

APPENDIX G

MONITORING AND REPORTING PROGRAM

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
LAHONTAN REGION

REVISED MONITORING AND REPORTING PROGRAM NO. 00-57
WDID NO. 6B190107069
FOR

LOS ANGELES COUNTY SANITATION DISTRICT NO. 20
AND CITY OF LOS ANGELES WORLD AIRPORTS
PALMDALE WATER RECLAMATION PLANT

Los Angeles County

The Dischargers shall be responsible for compliance with this Monitoring and Reporting Program as follows. Los Angeles County Sanitation Districts (LACSD) shall be responsible for compliance with monitoring and requirements I. A-E, I.H, and II.A-B. Los Angeles World Airports (LAWA) shall be responsible for compliance with monitoring and reporting requirements I.F-G.

I. MONITORING

A. Flow Monitoring

The following shall be recorded in a permanent log book:

1. The total volume, in millions of gallons (MGallons), of wastewater flow to the secondary treatment facilities for each day.
2. The total volume, in MGallons, of wastewater flow to the secondary treatment facilities for each month.
3. The maximum instantaneous flowrate, in MGallons/Day, of wastewater to the secondary treatment facilities that occurs each day.
4. The calculated average flowrate, in MGallons/Day, of wastewater to the secondary treatment facilities for each month.
5. The volume, in MGallons, of wastewater flow to the LAWA Irrigation Site for each month. Separate flow volumes shall be recorded for effluent disposed by landspreading (without crop growth) and for recycled water applied for irrigated agricultural purposes).
6. The calculated average flow rates, in MGallons/Day, of wastewater to the LAWA Irrigation Site for each month.
7. The freeboard (distance from the top of the lowest part of the dike to the wastewater surface in a pond) measured once each month in each pond. If the pond does not contain wastewater, indicate that it is empty.

B. Facility Influent Monitoring

Influent samples taken prior to the primary clarifiers shall be analyzed to determine the magnitude of the following parameters:

<u>Parameter</u>	<u>Units</u>	<u>Type of Sample</u>	<u>Frequency</u>
BOD ¹	mg/L	24-hour composite	Weekly
COD ³	mg/L	24-hour composite	Weekly
MBAS ²	mg/L	24-hour composite	Monthly
Nitrate Nitrogen	mg/L as N	24-hour composite	Monthly
Kjeldahl Nitrogen	mg/L as N	24-hour composite	Monthly
Ammonia Nitrogen	mg/L as N	24-hour composite	Monthly
Total Petroleum Hydrocarbons ⁵	µg/L	24-hour composite	Quarterly
Bromoform	µg/L	Grab	Semiannually
Chloroform	µg/L	Grab	Semiannually
Dibromochloromethane	µg/L	Grab	Semiannually
Dichlorobromomethane	µg/L	Grab	Semiannually
Total Dissolved Solids	mg/L	24-hour composite	Semiannually
Total Cyanides	µg/L	24-hour composite	Annually
Total Phenols	µg/L	24-hour composite	Annually
Purgeable Organics ⁶	µg/L	Grab ⁴	Annually
Base/Neutral Extractable Organics ⁶	µg/L	24-hour composite	Annually
Acid Extractable Organics ⁶	µg/L	24-hour composite	Annually
Heavy Metals ⁶	mg/L	24-hour composite	Annually

C. Facility Effluent Monitoring

Samples of the wastewater effluent from the treatment Facility shall be collected downstream of all treatment units and analyzed to determine the magnitude of the following parameters:

<u>Parameter</u>	<u>Units</u>	<u>Type of Sample</u>	<u>Frequency</u>
BOD ¹	mg/L	24-hour composite	Weekly
Total Suspended Solids	mg/L	24-hour composite	Weekly
COD ³	mg/L	24-hour composite	Weekly
Dissolved Oxygen	mg/L	Grab ⁴	Weekly
pH	pH units	Grab ⁴	Weekly
Temperature	°C	Grab ⁴	Weekly
MBAS ²	mg/L	24-hour composite	Monthly
Total Dissolved Solids	mg/L	24-hour composite	Monthly
Chlorides	mg/L	24-hour composite	Monthly
Sodium	mg/L	24-hour composite	Monthly
Sulfate	mg/L	24-hour composite	Monthly
Nitrate Nitrogen	mg/L as N	24-hour composite	Monthly
Kjeldahl Nitrogen	mg/L as N	24-hour composite	Monthly
Ammonia Nitrogen	mg/L as N	24-hour composite	Monthly
Total Organic Carbon	mg/L	24-hour composite	Quarterly
Copper	mg/L	24-hour composite	Quarterly
Zinc	mg/L	24-hour composite	Quarterly

<u>Parameter</u>	<u>Units</u>	<u>Type of Sample</u>	<u>Frequency</u>
Selenium	mg/L	24-hour composite	Quarterly
Total Petroleum Hydrocarbons ⁵	µg/L	24-hour composite	Quarterly
Oil and Grease	mg/L	Grab	Quarterly
Bromoform	µg/L	Grab	Quarterly
Chloroform	µg/L	Grab	Quarterly
Dibromochloromethane	µg/L	Grab	Quarterly
Dichlorobromomethane	µg/L	Grab	Quarterly
Total Cyanides	µg/L	24-hour composite	Annually
Total Phenols	µg/L	24-hour composite	Annually
Purgeable Organics ⁶	µg/L	Grab ⁴	Annually
Base/Neutral Extractable Organics ⁶	µg/L	24-hour composite	Annually
Acid Extractable Organics ⁶	µg/L	24-hour composite	Annually
Heavy Metals ⁶	mg/L	Grab ⁴	Annually
Methyl t-Butyl Ether	µg/L	24-hour composite	Annually

D. Ground Water and Vadose Zone Monitoring

The existing ground water and vadose zone monitoring system consists of approximately eighteen (18) wells (eleven monitoring and seven supply wells) and approximately seven lysimeters identified as follows and located as indicated on Attachment "A" of Board Order No. 6-00-57:

Baseline sampling and analyses must be conducted on any additionally proposed ground water and/or vadose zone monitoring system prior to discharge of wastewater to any new areas not now monitored.

Ground Water Monitoring Wells

MW1
 MW2
 MW4
 MW15
 MW16
 MW17
 MW18

Supply Water Monitoring Wells

E
 H2
 SW1
 SW2
 SW5
 SW7
 SW8
 SW9
 SW10
 SW13
 SW14

Vadose Zone Monitoring Lysimeters

- L1
- L3
- L4
- L6
- L8
- L13
- L16

Beginning immediately, grab samples shall be collected from the seven (7) monitoring wells, the eleven (11) water supply wells, and the seven (7) lysimeters. Monitoring well (except supply well) samples shall be collected from the top five feet of the ground water or uppermost portion of the aquifer measuring from the anticipated low water level; water supply samples shall be collected from the uppermost portion of the aquifer, to the maximum extent possible. The Discharger must monitor these systems at the required frequencies, unless there are factors beyond the Discharger's control that prevent the sampling of these systems. These factors include, but are not limited to: supply well is dismantled, out of service, or turned off.

All monitoring and supply well samples shall be analyzed to determine the magnitude of the following parameters:

<u>Parameter</u>	<u>Units</u>	<u>Frequency</u>
Kjeldahl Nitrogen	mg/L as N	Semiannually
Nitrate Nitrogen	mg/L as N	Semiannually
Ammonia Nitrogen	mg/L as N	Semiannually
MBAS ²	mg/L	Semiannually
Chloride	mg/L	Semiannually
Sodium	mg/L	Semiannually
Sulfate	mg/L	Semiannually
Total Organic Carbon	µg/L	Semiannually
Total Dissolved Solids	mg/L	Semiannually
Total Petroleum Hydrocarbons ⁵	µg/L	Semiannually
Bromoform	µg/L	Semiannually
Chloroform	µg/L	Semiannually
Dibromochloromethane	µg/L	Semiannually
Dichlorobromomethane	µg/L	Semiannually
Total Cyanides	µg/L	Annually
Total Phenols	µg/L	Annually
Purgeable Organics ⁶	µg/L	Annually
Base/Neutral Extractable Organics ⁶	µg/L	Annually
Acid Extractable Organics ⁶	µg/L	Annually
Heavy Metals ⁶	mg/L	Annually
Methyl Tertiary Butyl Ether	µg/L	Annually

The depth to ground water in each well and the field parameters of pH, electrical conductivity, temperature and dissolved oxygen shall be measured and recorded each time a well is sampled. The flow direction of the ground water shall be estimated annually. A graphical representation of the annual ground water flow direction shall be included in the annual monitoring report

Lysimeter samples shall be analyzed for the following parameters:

<u>Parameter</u>	<u>Units</u>	<u>Frequency</u>
Kjeldahl Nitrogen	mg/L as N	Semiannually
Nitrate Nitrogen	mg/L as N	Semiannually
Ammonia Nitrogen	mg/L as N	Semiannually
Total Dissolved Solids	mg/L	Semiannually
Chloride	mg/L	Semiannually
Sodium	mg/L	Semiannually
Sulfate	mg/L	Semiannually
Methylene Blue Active Substances	mg/L	Semiannually

E. Biosolids Disposal

The following shall be recorded monthly:

1. Total quantity of biosolids generated during the monitoring period.
2. Date and quantity of biosolids removed off site, location of use, recipient (including name and address) and biosolids disposal method (including crops grown if appropriate) for all biosolids removed off site.
3. Cumulative total quantity of biosolids currently on site including the quantity of biosolids added during this monitoring period.

By **July 1** of each year, the Discharger shall submit a copy of its annual federal biosolids report.

F. Reclamation Monitoring

The following shall be recorded in a permanent log book annually:

1. Names, addresses, and telephone numbers of all secondary users of reclaimed wastewater.
2. Names, types, method and number of harvests, quantity, and end uses of all crops irrigated with reclaimed wastewater.
3. Number of acres of each type of crop irrigated with reclaimed wastewater and method of irrigation.

4. Location of each type of crop irrigated with reclaimed wastewater (locations shall also be indicated on a map of appropriate scale, such as a USGS 7.5 Minute Topographic Quadrangle map).
5. Information that demonstrates that all recycled water applied complied with the State Department of Health Services water recycling requirements specified in the Order. The information should include verification that the level of treatment required for water recycling was achieved and that the methods of recycled water application were implemented as required.

G. Chemical Use Monitoring

LAWA shall record the names and chemical compositions, quantities and dates of application of all chemical fertilizers, herbicides and pesticides applied to any crop grown on the water recycling site and other irrigated agriculture sites on LAWA property in a permanent log book quarterly.

H. Operation and Maintenance

A brief summary of any operational problems and maintenance activities that may affect effluent quality shall be submitted to the Regional Board with each monitoring report.

This summary shall discuss:

1. Any modifications or additions to the wastewater conveyance system, treatment facilities, or disposal/water recycling facilities.
2. Any major maintenance conducted on the wastewater conveyance system, treatment facilities, or disposal/water recycling facilities.
3. Any major problems occurring in wastewater conveyance system, treatment facilities, or disposal/water recycling facilities.
4. The calibration of any wastewater flow measuring devices.

II. REPORTING

A. General Provisions

The Discharger shall comply with the "General Provisions for Monitoring and Reporting," (GPMR) dated September 1, 1994, which is attached to and made part of this Monitoring and Reporting Program. Pursuant to General Provision 1.d of the GPMR, the Discharger shall submit by July 30, 2000 a Sampling and Analysis Plan (SAP) to the Regional Board for approval.

