on low chlorine residual and/or peak flow.

9. All other conditions and provisions of Order No. 00-31 shall remain unchanged.

I Gerard J. Thibeault, Executive Officer, do hereby certify that the forgoing is a full, true, and correct copy of an order adopted by the California Regional Water Quality Control Board, Santa Ana Region, on October 26, 2001.

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Gerard J. Thibeault
Executive Officer

[5] Mg-min/L = Milligram-minute per Liter