B. Submittal Periods

Monthly and annual reporting due dates have been extended from the state-wide standard guidelines at the Discharger's justified request. Beginning on August 1, 2000, monthly monitoring reports including the preceding information shall be submitted to the Regional Board by the 1st day of the third month following each monthly monitoring period.

An annual monitoring report containing summaries of all the above information, compliance status, and the names and grades of all the certified operators shall be submitted to the Regional Board by April 1 of each year.

Ordered by: Harold J. Singer
HAROLD J. SINGER
EXECUTIVE OFFICER

Dated: June 14, 2000

Attachment: General Provisions for Monitoring and Reporting

- 1 Biochemical Oxygen Demand (5 day, 20°C) of an unfiltered influent sample; filtered sample for final effluent.
- 2 Methylene Blue Active Substances.
- 3 Chemical Oxygen Demand of an unfiltered influent sample; filtered sample for final effluent.
- 4 Grab samples as defined for respective parameters in current Sampling and Analysis Plan.
- 5 Use USEPA Test Method SW 8015 with method calibration based on an appropriate fuel standard. When a test result is below the method detection limit, the result shall be reported as "less than "x" micrograms/liter" ("x" shall be the numeric method detection limit value for the test method).
- 6 Analysis shall be conducted for those substances included on the USEPA list of priority pollutants and all other toxic substances known to be discharged to the sewer system.

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
LAHONTAN REGION

GENERAL PROVISIONS
FOR MONITORING AND REPORTING

1. SAMPLING AND ANALYSIS

- a. All analyses shall be performed in accordance with the current edition(s) of the following documents:
 - i. Standard Methods for the Examination of Water and Wastewater
 - ii. Methods for Chemical Analysis of Water and Wastes, EPA
- b. All analyses shall be performed in a laboratory certified to perform such analyses by the California State Department of Health Services or a laboratory approved by the Regional Board. Specific methods of analysis must be identified on each laboratory report.
- c. Any modifications to the above methods to eliminate known interferences shall be reported with the sample results. The method used shall also be reported. If methods other than USEPA approved methods or Standard Methods are used, the exact methodology must be submitted for review and must be approved by the Regional Board prior to use.
- d. The Discharger shall establish chain-of-custody procedures to ensure that specific individuals are responsible for sample integrity from commencement of sample collection through delivery to an approved laboratory. Sample collection, storage and analysis shall be conducted in accordance with an approved Sampling and Analysis Plan (SAP). The most recent version of the approved SAP shall be kept at the facility.
- e. The Discharger shall calibrate and perform maintenance procedures on all monitoring instruments and equipment to ensure accuracy of measurements, or shall ensure that both activities will be conducted. The calibration of any wastewater flow measuring device shall be recorded and maintained in the permanent log book described in 2.b, below.
- f. A grab sample is defined as an individual sample collected in fewer than 15 minutes.
- g. A composite sample is defined as a combination of no fewer than eight individual samples obtained over the specified sampling period at equal intervals. The volume of each individual sample shall be proportional to the discharge flow rate at the time of sampling. The sampling period shall equal the discharge period, or 24 hours, whichever period is shorter.

2. OPERATIONAL REQUIREMENTS

a. Sample Results

Pursuant to California Water Code Section 13267(b), the Discharger shall maintain all sampling and analytical results including: strip charts; date, exact place, and time of sampling; date analyses were performed; sample collector's name; analyst's name; analytical techniques used; and results of all analyses. Such records shall be obtained for a minimum of three years. This period of retention shall be extended during the course of any unresolved litigation regarding this discharge, or when requested by the Regional Board.

b. Operational Log

Pursuant to California Water Code Section 13267(b), an operation and maintenance log shall be maintained at the facility. All monitoring and reporting data shall be recorded in a permanent log book.

3. REPORTING

- a. For every item where the requirements are not met, the Discharger shall submit a statement of the actions undertaken or proposed which will bring the discharge into full compliance with requirements at the earliest time and submit a timetable for correction.
- b. Pursuant to California Water Code Section 13267(b), all sampling shall be made available to the Regional Board upon request. Results shall be retained for a minimum of three years. This period of retention shall be extended during the course of any unresolved litigation regarding this discharge, or when requested by the Regional Board.
- c. The Discharger shall provide a brief summary of any operational problems and maintenance activities to the Regional Board with each monitoring report. Any modifications or additions to, or any major maintenance conducted on, or any major problems occurring to the wastewater conveyance system, treatment facilities, or disposal facilities shall be included in this summary.
- d. Monitoring reports shall be signed by:
 - i. In the case of a corporation, by a principal executive officer at least of the level of vice-president or his duly authorized representative, if such representative is responsible for the overall operation of the facility from which the discharge originates;
 - ii. In the case of a partnership, by a general partner;

- iii. In the case of a sole proprietorship, by the proprietor;
 - iv. In the case of a municipal, state or other public facility, by either a principal executive officer, ranking elected official, or other duly authorized employee.
- e. Monitoring reports are to include the following:
- i. Name and telephone number of individual who can answer questions about the report.
 - ii. The Monitoring and Reporting Program Number.
 - iii. WDID Number.
- f. Modifications

This Monitoring and Reporting Program may be modified at the discretion of the Regional Board Executive Officer.

4. NONCOMPLIANCE

Under Section 13268 of the Water Code, any person failing or refusing to furnish technical or monitoring reports or falsifying any information provided therein, is guilty of a misdemeanor and may be liable civilly in an amount of up to one thousand dollars (\$1,000) for each day of violation under Section 13268 of the Water Code.



California Regional Water Quality Control Board Lahontan Region

31-370.40.4A



Terry Tamminen
Secretary for
Environmental
Protection

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Arnold Schwarzenegger
Governor

February 26, 2004

WDID NO. 6B190107069

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Gary Brown, Director
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**ADOPTED MONITORING AND REPORTING PROGRAM NO. 6-00-57-A01
MONITORING AND REPORTING PROGRAM NO. 6-00-57-A01 FOR LOS ANGELES
COUNTY SANITATION DISTRICT NO. 20 AND THE CITY OF LOS ANGELES
WORLD AIRPORTS, PALMDALE WATER RECLAMATION PLANT, LOS ANGELES
COUNTY**

Enclosed is a revision to the Monitoring and Reporting Program No. 6-00-57-A01 for the Palmdale Water Reclamation Plant. The District and LAWA are required to initiate the monitoring specified in this revised Program on April 1, 2004. Until then, please follow the monitoring and reporting in the existing Program.

This revised Monitoring and Reporting Program requires the District and LAWA to prepare and submit two reports on March 31, 2004. The reports are a Sampling and Analysis Plan and a Wind Speed Monitoring Plan.

If you have any questions on this revised Program, please contact either Jehiel Cass (760) 241-2434 or Mike Plaziak (760) 241-7358 at our Victorville Office.

Sincerely,

Harold J. Singer
Executive Officer

Enclosure: MRP No. 6-00-57-A01

DOC #

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California Environmental Protection Agency

James F. Stahl, General Manager
Gary Brown, Director

- 2 -

February 26, 2004


cc: w/enclosure

Regional Board Members

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rp/LACSD MRP ADP LTR

California Environmental Protection Agency

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CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
LAHONTAN REGION

**REVISED MONITORING AND REPORTING PROGRAM NO. 00-57-A01
WDID NO. 6B190107069
FOR
LOS ANGELES COUNTY SANITATION DISTRICT NO. 20
AND CITY OF LOS ANGELES WORLD AIRPORTS
PALMDALE WATER RECLAMATION PLANT**

_____Los Angeles County_____

I. MONITORING

A. Flow Monitoring

The following shall be recorded in a permanent logbook:

1. The total volume, in millions of gallons (MG), of wastewater flow to the secondary treatment facilities for each day.
2. The total volume, in MG, of wastewater flow to the secondary treatment facilities for each month.
3. The maximum instantaneous flowrate, in millions of gallons per day (MGD), of wastewater to the secondary treatment facilities that occurs each day.
4. The calculated average flowrate, in MGD, of wastewater to the secondary treatment facilities for each month.
5. The volumes, in MG, of treated effluent flow to the Los Angeles World Airports (LAWA) lease land site for each month. Separate flow volumes shall be recorded for treated effluent disposed by land application, and recycled water applied for irrigated agricultural purposes.
6. The calculated average flow rates, in MGD, of wastewater to the LAWA Irrigation Site for each month.
7. The freeboard (distance from the top of the lowest part of the dike to the wastewater surface in a pond) measured once each month in each pond at the time when the freeboard is at its minimum distance. If the pond does not contain wastewater, indicate that it is empty.

B. Facility Influent Monitoring

Influent samples taken prior to the primary clarifiers shall be analyzed to determine the magnitude of the following parameters:

<u>Parameter</u>	<u>Units</u>	<u>Type of Sample</u>	<u>Frequency</u>
BOD ¹	mg/L	24-hour composite	Weekly
COD ³	mg/L	24-hour composite	Weekly
MBAS ²	mg/L	24-hour composite	Monthly
Nitrate Nitrogen	mg/L as N	24-hour composite	Monthly
Kjeldahl Nitrogen	mg/L as N	24-hour composite	Monthly
Ammonia Nitrogen	mg/L as N	24-hour composite	Monthly
Total Petroleum Hydrocarbons ⁵	µg/L	Grab ⁴	Quarterly
Bromoform	µg/L	Grab ⁴	Semiannually
Chloroform	µg/L	Grab ⁴	Semiannually
Dibromochloromethane	µg/L	Grab ⁴	Semiannually
Dichlorobromomethane	µg/L	Grab ⁴	Semiannually
Total Dissolved Solids	mg/L	24-hour composite	Semiannually
Total Cyanides	µg/L	24-hour composite	Annually
Total Phenols	µg/L	24-hour composite	Annually
Volatile Organics ⁶	µg/L	Grab ⁴	Annually
Base/Neutral Extractable Organics ⁶	µg/L	24-hour composite	Annually
Acid Extractable Organics ⁶	µg/L	24-hour composite	Annually
Heavy Metals ⁶	mg/L	24-hour composite	Annually

C. Facility Effluent Monitoring

Samples of the wastewater effluent from the treatment Facility shall be collected downstream of all treatment units and analyzed to determine the magnitude of the following parameters:

<u>Parameter</u>	<u>Units</u>	<u>Type of Sample</u>	<u>Frequency</u>
BOD ¹	mg/L	24-hour composite	Weekly
Total Suspended Solids	mg/L	24-hour composite	Weekly
COD ³	mg/L	24-hour composite	Weekly
Dissolved Oxygen	mg/L	Grab ⁴	Weekly
pH	pH units	Grab ⁴	Weekly
Temperature	°C	Grab ⁴	Weekly
MBAS ²	mg/L	24-hour composite	Monthly
Total Dissolved Solids	mg/L	24-hour composite	Monthly
Chlorides	mg/L	24-hour composite	Monthly
Sodium	mg/L	24-hour composite	Monthly
Sulfate	mg/L	24-hour composite	Monthly
Nitrate Nitrogen	mg/L as N	24-hour composite	Monthly
Kjeldahl Nitrogen	mg/L as N	24-hour composite	Monthly
Ammonia Nitrogen	mg/L as N	24-hour composite	Monthly

<u>Parameter</u>	<u>Units</u>	<u>Type of Sample</u>	<u>Frequency</u>
Total Organic Carbon	mg/L	24-hour composite	Quarterly
Total Petroleum Hydrocarbons ⁵	µg/L	24-hour composite	Quarterly
Oil and Grease	mg/L	Grab ⁴	Quarterly
Bromoform	µg/L	Grab ⁴	Quarterly
Chloroform	µg/L	Grab ⁴	Quarterly
Dibromochloromethane	µg/L	Grab ⁴	Quarterly
Dichlorobromomethane	µg/L	Grab ⁴	Quarterly
Heavy Metals ⁶	mg/L	24-hour composite	Quarterly
Total Cyanides	µg/L	24-hour composite	Annually
Total Phenols	µg/L	24-hour composite	Annually
Volatile Organics ⁶	µg/L	Grab ⁴	Annually
Base/Neutral Extractable Organics ⁶	µg/L	24-hour composite	Annually
Acid Extractable Organics ⁶	µg/L	24-hour composite	Annually
Methyl Tertiary Butyl Ether	µg/L	24-hour composite	Annually

D. Ground Water Monitoring

The existing ground water monitoring system consists of 29 wells (18 monitoring and 11 supply wells) identified as follows and located as indicated on Attachment "A" of Board Order No. 6-00-57.

<u>Ground Water Monitoring Wells</u>			<u>Supply Water Monitoring Wells</u>	
MW1	MW18	MW24	E	SW8
MW2	MW19	MW25	H2	SW9
MW4	MW20	MW26	SW1	SW10
MW15	MW21	MW27	SW2	SW13
MW16	MW22	MW28	SW5	SW14
MW17	MW23	MW29	SW7	

Beginning immediately, grab samples shall be collected from the 18 monitoring wells and the 11 water supply wells. Ground water samples obtained from monitoring wells shall be collected from the top five feet of the aquifer. Ground water samples obtained from water supply wells shall be collected from the uppermost portion of the aquifer, to the maximum extent possible. The Discharger must monitor these water supply wells at the required frequencies, unless there are factors beyond the Discharger's control that prevent the sampling. These factors include, but are not limited to, a supply well that is dismantled or out of service. The District must make an effort to monitor supply wells that are used during the quarter but are not in use on the day that samples are typically collected.

All monitoring and supply well samples shall be analyzed to determine the magnitude of the following parameters:

<u>Parameter</u>	<u>Units</u>	<u>Frequency</u>
Kjeldahl Nitrogen	mg/L as N	Quarterly
Nitrate Nitrogen	mg/L as N	Quarterly
Ammonia Nitrogen	mg/L as N	Quarterly
MBAS ²	mg/L	Quarterly
Chloride	mg/L	Quarterly
Sodium	mg/L	Quarterly
Sulfate	mg/L	Quarterly
Total Organic Carbon	µg/L	Quarterly
Total Dissolved Solids	mg/L	Quarterly
Total Petroleum Hydrocarbons ⁵	µg/L	Annually
Bromoform	µg/L	Annually
Chloroform	µg/L	Annually
Dibromochloromethane	µg/L	Annually
Dichlorobromomethane	µg/L	Annually
Total Cyanides	µg/L	Annually
Total Phenols	µg/L	Annually
Volatile Organics ⁶	µg/L	Annually
Base/Neutral Extractable Organics ⁶	µg/L	Annually
Acid Extractable Organics ⁶	µg/L	Annually
Heavy Metals ⁶	mg/L	Annually
Methyl Tertiary Butyl Ether	µg/L	Annually

The depth to ground water in each monitoring well and supply well (when feasible) and the field parameters of pH, electrical conductivity, temperature and dissolved oxygen shall be measured and recorded each time a well is sampled. The flow direction of the ground water shall be calculated quarterly. A graphical representation of the ground water flow direction shall be included in the quarterly monitoring reports.

Quarterly ground water monitoring reports shall contain running graphs and trend analyses of total dissolved solids and nitrate as N for ground water monitoring well data.

E. Vadose Zone Monitoring

The existing vadose zone monitoring system consists of seven lysimeters as indicated on Attachment "A" of Board Order No. 6-00-57. Many of these lysimeters are dry or located in less than optimal locations. This system is currently inadequate and must be updated to ensure lysimeters are positioned in the appropriate locations and depths to provide a vertical distribution profile of vadose zone pore-fluid chemistry below the land spreading and irrigated areas of the Effluent Management Site.

The Discharger shall submit a Vadose Zone Monitoring plan as a part of the Sampling and Analysis reporting requirement contained in Section II.A.1. The Plan must include proposed locations of new lysimeters, installation procedures, monitoring protocols and methods to measure soil pore moisture near some of the lysimeters. Upon acceptance of the Discharger's Vadose Zone Monitoring Plan, soil pore-fluid shall be collected

from lysimeters identified in the accepted plan and analyzed for the following parameters:

<u>Parameter</u>	<u>Units</u>	<u>Frequency</u>
Kjeldahl Nitrogen	mg/L as N	Quarterly
Nitrate Nitrogen	mg/L as N	Quarterly
Ammonia Nitrogen	mg/L as N	Quarterly
Total Dissolved Solids	mg/L	Quarterly
Chloride	mg/L	Quarterly
Sodium	mg/L	Quarterly
Sulfate	mg/L	Quarterly
MBAS ²	mg/L	Quarterly
Total Petroleum Hydrocarbons ⁵	µg/L	Annually
Bromoform	µg/L	Annually
Chloroform	µg/L	Annually
Dibromochloromethane	µg/L	Annually
Dichlorobromomethane	µg/L	Annually
Total Cyanides	µg/L	Annually
Total Phenols	µg/L	Annually
Volatile Organics ⁶	µg/L	Annually
Base/Neutral Extractable Organics ⁶	µg/L	Annually
Acid Extractable Organics ⁶	µg/L	Annually
Heavy Metals ⁶	mg/L	Annually

F. Biosolids Disposal

The following shall be recorded monthly:

1. Total quantity of biosolids generated during the monitoring period.
2. Date and quantity of biosolids removed off site, location of use, recipient (including name and address) and biosolids disposal method (including crops grown if applicable) for all biosolids removed off site.
3. Cumulative total quantity of biosolids currently on site including the quantity of biosolids added during this monitoring period.

G. Effluent Management Site Monitoring

1. An Annual Cropping Plan shall be submitted on November 15 of each year containing, but not limited to, the following items describing the proposed cropping plan for the upcoming calendar year.
 - a. Names, addresses, and telephone numbers of all secondary users of reclaimed wastewater at the Effluent Management Site.
 - b. For each field, provide the following information

- i. Location using a US Geological Survey 7.5 minute topographic quadrangle map.
 - ii. Acreage.
 - iii. Crop names and types (i.e. fodder, seed or other).
 - iv. Approximate planting dates.
 - v. Approximate harvest dates.
 - vi. Irrigation method.
 - vii. Volume of water expected to be used based on crop needs (irrigation efficiency, evapotranspiration and need for maintenance leaching). Provide basis for calculations including field data or references.
 - viii. Amount of nitrogen expected to be applied to the crop from all sources including estimates of nitrogen available in the root zone.
 - ix. Amount of nitrogen expected in the harvested crop per harvest and total amount expected to be removed for the field per year.
 - x. Describe the fate of nitrogen that has been applied or is available in the root zone that is not accounted for in the crops harvested.
2. The following shall be reported in the Effluent Management Site Monitoring Report on a quarterly basis.
- a. Monthly analysis and summary, by a certified soil scientist or qualified agronomist, of the amount of water and nitrogen applied or is available to the crops per irrigated field (see G.1.b. above). The analysis must compare the actual water and nitrogen applications to those predicted in the Annual Cropping Plan and discuss any significant differences. Additionally, this monthly report must include an evaluation of the actual crop production (percent germination, growth status) to that projected in the Annual Cropping Plan at harvest.
 - b. For each harvest completed during the quarter, the report must include the total amount of nitrogen harvested based on the results of site-specific plant tissue analyses. Conservative estimates of the amount of nitrogen harvested may be used in lieu of site-specific plant tissue analysis provided the estimate is justified by literature references. The production from the field may be determined by multiplying the number of bales by an average bale weight. The results of this calculation must be compared to the total amount of nitrogen applied to the crop from all sources (wastewater, other water, and fertilizer) or available during production. Any significant differences must be addressed in the context of this crop and any modifications needed to the overall Farm Management Plan or Annual Cropping Plan.
 - c. Recycled water balance for the quarter and the crop cycle including: the amount of water applied to each field (see G.1.b. above), water losses due to irrigation efficiency, evapotranspiration, and the amount of water

in storage in the vadose zone or available for percolation below the root zone. These values must be compared to the values proposed in the Annual Cropping Plan and any significant differences must be addressed. If recycled water is blended with non-recycled water to meet the increased water demand during warmer seasons, the quantity and percentage of recycled water and the total water applied shall be determined and reported. Nitrogen content of non-recycled water shall also be determined and reported.

- d. Information that demonstrates that all recycled water applied complied with the State Department of Health Services water recycling requirements specified in the Order. The information should include verification that the level of treatment required for water recycling was achieved and that the methods of recycled water application were implemented as required.
3. The Discharger shall report the status of compliance with its health and safety plan requirements annually. The report shall be incorporated in the annual reporting requirements described in Section II.B.3 and include, but not be limited to, the following.
 - a. Evidence of public and worker notification of the use of undisinfected reclaimed water.
 - b. Evidence of effective ongoing worker training in the safe handling of undisinfected reclaimed water, and log of maintenance activity showing use of undisinfected recycled water stopped during required maintenance, and flow stoppage prior to harvest. Record of trainers/trainees, when and what subjects covered.
 - d. List of special equipment provided to workers for handling undisinfected recycled water (i.e. gloves, respirators, and eye protection), record of provision and provisioner. Location of protected equipment storage.
 - e. Provisions for worker hygiene in the field when using undisinfected reclaimed water, such as provision and quantity of freshwater washdown water and protective measures for food and drink handling.
 4. An Effluent Management Site Operations Report shall be reported quarterly, maintained onsite, and made available for inspection by Board staff.
 - a. Summary of daily wind speed and direction at the Effluent Management Site. The report shall indicate periods when irrigation ceased due to the potential to transport effluent offsite by high wind conditions. Additionally, the report must include a discussion of the factors that lead to a decision to continue irrigation when the wind speed exceed that level defined by the Discharger as its best management practice for

preventing off-site transport of reclaimed wastewater. The Discharger shall develop and implement a plan for wind speed monitoring and procedures for terminating irrigation of fields with recycled water when wind conditions may cause the recycled water spray or aerosols to leave the property. The above plan shall be submitted as required in General Reporting Requirement II.A.3.

- b. Monthly evaluation of the effectiveness of wind barriers to prevent offsite drift of undisinfectated recycled water aerosols.
- c. Summary of maintenance activities such as maintenance of adequate setbacks from the property lines for the use of undisinfectated reclaimed water, discing, deep discing, weed removal and reconturing at land spreading areas and irrigated fields.
- d. Summary of effectiveness of aerosol reduction by the use of drop tubes on center-pivot irrigation systems and of coarse water droplet nozzles where appropriate.
- e. Summary of daily inspections for ponding, offsite flow or offsite drift when irrigation with recycled water is occurring.

H. Chemical Use Monitoring

The Discharger shall record the names and chemical compositions, quantities and dates of application of all chemical fertilizers, herbicides and pesticides applied to any crop grown on the water recycling site in a permanent log book. Chemical use information shall be submitted to the Regional Board on a quarterly basis.

I. Operation and Maintenance

A brief summary of any operational problems and maintenance activities that may affect effluent quality shall be submitted to the Regional Board with each monthly monitoring report.

This summary shall discuss:

1. Any modifications or additions to the wastewater conveyance system, treatment facilities, or disposal/water recycling facilities.
2. Any major maintenance conducted on the wastewater conveyance system, treatment facilities, or disposal/water recycling facilities.
3. Any major problems occurring in wastewater conveyance system, treatment facilities, or disposal/water recycling facilities.
4. The calibration of any wastewater flow measuring devices.

II. REPORTING

A. General Provisions

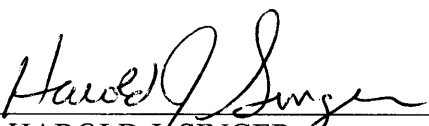
1. The Discharger shall comply with the "General Provisions for Monitoring and Reporting," (GPMR) dated September 1, 1994, which is attached to and made part of this Monitoring and Reporting Program. Pursuant to General Provision 1.d of the GPMR, the Discharger shall submit by March 31, 2004 a Sampling and Analysis Plan (SAP) to the Regional Board for acceptance. The SAP shall include a Vadose Zone Monitoring Plan to identify numbers and locations of lysimeters necessary to adequately monitor the vadose zone below the Effluent Management Site.
2. The monitoring and reporting required by this program becomes effective on April 1, 2004. The monitoring and reporting prescribed in Monitoring and Reporting Program No. 00-57 applies to all data collected on or before March 31, 2004.
3. The Discharger shall submit by March 31, 2004 a Wind Speed Monitoring Plan. The plan shall include measures to determine wind speed and direction at the Effluent Management Site and sufficient alarm mechanisms to warn site operators of excessive wind conditions that may allow undisinfected effluent to be discharged off-site in violation of waste discharge requirements. The Plan must identify measures that will be implemented by the District in response to detection of wind speeds in excess of the level defined by the District as its best management practice for preventing wastewater from leaving its authorized disposal area. The measures must include a decision-making process that the District will use to continue irrigation when wind speeds exceed the level defined by the District.
4. Status of implementation of the proposed chlorination disinfection and dechlorination system for reclaimed water.

B. Submittal Periods

Monthly and annual reporting due dates have been extended from the statewide standard guidelines at the Discharger's justified request. The Discharger must submit monitoring reports according to the following schedule:

1. Beginning on June 1, 2004, monthly monitoring reports shall be submitted to the Regional Board by the 1st working day of the second month following each monthly monitoring period. Data that is required on a frequency longer than one month will be incorporated into the monthly report for the month the analyses are required. For example, analyses that are to be performed on a semi-annual frequency will be included in the monthly report for June and December. The following reports shall be provided on a monthly frequency:

- a. Facility Influent Monitoring Report
 - b. Facility Effluent Monitoring Report
 - c. Operation and Maintenance Report
2. Beginning August 2, 2004, quarterly monitoring reports shall be submitted to the Regional Board by the 1st working day of the second month following each quarterly monitoring period. The quarterly monitoring period shall end on March 31st, June 30th, September 30th, and December 31st of each calendar year. Data that are required on a frequency longer than one quarter will be incorporated into the quarterly report that coincides with the period for which the analyses are required. The following reports shall be provided on a quarterly frequency:
- a. Ground Water Monitoring Report
 - b. Vadose Zone Monitoring Report
 - c. Effluent Management Site Monitoring Report
 - d. Effluent Management Site Operations Report
 - e. Chemical Use Monitoring Report
3. An annual monitoring report shall be submitted with the fourth quarter monitoring report. The report must contain:
- a. A summary and evaluation of the above information in Reporting Requirement II.B.1 and II.B.2, which also includes compliance status;
 - b. The names and grades of all the certified operators;
 - c. An annual Health and Safety Plan including Health and Safety Compliance reporting discussed in section I.G.3.;
 - d. Chemical Use Monitoring reporting information discussed in section I.H.;
 - e. The annual Federal Biosolids Report

Ordered by: 
HAROLD J. SINGER
EXECUTIVE OFFICER

Dated: Feb 26, 2004

Attachments: A. General Provisions for Monitoring and Reporting
B. Priority Pollutant List

- 1 Biochemical Oxygen Demand (5 day, 20°C) of an unfiltered influent sample; filtered sample for final effluent.
- 2 Methylene Blue Active Substances.
- 3 Chemical Oxygen Demand of an unfiltered influent sample; filtered sample for final effluent.
- 4 Grab samples as defined for respective parameters in current Sampling and Analysis Plan.
- 5 Use USEPA Test Method SW 8015 with method calibration based on an appropriate fuel standard. When a test result is below the reporting minimum level, the result shall be reported as "less than "x" micrograms/liter" ("x" shall be the numeric reporting minimum level value for the test).
- 6 Analysis shall be conducted for those shown in Attachment B.

Attachment A

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD LAHONTAN REGION

GENERAL PROVISIONS FOR MONITORING AND REPORTING

1. SAMPLING AND ANALYSIS

- a. All analyses shall be performed in accordance with the current edition(s) of the following documents:
 - i. Standard Methods for the Examination of Water and Wastewater
 - ii. Methods for Chemical Analysis of Water and Wastes, EPA
- b. All analyses shall be performed in a laboratory certified to perform such analyses by the California State Department of Health Services or a laboratory approved by the Regional Board Executive Officer. Specific methods of analysis must be identified on each laboratory report.
- c. Any modifications to the above methods to eliminate known interferences shall be reported with the sample results. The methods used shall also be reported. If methods other than EPA-approved methods or Standard Methods are used, the exact methodology must be submitted for review and must be approved by the Regional Board prior to use.
- d. The Discharger shall establish chain-of-custody procedures to insure that specific individuals are responsible for sample integrity from commencement of sample collection through delivery to an approved laboratory. Sample collection, storage, and analysis shall be conducted in accordance with an approved Sampling and Analysis Plan (SAP). The most recent version of the approved SAP shall be kept at the facility.
- e. The Discharger shall calibrate and perform maintenance procedures on all monitoring instruments and equipment to ensure accuracy of measurements, or shall insure that both activities will be conducted. The calibration of any wastewater flow measuring device shall be recorded and maintained in the permanent log book described in 2.b, below.
- f. A grab sample is defined as an individual sample collected in fewer than 15 minutes.
- g. A composite sample is defined as a combination of no fewer than eight individual samples obtained over the specified sampling period at equal intervals. The volume of each individual sample shall be proportional to the discharge flow rate at the time of sampling. The sampling period shall equal the discharge period, or 24 hours, whichever period is shorter.

2. OPERATIONAL REQUIREMENTS

a. Sample Results

Pursuant to California Water Code Section 13267(b), the Discharger shall maintain all sampling and analytical results including: strip charts; date, exact place, and time of sampling; date analyses were performed; sample collector's name; analyst's name; analytical techniques used; and results of all analyses. Such records shall be retained for a minimum of three years. This period of retention shall be extended during the course of any unresolved litigation regarding this discharge, or when requested by the Regional Board.

b. Operational Log

Pursuant to California Water Code Section 13267(b), an operation and maintenance log shall be maintained at the facility. All monitoring and reporting data shall be recorded in a permanent log book.

3. REPORTING

- a. For every item where the requirements are not met, the Discharger shall submit a statement of the actions undertaken or proposed which will bring the discharge into full compliance with requirements at the earliest time, and shall submit a timetable for correction.
- b. Pursuant to California Water Code Section 13267(b), all sampling and analytical results shall be made available to the Regional Board upon request. Results shall be retained for a minimum of three years. This period of retention shall be extended during the course of any unresolved litigation regarding this discharge, or when requested by the Regional Board.
- c. The Discharger shall provide a brief summary of any operational problems and maintenance activities to the Board with each monitoring report. Any modifications or additions to, or any major maintenance conducted on, or any major problems occurring to the wastewater conveyance system, treatment facilities, or disposal facilities shall be included in this summary.
- d. Monitoring reports shall be signed by:
 - i. In the case of a corporation, by a principal executive officer at least of the level of vice-president or his duly authorized representative, if such representative is responsible for the overall operation of the facility from which the discharge originates;
 - ii. In the case of a partnership, by a general partner;
 - iii. In the case of a sole proprietorship, by the proprietor; or

- iv. In the case of a municipal, state or other public facility, by either a principal executive officer, ranking elected official, or other duly authorized employee.
- e. Monitoring reports are to include the following:
 - i. Name and telephone number of individual who can answer questions about the report.
 - ii. The Monitoring and Reporting Program Number.
 - iii. WDID Number.
- f. Modifications

This Monitoring and Reporting Program may be modified at the discretion of the Regional Board Executive Officer.

4. NONCOMPLIANCE

Under Section 13268 of the Water Code, any person failing or refusing to furnish technical or monitoring reports, or falsifying any information provided therein, is guilty of a misdemeanor and may be liable civilly in an amount of up to one thousand dollars (\$1,000) for each day of violation under Section 13268 of the Water Code.

x:PROVISIONS WDRS

file: general pro mrp

ATTACHMENT "B"
(To Revised Monitoring and Reporting Program 00-57A01)

PRIORITY POLLUTANTS

Metals

Antimony
Arsenic
Beryllium
Cadmium
Chromium
Copper
Lead
Mercury
Nickel
Selenium
Silver
Thallium
Zinc

Miscellaneous

Cyanide
Asbestos (only if
specifically
required)

Pesticides & PCBs

Aldrin
Chlordane
Dieldrin
4,4'-DDT
4,4'-DDE
4,4'-DDD
Alpha-endosulfan
Beta-endosulfan
Endosulfan sulfate
Endrin
Endrin aldehyde
Heptachlor
Heptachlor epoxide
Alpha-BHC
Beta-BHC
Gamma-BHC
Delta-BHC
Toxaphene
PCB 1016
PCB 1221
PCB 1232
PCB 1242
PCB 1248
PCB 1254
PCB 1260

Base/Neutral Extractibles

Acenaphthene
Benzidine
1,2,4-trichlorobenzene
Hexachlorobenzene
Hexachloroethane
Bis(2-chloroethyl) ether
2-chloronaphthalene
1,2-dichlorobenzene
1,3-dichlorobenzene
1,4-dichlorobenzene
3,3'-dichlorobenzidine
2,4-dinitrotoluene
2,6-dinitrotoluene
1,2-diphenylhydrazine
Fluoranthene
4-chlorophenyl phenyl ether
4-bromophenyl phenyl ether
Bis(2-chloroisopropyl) ether
Bis(2-chloroethoxy) methane
Hexachlorobutadiene
Hexachlorocyclopentadiene
Isophorone
Naphthalene
Nitrobenzene
N-nitrosodimethylamine
N-nitrosodi-n-propylamine
N-nitrosodiphenylamine
Bis (2-ethylhexyl) phthalate
Butyl benzyl phthalate
Di-n-butyl phthalate
Di-n-octyl phthalate
Diethyl phthalate
Dimethyl phthalate
Benzo(a) anthracene
Benzo(a) pyrene
Benzo(b) fluoranthene
Benzo(k) fluoranthene
Chrysene
Acenaphthylene
Anthracene
1,12-benzoperylene
Fluorene
Phenanthrene
1,2,5,6-dibenzanthracene
Indeno (1,2,3-cd) pyrene
Pyrene
TCDD

Acid Extractibles

2,4,6-trichlorophenol
P-chloro-m-cresol
2-chlorophenol
2,4-dichlorophenol
2,4-di methyl phenol
2-nitrophenol
4-nitrophenol
2,4-dinitrophenol
4,6-dinitro-o-cresol
Pentachlorophenol
Phenol

Volatile Organics

Acrolein
Acrylonitrile
Benzene
Carbon tetrachloride
Chlorobenzene
1,2-dichloroethane
1,1,1-trichloroethane
1,1-dichloroethane
1,1,2-trichloroethane
1,1,2,2-tetrachloroethane
Chloroethane
Chloroform
1,1-dichloroethylene
1,2-trans-dichloroethylene
1,2-dichloropropane
1,3-dichloropropylene
Ethylbenzene
Methylene chloride
Methyl chloride
Methyl bromide
Bromoform
Dichlorobromomethane
Chlorodibromomethane
Tetrachloroethylene
Toluene
Trichloroethylene
Vinyl chloride
2-chloroethyl vinyl ether
Xylene

31-370.40.4 A



California Regional Water Quality Control Board

Lahontan Region



Terry Tamminen
Secretary for
Environmental
Protection

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Arnold Schwarzenegger
Governor

April 26, 2004

WDID NO. 6B190107069

James F. Stahl, Gen Mgr
Co Sanitation Dist of Los Angeles
P.O. Box 4998
Whittier, CA 90607-4998
Attn: Stephen Maguin

Paul Green, Chief Operating Officer
Environmental Management Division
Los Angeles World Airports
PO Box 92216, WPC
Los Angeles, CA 90009-2216
Attn: Gary Brown

ADOPTED BOARD ORDER NO. 6-00-57A01 and MONITORING AND REPORTING PROGRAM NO. 6-00-57A02 FOR AMENDED WASTE DISCHARGE REQUIREMENTS (WDRS) AND AMENDED MONITORING AND REPORTING PROGRAM - LOS ANGELES COUNTY SANITATION DISTRICT NO. 20 AND THE CITY OF LOS ANGELES WORLD AIRPORTS; PALMDALE WATER RECLAMATION PLANT, LOS ANGELES COUNTY

Enclosed is the original signed Board Order No. 6-00-57A01 and Monitoring and Reporting Program No. 6-00-57A02 which were adopted at the Regional Water Quality Control Board meeting held in Palmdale, California on April 14, 2004.

Sincerely,

Rebecca Phillips
Office Technician

Enclosure: Adopted Board Order

c/

Jim Ritchie, Deputy Executive Dir
Long Range Planning - Env Affairs
Los Angeles World Airports
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APR 29 04 AM 11:10



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California Environmental Protection Agency

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
LAHONTAN REGION

**AMENDED MONITORING AND REPORTING
PROGRAM NO. 00-57-A02
WDID NO. 6B190107069
FOR
LOS ANGELES COUNTY SANITATION DISTRICT NO. 20
AND THE CITY OF LOS ANGELES WORLD AIRPORTS
PALMDALE WATER RECLAMATION PLANT**

Los Angeles County

Monitoring and Reporting Program (MRP) 00-57, for the Los Angeles County Sanitation District No. 20 and City of Los Angeles World Airports (Dischargers), Palmdale Water Reclamation Plant (Facility), was revised as MRP 00-57A01, which updated and specified additional monitoring and reporting requirements for the Dischargers, became effective on February 26, 2004.

Board Order No. 6-00-57, which specified waste discharge requirements (WDRs) and water recycling requirements (WRRs) for the Dischargers, was subsequently amended in Board Order No. 6-00-57A01, which became effective on April 14, 2004, to authorize an expansion of the Effluent Management site (EMS) for the Facility, to include Section 15, T6N, R11W, SBB&M, and to remove areas previously included in the authorized EMS, which are no longer applicable.

Monitoring and Reporting Program No. 00-57-A01 is amended as follows:

1. Section 15 Recycled Water Use Monitoring

The monitoring and reporting requirements specified in Revised MRP 00-57A01 Section I.G. (Effluent Management Site Monitoring) also apply to the Section 15 EMS expansion area.

2. Sampling and Analysis Plan Modification

Revised MRP 00-57A01 requires (See Section II. Reporting, General Provision A.1.), that a Sampling and Analysis Plan (SAP), describing field and sample collection and laboratory analytical methods, be submitted by the Dischargers. An amended SAP shall be submitted by **June 1, 2004**. The amended SAP shall include designations and locations for vadose zone monitoring for the authorized EMS expansion area, Section 15.

3. Ground Water Monitoring

The following ground water monitoring wells are added to the list of ground water monitoring wells that must be sampled in accordance with Section I.D. of the MRP. The number of monitoring wells to be sampled is now 26.

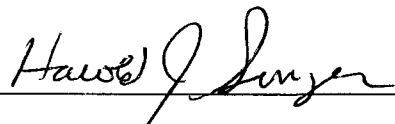
MW301	MW305
MW302	MW306
MW303	MW307
MW304	MW308

4. Vadose Zone Monitoring

- A. The Vadose Zone monitoring system shall be monitored in accordance with Monitoring Requirement I.E., Vadose Zone Monitoring, as specified in the Revised MRP 00-57A01.
- B. The initial round of samples from the vadose zone monitoring system for the expanded EMS area, Section 15, shall be collected, analyzed and the results submitted to the Regional Board prior to the initiation of recycled water application to Section 15.

5. Reporting Requirements

- A. The Revised Monitoring and Reporting Program (MRP) No. 00-57A01, including the "General Provisions for Monitoring and Reporting" dated September 1, 1994 incorporated therein, remain in effect. In addition, amended MRP No. 00-57A02, also applies.
- B. Pursuant to Section 13267 of the California Water Code, the Dischargers shall comply with MRPs No. 00-57A01 and 00-57A02, the "General Provisions for Monitoring and Reporting", and the "Standard Provisions for Waste Discharge Requirements" dated September 1, 1994, incorporated into Board Order No. 6-00-57.
- C. A copy of all applicable Regional Board Orders and MRPs for the PWRP shall be available at all times at the treatment plant and at each reuse site operated by a secondary user.

Ordered by: 
HAROLD J. SINGER
EXECUTIVE OFFICER

Dated: April 14, 2004

ATTACHMENT C

California Health Laws Related to Recycled Water Title 22

June 2001 Edition

CHAPTER 3 WATER RECYCLING CRITERIA ARTICLE 1 DEFINITIONS

60301. Definitions

60301.100. Approved laboratory

"Approved laboratory" means a laboratory that has been certified by the Department to perform microbiological analyses pursuant to section 116390, Health and Safety Code.

60301.160. Coagulated wastewater

"Coagulated wastewater" means oxidized wastewater in which colloidal and finely divided suspended matter have been destabilized and agglomerated upstream from a filter by the addition of suitable floc-forming chemicals.

60301.170. Conventional treatment

"Conventional treatment" means a treatment chain that utilizes a sedimentation unit process between the coagulation and filtration processes and produces an effluent that meets the definition for disinfected tertiary recycled water.

60301.200. Direct beneficial use

"Direct beneficial use" means the use of recycled water that has been transported from the point of treatment or production to the point of use without an intervening discharge to waters of the State.

60301.220. Disinfected secondary-2.2 recycled water

"Disinfected secondary-2.2 recycled water" means recycled water that has been oxidized and disinfected so that the median concentration of total coliform bacteria in the disinfected effluent does not exceed a most probable number (MPN) of 2.2 per 100 milliliters utilizing the bacteriological results of the last seven days for which analyses have been completed, and the number of total coliform bacteria does not exceed an MPN of 23 per 100 milliliters in more than one sample in any 30 day period.

60301.225. Disinfected secondary-23 recycled water

"Disinfected secondary-23 recycled water" means recycled water that has been oxidized and disinfected so that the median concentration of total coliform bacteria in the disinfected effluent does not exceed a most probable number (MPN) of 23 per 100

milliliters utilizing the bacteriological results of the last seven days for which analyses have been completed, and the number of total coliform bacteria does not exceed an MPN of 240 per 100 milliliters in more than one sample in any 30 day period.

60301.230. Disinfected tertiary recycled water

"Disinfected tertiary recycled water" means a filtered and subsequently disinfected wastewater that meets the following criteria:

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

(1) 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

(2) A disinfection process that, when combined with the filtration process, has been demonstrated to inactivate and/or remove 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.

(b) The median concentration of total coliform bacteria measured in the disinfected effluent does not exceed an MPN of 2.2 per 100 milliliters utilizing the bacteriological results of the last seven days for which analyses have been completed and the number of total coliform bacteria does not exceed an MPN of 23 per 100 milliliters in more than one sample in any 30 day period. No sample shall exceed an MPN of 240 total coliform bacteria per 100 milliliters.

60301.240. Drift

"Drift" means the water that escapes to the atmosphere as water droplets from a cooling system.

60301.245. Drift eliminator

"Drift eliminator" means a feature of a cooling system that reduces to a minimum the generation of drift from the system.

60301.250. Dual plumbed system

"Dual plumbed system" or "dual plumbed" means a system that utilizes separate piping systems for recycled water and potable water within a facility and where the recycled water is used for either of the following purposes:

(a) To serve plumbing outlets (excluding fire suppression systems) within a building or

(b) Outdoor landscape irrigation at individual residences.

60301.300. F-Specific bacteriophage MS-2

"F-specific bacteriophage MS-2" means a strain of a specific type of virus that infects coliform bacteria that is traceable to the American Type Culture Collection (ATCC 1559781) and is grown on lawns of E. coli (ATCC 15597).

60301.310. Facility

"Facility" means any type of building or structure, or a defined area of specific use that receives water for domestic use from a public water system as defined in section 116275 of the Health and Safety Code.

60301.320. Filtered wastewater

"Filtered wastewater" means an oxidized wastewater that meets the criteria in subsection (a) or (b):

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

(1) 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; and

(2) So that the turbidity of the filtered wastewater does not exceed any of the following:

(A) An average of 2 NTU within a 24-hour period;

(B) 5 NTU more than 5 percent of the time within a 24-hour period; and

California Health Laws Related to Recycled Water Title 22

(C) 10 NTU at any time.

(b) 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:

(1) 0.2 NTU more than 5 percent of the time within a 24-hour period; and

(2) 0.5 NTU at any time.

60301.330. Food crops

"Food crops" means any crops intended for human consumption.

60301.400. Hose bibb

"Hose bibb" means a faucet or similar device to which a common garden hose can be readily attached.

60301.550. Landscape impoundment

"Landscape impoundment" means an impoundment in which recycled water is stored or used for aesthetic enjoyment or landscape irrigation, or which otherwise serves a similar function and is not intended to include public contact.

60301.600.

Modal contact time

"Modal contact time" means the amount of time elapsed between the time that a tracer, such as salt or dye, is injected into the influent at the entrance to a chamber and the time that the highest concentration of the tracer is observed in the effluent from the chamber.

60301.620. Nonrestricted recreational impoundment

"Nonrestricted recreational impoundment" means an impoundment of recycled water, in which no limitations are imposed on body-contact water recreational activities.

60301.630. NTU

"NTU" (Nephelometric turbidity unit) means a measurement of turbidity as determined by the ratio of the intensity of light scattered by the sample to the intensity of incident light as measured by method 2130 B. in Standard Methods for the Examination of Water and Wastewater, 20th ed.; Eaton, A. D., Clesceri, L. S., and Greenberg, A. E., Eds; American Public Health Association: Washington, DC, 1995; p. 2-8.

60301.650. Oxidized wastewater.

"Oxidized wastewater" means wastewater in which the organic matter has been stabilized, is nonputrescible, and contains dissolved oxygen.

60301.660. Peak dry weather design flow

"Peak Dry Weather Design Flow" means the arithmetic mean of the maximum peak flow rates sustained over some period of time (for example three hours) during the maximum 24-hour dry weather period. Dry weather period is defined as periods of little or no rainfall.

60301.700. Recycled water agency.

"Recycled water agency" means the public water system, or a publicly or privately owned or operated recycled water system, that delivers or proposes to deliver recycled water to a facility.

60301.710. Recycling plant

"Recycling plant" means an arrangement of devices, structures, equipment, processes and controls which produce recycled water.

60301.740. Regulatory Agency

"Regulatory agency" means the California Regional Water Quality Control Board(s) that have jurisdiction over the recycling plant and use areas.

60301.750. Restricted access golf course

"Restricted access golf course" means a golf course where public access is controlled so that areas irrigated with recycled water cannot be used as if they were part of a park, playground, or school yard and where irrigation is conducted only in areas and during periods when the golf course is not being used by golfers.

60301.760. Restricted recreational impoundment

"Restricted recreational impoundment" means an impoundment of recycled water in which recreation is limited to fishing, boating, and other non-body-contact water recreational activities.

60301.800. Spray irrigation

"Spray irrigation" means the application of recycled water to crops to maintain vegetation or support growth of vegetation by applying *it* from sprinklers.

Section 60301.830. Standby Unit Process.

"Standby unit process" means an alternate unit process or an equivalent alternative process which is maintained in operable condition and which is capable of providing comparable treatment of the actual flow through the unit for which it is a substitute.

60301.900. Undisinfected secondary recycled water.

"Undisinfected secondary recycled water" means oxidized wastewater.

60301.920. Use area

"Use area" means an area of recycled water use with defined boundaries. A use area, may contain one or more facilities.

ARTICLE 2. SOURCES OF RECYCLED WATER.

60302. Source specifications.

The requirements in this chapter shall only apply to recycled water from sources that contain domestic waste, in whole or in part.

ARTICLE 3. USES OF RECYCLED WATER.

60303. Exceptions

The requirements set forth in this chapter shall not apply to the use of recycled water onsite at a water recycling plant, or wastewater treatment plant, provided access by the public to the area of onsite recycled water use is restricted.

60304. Use of recycled water for irrigation

(a) Recycled water used for the surface irrigation of the following shall be a disinfected tertiary recycled water, except that for filtration pursuant to Section 60301.320(a) coagulation need not be used as part of the treatment process provided that the filter effluent turbidity does not exceed 2 NTU, the turbidity of the influent to the filters is continuously measured, the influent turbidity does not exceed 5 NTU for more than 15 minutes and never exceeds 10 NTU, and that there is the capability to automatically activate chemical addition or divert the wastewater should the filter influent turbidity exceed 5 NTU for more than 15 minutes:

- (1) Food crops, including all edible root crops, where the recycled water comes into contact with the edible portion of the crop,
- (2) Parks and playgrounds,
- (3) School yards,
- (4) Residential landscaping,

(5) Unrestricted access golf courses, and

(6) Any other irrigation use not specified in this section and not prohibited by other sections of the California Code of Regulations.

(b) Recycled water used for the surface irrigation of food crops where the edible portion is produced above ground and not contacted by the recycled water shall be at least disinfected secondary-2.2 recycled water.

(c) Recycled water used for the surface irrigation of the following shall be at least disinfected secondary-2.3 recycled water:

(1) Cemeteries,

(2) Freeway landscaping,

(3) Restricted access golf courses,

(4) Ornamental nursery stock and sod farms where access by the general public is not restricted.

{5} Pasture for animals producing milk for human consumption, and

(6) Any nonedible vegetation where access is controlled so that the irrigated area cannot be used as if it were part of a park, playground or school yard

(d) Recycled wastewater used for the surface irrigation of the following shall be at least undisinfected secondary recycled water:

(1) Orchards where the recycled water does not come into contact with the edible portion of the crop,

(2) Vineyards where the recycled water does not come into contact with the edible portion of the crop,

(3) Non food-bearing trees (Christmas tree farms are included in this category provided no irrigation with recycled water occurs for a period of 14 days prior to harvesting or allowing access by the general public),

(4) Fodder and fiber crops and pasture for animals not producing milk for human consumption,

(5) Seed crops not eaten by humans,

(6) Food crops that must undergo commercial pathogen-destroying processing before being consumed by humans, and

(7) Ornamental nursery stock and sod farms provided no irrigation with recycled water occurs for a period of 14 days prior to harvesting, retail sale, or allowing access by the general public.

(e) No recycled water used for irrigation, or soil that has been irrigated with recycled water, shall come into contact with the edible portion of food crops eaten raw by humans unless the recycled water complies with subsection (a).

60305. Use of recycled water for impoundments.

(a) Except as provided in subsection (b), recycled water used as a source of water supply for nonrestricted recreational impoundments shall be disinfected tertiary recycled water that has been subjected to conventional treatment.

(b) Disinfected tertiary recycled water that has not received conventional treatment may be used for nonrestricted recreational impoundments provided the recycled water is monitored for the presence of pathogenic organisms in accordance with the following:

(1) During the first 12 months of operation and use the recycled water shall be sampled and analyzed monthly for *Giardia*, enteric viruses, and *Cryptosporidium*. Following the first 12 months of use, the recycled water shall be sampled and analyzed quarterly for *Giardia*, enteric viruses, and *Cryptosporidium*. The ongoing monitoring may be discontinued after the first two years of operation with the approval of the department. This monitoring shall be in addition to the monitoring set forth in section 60321.

(2) The samples shall be taken at a point following disinfection and prior to the point where the recycled water enters the use impoundment. The samples shall be analyzed by an approved laboratory and the results submitted quarterly to the regulatory agency.

(c) The total coliform bacteria concentrations recreational impoundments, measured at a the point between the disinfection process and the point of entry to the use impoundment, shall comply with the criteria specified in section 60301.230 (b) for disinfected tertiary recycled water.

(d) Recycled water used as a source of supply for restricted recreational impoundments and for any publicly accessible impoundments at fish hatcheries shall be at least disinfected secondary-2.2 recycled water.

(e) Recycled water used as a source of supply for landscape impoundments that do not utilize decorative fountains shall be at least disinfected secondary-23 recycled water.

60306. Use of recycled water for cooling

(a) Recycled water used for industrial or commercial cooling or air conditioning that involves the use of a cooling tower, evaporative condenser, spraying or any mechanism that creates a mist shall be a disinfected tertiary recycled water.

(b) Use of recycled water for industrial or commercial cooling or air conditioning that does not involve the use of a cooling tower, evaporative condenser, spraying, or any mechanism that creates a mist shall be at least disinfected secondary-23 recycled water.

(c) Whenever a cooling system, using recycled water in conjunction with an air conditioning facility, utilizes a cooling tower or otherwise creates a mist that could come into contact with employees or members of the public, the cooling system shall comply with the following:

1) A drift eliminator shall be used whenever the cooling system is in operation.

(2) A chlorine, or other, biocide shall be used to treat the cooling system recirculating water to minimize the growth of *Legionella* and other micro-organisms.

60307. Use of recycled water for other purposes

(a) Recycled water used for the following shall be disinfected tertiary recycled water, except that for filtration being provided pursuant to Section 60301.320(a) coagulation need not be used as part of the treatment process provided that the filter effluent turbidity does not exceed 2 NTU, the turbidity of the influent to the filters is continuously measured, the influent turbidity does not exceed 5 NTU for more than 15 minutes and never exceeds 10 NTU, and that there is the capability to automatically activate chemical addition or divert the wastewater should the filter influent turbidity exceed 5 NTU for more than 15 minutes:

- (1) Flushing toilets and urinals,
- (2) Priming drain traps,
- (3) Industrial process water that may come into contact with workers,
- (4) Structural fire fighting,
- (5) Decorative fountains,
- (6) Commercial laundries,
- (7) Consolidation of backfill around potable water pipelines,
- (8) Artificial snow making for commercial outdoor use, and
- (9) Commercial car washes, including hand washes if the recycled water is not heated, where the general public is excluded from the washing process.

(b) Recycled water used for the following uses shall be at least disinfected secondary- 23 recycled water:

- (1) Industrial boiler feed,
- (2) Nonstructural fire fighting,
- (3) Backfill consolidation around nonpotable piping,
- (4) Soil compaction,
- (5) Mixing concrete,
- (6) Dust control on roads and streets,
- (7) Cleaning roads, sidewalks and outdoor work areas and
- (8) Industrial process water that will not come into contact with workers.

(c) Recycled water used for flushing sanitary sewers shall be at least undisinfected secondary recycled water.

ARTICLE 4. USE AREA REQUIREMENTS.

60310. Use area requirements

(a) No irrigation with disinfected tertiary recycled water shall take place within 50 feet of any domestic water supply well unless all of the following conditions have been met:

(1) A geological investigation demonstrates that an aquitard exists at the well between the uppermost aquifer being drawn from and the ground surface.

(2) The well contains an annular seal that extends from the surface into the aquitard.

(3) The well is housed to prevent any recycled water spray from coming into contact with the wellhead facilities.

(4) The ground surface immediately around the wellhead is contoured to allow surface water to drain away from the well.

(5) The owner of the well approves of the elimination of the buffer zone requirement.

(b) No impoundment of disinfected tertiary recycled water shall occur within 100 feet of any domestic water supply well.

(c) No irrigation with, or impoundment of, disinfected secondary-2.2 or disinfected secondary-23 recycled water shall take place within 100 feet of any domestic water supply well.

(d) No irrigation with, or impoundment of, undisinfected secondary recycled water shall take place within 150 feet of any domestic water supply well.

(e) Any use of recycled water shall comply with the following:

(1) Any irrigation runoff shall be confined to the recycled water use area, unless the runoff does not pose a public health threat and is authorized by the regulatory agency.

(2) Spray, mist, or runoff shall not enter dwellings, designated outdoor eating areas, or food handling facilities.

(3) Drinking water fountains shall be protected against contact with recycled water spray, mist, or runoff.

(f) No spray irrigation of any recycled water, other than disinfected tertiary recycled water, shall take place within 100 feet of a residence or a place where public exposure could be similar to that of a park, playground, or school yard.

(g) All use areas where recycled water is used that are accessible to the public shall be posted with signs that are visible to the public, in a size no less than 4 inches high by 8 inches wide, that include the following wording: "RECYCLED WATER - DO NOT DRINK". Each sign shall display an international symbol similar to that shown in figure 60310-A. The Department may accept alternative signage and wording, or an educational program, provided the applicant demonstrates to the Department that the alternative approach will assure an equivalent degree of public notification.

(h) Except as allowed under section 7604 of title 17, California Code of Regulations, r physical connection shall be made or allowed to exist between any recycled water system and any separate system conveying potable water.

(i) The portions of the recycled water piping system that are in areas subject to access by the general public shall not include any hose bibbs. Only quick couplers that differ from those used on the potable water system shall be used on the portions of the recycled water piping system in areas subject to public access.



Water Recycling Criteria

FIGURE 60310-A

ARTICLE 5. DUAL PLUMBED RECYCLED WATER SYSTEMS,

60313. General requirements.

(a) No person other than a recycled water agency shall deliver recycled water to a dual- plumbed facility.

(b) No recycled water agency shall deliver recycled water for any internal use to any individually-owned residential units including free-standing structures, multiplexes, or condominiums.

(c) No recycled water agency shall deliver recycled water for internal use except for fire suppression systems, to any facility that produces or processes food products or beverages. For purposes of this Subsection, cafeterias or snack bars in a facility whose primary function does not involve the production or processing of foods or beverages are not considered facilities that produce or process foods or beverages.

(d) No recycled water agency shall deliver recycled water to a facility using a dual plumbed system unless the report required pursuant to section 13522.5 of the Water Code, and which meets the requirements set forth in section 60314, has been submitted to, and approved by, the regulatory agency.

60314. Report submittal

(a) For dual-plumbed recycled water systems, the report submitted pursuant to section 13522.5 of the Water Code shall contain the following information in addition to the information required by section 60323:

(1) A detailed description of the intended use area identifying the following:

(A) The number, location, and type of facilities within the use area proposing to use dual plumbed systems,

(B) The average number of persons estimated to be served by each facility on a daily basis,

(C) The specific boundaries of the proposed use area including a map showing the location of each facility to be served,

(D) The person or persons responsible for operation of the dual plumbed system at each facility, and

(E) The specific use to be made of the recycled water at each facility.

(2) Plans and specifications describing the following:

(A) Proposed piping system to be used,

(B) Pipe locations of both the recycled and potable systems,

(C) Type and location of the outlets and plumbing fixtures that will be accessible to the public, and

(D) The methods and devices to be used to prevent backflow of recycled water into the public water system.

(3) The methods to be used by the recycled water agency to assure that the installation and operation of the dual plumbed system will not result in cross connections between the recycled water piping system and the potable water piping system. This shall include a description of pressure, dye or other test methods to be used to test the system every four years.

(b) A master plan report that covers more than one facility or use site may be submitted provided the report includes the information required by this section. Plans and specifications for individual facilities covered by the report may be submitted at any time prior to the delivery of recycled water to the facility.

60315. Design requirements

The public water supply shall not be used as a backup or supplemental source of water for a dual-plumbed recycled water system unless the connection between the two systems is protected by an air gap separation which complies with the requirements of sections 7602 (a) and 7603 (a) of title 17, California Code of Regulations, and the approval of the public water system has been obtained.

60316. Operation requirements

(a) Prior to the initial operation of the dual-plumbed recycled water system and annually thereafter, the Recycled Water Agency shall ensure that the dual plumbed system within each facility and use area is inspected for possible cross connections with the potable water system. The recycled water system shall also be tested for possible cross connections at least once every four years. The testing shall be conducted in accordance with the method described in the report submitted pursuant to section 60314. The inspections and the testing shall be performed by a cross connection control specialist certified by the California-Nevada section of the American Water Works Association or an organization with equivalent certification requirements. A written report documenting the result of the inspection or testing for the prior year shall be submitted to the department within 30 days following completion of the inspection or testing.

(b) The recycled water agency shall notify the department of any incidence of backflow from the dual-plumbed recycled water system into the potable water system within 24 hours of the discovery of the incident.

(c) Any backflow prevention device installed to protect the public water system serving the dual-plumbed recycled water system shall be inspected and maintained in accordance with section 7605 of Title 17, California Code of Regulations.

ARTICLE 5.1 GROUNDWATER RECHARGE

60320. Groundwater recharge

(a) Reclaimed water used for groundwater recharge of domestic water supply aquifers by surface spreading shall be at all times of a quality that fully protects public health. The State Department of Health Services' recommendations to the Regional Water Quality Control Boards for proposed groundwater recharge projects and for expansion of existing projects will be made on an individual case basis where the use of reclaimed water involves a potential risk to public health.

(b) The State Department of Health Services' recommendations will be based on all relevant aspects of each project, including the following factors: treatment provided; effluent quality and quantity; spreading area operations; soil characteristics; hydrogeology; residence time; and distance to withdrawal.

(c) The State Department of Health Services will hold a public hearing prior to making the final determination regarding the public health aspects of each groundwater recharge project. Final recommendations will be submitted to the Regional Water Quality Control Board in an expeditious manner.

ARTICLE 5.5. OTHER METHODS OF TREATMENT

60320.5. Other methods of treatment

Methods of treatment other than those included in this chapter and their reliability features may be accepted if the applicant demonstrates to the satisfaction of the State Department of Health that the methods of treatment and reliability features will assure an equal degree of treatment and reliability.

ARTICLE 6. SAMPLING AND ANALYSIS

60321. Sampling and analysis

(a) Disinfected secondary-23, disinfected secondary-2.2, and disinfected tertiary recycled water shall be sampled at least once daily for total coliform bacteria. The samples shall be taken from the disinfected effluent and shall be analyzed by an approved laboratory.

(b) Disinfected tertiary recycled water shall be continuously sampled for turbidity using a continuous turbidity meter and recorder following filtration. Compliance with the daily average operating filter effluent turbidity shall be determined by averaging the levels of recorded turbidity taken at four-hour intervals over a 24-hour period. Compliance with turbidity pursuant to section 60301.320 (a)(2)(B) and (b)(1) shall be determined using the levels of recorded turbidity taken at intervals of no more than 1.2-hours over a 24-hour period. Should the continuous turbidity meter and recorder fail, grab sampling at a minimum frequency of 1.2-hours may be substituted for a period of up to 24-hours. The results of the daily average turbidity determinations shall be reported quarterly to the regulatory agency.

(c) The producer or supplier of the recycled water shall conduct the sampling required in subsections (a) and (b).

ARTICLE 7. ENGINEERING REPORT AND OPERATIONAL REQUIREMENTS

60323. Engineering report

(a) No person shall produce or supply reclaimed water for direct reuse from a proposed water reclamation plant unless he files an engineering report.

(b) The report shall be prepared by a properly qualified engineer registered in California and experienced in the field of wastewater treatment, and shall contain a description of the design of the proposed reclamation system. The report shall clearly indicate the means for compliance with these regulations and any other features specified by the regulatory agency.

(c) The report shall contain a contingency plan which will assure that no untreated or inadequately treated wastewater will be delivered to the use area.

60325. Personnel

(a) Each reclamation plant shall be provided with a sufficient number of qualified personnel to operate the facility effectively so as to achieve the required level of treatment at all times.

(b) Qualified personnel shall be those meeting requirements established pursuant to Chapter 9 (commencing with Section 13625) of the Water Code.

60327. Maintenance

A preventive maintenance program shall be provided at each reclamation plant to ensure that all equipment is kept in a reliable operating condition.

60329. Operating records and reports

(a) Operating records shall be maintained at the reclamation plant or a central depository within the operating agency. These shall include: all analyses specified in the reclamation criteria; records of operational problems, plant and equipment breakdowns, and diversions to emergency storage or disposal; all corrective or preventive action taken.

(b) Process or equipment failures triggering an alarm shall be recorded and maintained as a separate record file. The recorded information shall include the time and cause of failure and corrective action taken.

(c) A monthly summary of operating records as specified under (a) of this section shall be filed monthly with the regulatory agency.

(d) Any discharge of untreated or partially treated wastewater to the use area, and the cessation of same, shall be reported immediately by telephone to the regulatory agency, the State Department of Health, and the local health officer.

60331. Bypass

There shall be no bypassing of untreated or partially treated wastewater from the reclamation plant or any intermediate unit processes to the point of use.

ARTICLE 8. GENERAL REQUIREMENTS OF DESIGN

60333. Flexibility of design

The design of process piping, equipment arrangement, and unit structures in the reclamation plant must allow for efficiency and convenience in operation and maintenance and provide flexibility of operation to permit the highest possible degree of treatment to be obtained under varying circumstances.

60335. Alarms

(a) Alarm devices required for various unit processes as specified in other sections of these regulations shall be installed to provide warning of:

(1) Loss of power from the normal power supply.

(2) Failure of a biological treatment process.

(3) Failure of a disinfection process.

(4) Failure of a coagulation process.

(5) Failure of a filtration process.

(6) Any other specific process failure for which warning is required by the regulatory agency.

(b) All required alarm devices shall be independent of the normal power supply of the reclamation plant.

(c) The person to be warned shall be the plant operator, superintendent, or any other responsible person designated by the management of the reclamation plant and capable of taking prompt corrective action.

(d) Individual alarm devices may be connected to a master alarm to sound at a location where it can be conveniently observed by the attendant. In case the reclamation plant is not attended full time, the alarm(s) shall be connected to sound at a police station, fire station or other full time service unit with which arrangements have been made to alert the person in charge at times that the reclamation plant is unattended.

60337. Power supply

The power supply shall be provided with one of the following reliability features:

(a) Alarm and standby power source.

(b) Alarm and automatically actuated short-term retention or disposal provisions as specified in Section 60341.

(c) Automatically actuated long-term storage or disposal provisions as specified in Section 60341.

ARTICLE 9. RELIABILITY REQUIREMENTS FOR PRIMARY EFFLUENT

60339. Primary treatment

Reclamation plants, producing reclaimed water exclusively for uses for which primary effluent is permitted shall be provided with one of the following reliability features:

(a) Multiple primary treatment units capable of producing primary effluent with one unit not in operation.

(b) Long-term storage or disposal provisions as specified in Section 60341

Note: Use of primary effluent for recycled water is no longer allowed. [repeal of Section 60309, effective December 2000]

ARTICLE 10. RELIABILITY REQUIREMENTS FOR FULL TREATMENT

60341. Emergency storage or disposal

(a) Where short-term retention or disposal provisions are used as a reliability feature, these shall consist of facilities reserved for the purpose of storing or disposing of untreated or partially treated

wastewater for at least a 24-hour period. The facilities shall include all the necessary diversion devices, provisions for odor control, conduits, and pumping and pump back equipment. All of the equipment other than the pump back

equipment shall be either independent of the normal power supply or provided with a standby power source.

(b) Where long-term storage or disposal provisions are used as a reliability feature, these shall consist of ponds, reservoirs, percolation areas, downstream sewers leading to other treatment or disposal facilities or any other facilities reserved for the purpose of emergency storage or disposal of untreated or partially treated wastewater. These facilities shall be of sufficient capacity to provide disposal or storage of wastewater for at least 20 days, and shall include all the necessary diversion works, provisions for odor and nuisance control, conduits, and pumping and pump back equipment. All of the equipment other than the pump back equipment shall be either independent of the normal power supply or provided with a standby power source.

(c) Diversion to a less demanding reuse is an acceptable alternative to emergency disposal of partially treated wastewater provided that the quality of the partially treated wastewater is suitable for the less demanding reuse.

(d) Subject to prior approval by the regulatory agency, diversion to a discharge point which requires lesser quality of wastewater is an acceptable alternative to emergency disposal of partially treated wastewater.

(e) Automatically actuated short-term retention or disposal provisions and automatically actuated long-term storage or disposal provisions shall include, in addition to provisions of (a), (b), (c), or (d) of this section, all the necessary sensors, instruments, valves and other devices to enable fully automatic diversion of untreated or partially treated wastewater to approved emergency storage or disposal in the event of failure of a treatment process and a manual reset to prevent automatic restart until the failure is corrected.

60343. Primary treatment

All primary treatment unit processes shall be provided with one of the following reliability features:

(a) Multiple primary treatment units capable of producing primary effluent with one unit not in operation.

(b) Standby primary treatment unit process.

(c) Long-term storage or disposal provisions.

60345. Biological treatment

All biological treatment unit processes shall be provided with one of the following reliability features:

(a) Alarm and multiple biological treatment units capable of producing oxidized wastewater with one unit not in operation.

(b) Alarm, short-term retention or disposal provisions, and standby replacement equipment.

(c) Alarm and long-term storage or disposal provisions.

(d) Automatically actuated long-term storage or disposal provisions.

60347. Secondary sedimentation

All secondary sedimentation unit processes shall be provided with one of the following reliability features:

(a) Multiple sedimentation units capable of treating the entire flow with one unit not in operation.

(b) Standby sedimentation unit process.

(c) Long-term storage or disposal provisions.

60349. Coagulation

(a) All coagulation unit processes shall be provided with the following mandatory features for uninterrupted coagulant feed:

1) Standby feeders,

(2) Adequate chemical stowage and conveyance facilities,

(3) Adequate reserve chemical supply, and

(4) Automatic dosage control,

(b) All coagulation unit processes shall be provided with one of the following reliability features:

(1) Alarm and multiple coagulation units capable of treating the entire flow with one unit not in operation;

(2) Alarm, short-term retention or disposal provisions, and standby replacement equipment;

(3) Alarm and long-term storage or disposal provisions;

(4) Automatically actuated long-term storage or disposal provisions, or

(5) Alarm and standby coagulation process.

60351. Filtration

All filtration unit processes shall be provided with one of the following reliability features:

(a) Alarm and multiple filter units capable of treating the entire flow with one unit not in operation.

(b) Alarm, short-term retention or disposal provisions and standby replacement equipment.

(c) Alarm and long-term storage or disposal provisions.

(d) Automatically actuated long-term storage or disposal provisions.

(e) Alarm and standby filtration unit process.

Section 60353. Disinfection

(a) All disinfection unit processes where chlorine is used as the disinfectant shall be provided with the following features for uninterrupted chlorine feed:

- (1) Standby chlorine supply,
- (2) Manifold systems to connect chlorine cylinders,
- (3) Chlorine scales, and
- (4) Automatic devices for switching to full chlorine cylinders.

Automatic residual control of chlorine dosage, automatic measuring and recording of chlorine residual, and hydraulic performance studies may also be required.

(b) All disinfection unit processes where chlorine is used as the disinfectant shall be provided with one of the following reliability features:

- (1) Alarm and standby chlorinator;
- (2) Alarm, short-term retention or disposal provisions, and standby replacement equipment;
- (3) Alarm and long-term storage or disposal provisions;
- (4) Automatically actuated long-term storage or disposal provisions; or
- (5) Alarm and multiple point chlorination, each with independent power source, separate chlorinator, and separate chlorine supply.

60355. Other alternatives to reliability requirements

Other alternatives to reliability requirements set forth in Articles 8 to 10 may be accepted if the applicant demonstrates to the satisfaction of the State Department of Health that the proposed alternative will assure an equal degree of reliability.



California Regional Water Quality Control Board

Lahontan Region **31-370.40.4A**



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AMENDED MONITORING AND REPORTING PROGRAM NO. 6-00-57-A03- LOS ANGELES COUNTY SANITATION DISTRICT NO. 20 PALMDALE AND LOS ANGELES WORLD AIRPORT - PALMDALE WATER RECLAMATION PLANT, PALMDALE, LOS ANGELES COUNTY

This letter transmits the enclosed Monitoring and Reporting Program No. 6-00-57-A03 amending the Monitoring and Reporting Program No. 6-00-57-A01 for the Palmdale Water Reclamation Plant. The Monitoring and Reporting Program reflects the changes consistent with the amended Vadose Zone Monitoring Plan submitted by the District. The main changes in the monitoring program and rationale for additional items requested in the Monitoring and Reporting Program are described below:

1. Extension Request for Submittal of Self-Monitoring Reports

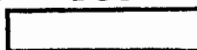
I have amended the Monitoring and Reporting Program (No. 6-00-57-A03) to allow 60 days for submitting the Annual Report (Attached). This schedule is more consistent with the annual report submittals required of other Category 1 Dischargers in Region 6. No new data collection is required for the annual report and 60 days should provide sufficient time to compile existing information from the prior calendar year for an annual report.

The District is correct that revised Monitoring and Reporting Program No. 00-57-A01 requires a shorter submittal period for monthly and quarterly reports than previously allowed (30 days instead of 60 days). I do not accept the District's request for a monthly and quarterly report submittal period longer than 30 days. The District's major concern relates to the logistical difficulty in completing field sampling, laboratory analysis and report compilation within 30 days. The State Water Resources Control Board (SWRCB) recommends that all monitoring reports be submitted within 30 days of the end of the reporting period. The factors recommended by the SWRCB in determining Self Monitoring Reports (SMR) submittal dates are: 1) complexity of sampling, 2) approved laboratory availability, 3) time for data analysis and review, and 4) reporting frequency¹. These factors were considered in my purposeful decision to reduce the SMR submittal period from 60-days to 30-days. One month (30-days) is the best balance between the District's need to collect and compile reporting information and the Regional Board's need to verify compliance in a timely manner.

¹ State Water Resources Control Board, Administrative Procedures Manual, Water Quality, Chapter 2, Waste Discharge Requirements, page 8, May 1998

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California Environmental Protection Agency

2. Relationship between Need for and Benefit from Reports

The District is concerned that newly required reports [Annual Cropping Plan, Quarterly Effluent Management Site Monitoring Report, Annual Health and Safety Plan, and Quarterly Effluent Management Site Operations Report] represent a significant burden and cost and provide no reasonable relationship between their need and benefit as required under Water Code Section 13267.

The purpose of these reports is to ensure that the District provides evidence to demonstrate that: 1) agricultural re-use areas in the effluent management site do not further contribute to groundwater pollution (e.g. demonstrations that agronomic application rates are used), 2) nuisance conditions are not created, and 3) effluent disposal operations are conducted as planned. Additional rationale for these reports follows.

Annual Cropping Plan [Monitoring and Reporting Program No. 00-57-A01, I.G.1] – This plan is requested to provide a reasonable estimate of the amount of nitrogen uptake anticipated in the upcoming year based on the expected type of crop grown and irrigation water needed. Implementing this plan should result in the most efficient water use to irrigate at agronomic rates. This plan should be considered a site-specific annual update to your previously submitted Farm Management Plan.

Quarterly Effluent Management Site Monitoring Report [Monitoring and Reporting Program No. 00-57-A01, I.G.2] – This plan is requested to provide a reasonable comparison of the projected agronomic crop needs made in the Annual Cropping Plan with the actual crop production for the last three months. The monthly report must include some quantifiable measure of the crop growth status to validate nitrogen update assumptions. Note that Amended Cleanup and Abatement Order No. R6V-2003-056-A01 specifically allows the District to prepare and submit a single report that satisfies both the quarterly: a) Cleanup and Abatement Order, and b) Monitoring and Reporting Program requirements relating to agricultural re-use areas.

Annual Health and Safety Evaluation [Monitoring and Reporting Program No. 00-57-A01, I.G.3] – Amended Monitoring and Reporting Program No. 00-57-A03 now calls this report “Recycled Water Treatment and Use Report.” The purpose for this report is to ensure that the District complies with Department of Health Services (DHS) criteria for recycled water use. Specific examples of DHS or Regional Board criteria that should be evaluated monthly are:

- a. Section 60310(g) (Use Area Requirements), Title 22, California Code of Regulations (CCR), requires that “...*all areas where recycled water is used that are accessible to the public shall be posted with signs...*”
- b. Section 60304(d) requires a “...*period of 14 days...*” from the last recycled water application to the harvest of certain crops like Christmas Trees that are irrigated with recycled water.
- c. Board Order No. 6-00-57, Section I.B.2 requires reporting if any recycled water was discharged to Little Rock Wash.

The District contends that the Regional Board has no authority to require the District to submit a General Health and Safety Plan. The Amended Monitoring and Reporting program does not require a Health and Safety Plan to be submitted. It does, however, require the District to report on the

health and safety measures taken to ensure the safe use of recycled water in such areas as: 1) worker training, 2) special equipment purchases, 3) worker hygiene provisions and 4) evidence that recycled water meets Title 22, CCR criteria for recycled water treatment and use. It is reasonable to request this information.

Quarterly Effluent Management Site Operations Report [Monitoring and Reporting Program 6-00-57-A01, I.G.4] – Board Order No. 6-00-57 restricts the use of recycled water to authorized disposal areas described in the Order. In order to ensure there is no offsite migration of recycled water, the District proposed separately to develop Best Management Practices as part of a Wind Speed Monitoring Study. Board staff comments on the Study will be sent in a separate letter. The focus of this report is to ensure the District meets the DHS criteria for recycled water use. It is reasonable to request this report.

3. Vadose Zone Monitoring

Board staff recognizes the volume restrictions inherent in lysimeter use. The constituent list for vadose zone pore-water sampling was modified in Monitoring and Reporting Program R6V-2003-056-A03 to reflect the sample volume limitations.

There are two locations of higher permeability soils that require individual vadose zone monitoring stations not proposed in the District's plan. The MRP R6V-2003-056-A03 incorporates these two monitoring stations.

4. Duplicative Reporting

The District is concerned about duplicative reporting requests between MRP No. 00-57-A01 and CAO No. R6V-2003-056. Three specific examples are listed.

- a. Fate of Nitrogen – The Monitoring and Reporting Program 6-00-57-A01, Section I.G.1 requires a “*description of the fate of nitrogen that has been applied or is available in the root zone that is not accounted for in the crops harvested.*” Cleanup and Abatement Order No R6V-2003-056, Section 3.1.5 requires “*an on-going evaluation of the amount (pounds per year) of nitrogen being discharged to groundwater (does not include nitrogen that is used by crops based on actual production data) that is cumulative from the date of this order.*” These two requirements are similar, but not duplicative. One requires an evaluation of the amount and the other the fate of excess nitrogen. Both items are of concern and may be evaluated in a single report as previously stated.
- b. Amount of Nitrogen in Harvest - Monitoring and Reporting Program 6-00-57-A01, Section I.G.2.b. requires “*for each harvest completed during the quarter, the report must include the total amount of nitrogen harvested based on the results of site specific tissue analyses.*” Cleanup and Abatement Order No. No R6V-2003-056, Section 3.1.5 contains harvest data submittal requirements, as noted above. These two requirements are similar, but not duplicative. While both requirements require an evaluation of the amount of nitrogen taken up by a crop, the Monitoring and Reporting Program requires validation by crop tissue samples. The Regional Board staff has discussed with District staff that it is appropriate to use literature values to estimate crop uptake during the growing season. Actual crop production should be verified at harvest by such means as crop tissue samples. For the

tree crops, it is acceptable to use literature values to describe the amount of nitrogen taken up during the period.

- c. State Department of Health Services Recycled Water Requirements - Monitoring and Reporting Program 6-00-57-A01, Section I.G.2.d. requires *“information that demonstrates that all recycled water applied complies with the State Department of Health Services water recycling requirements specified in the Order. The information should include verification that the level of treatment required for water recycling was achieved and that methods of recycled water application were implemented as required.”* The District maintains that this is duplicative reporting. Waste Discharge Requirements contain effluent limits. The Monitoring and Reporting Program requests information to demonstrate compliance with the limits. The SMR should have a separate section discussing narrative compliance with recycled water criteria for the period. Reference may be made to supporting data tables as needed to demonstrate compliance with numerical criteria.

If you should have any further questions, please contact me at (530) 542-5412 or Hisam A. Baqai, Supervising Engineer at (760) 241-7325 in the Victorville office.

Sincerely,



HAROLD J. SINGER
EXECUTIVE OFFICER

Enclosure: Amended MRP 6-00-057-A03

cc: Palmdale Mailing List

JC/rc /lacs20 – Monitoring and Reporting Program Extension Response

**LOS ANGELES COUNTY SANITATION DISTRICT #20
PALMDALE – MAILING LIST**

Regional Board Members

Dave Snyder, County Sanitation District of Los Angeles County
Raymond Tremblay, County Sanitation District of Los Angeles County
Gary Brown, Director, Environmental Mgt Div, Los Angeles World Airports
Lyle Haynes, Asset Management Division, Los Angeles World Airports
Andrew Huang, Environmental Supervisor, Los Angeles World Airports
Paul Green, Chief Operating Officer, Los Angeles World Airports
Lewis Trout, Senior Real Estate Officer, Palmdale Regional Airport
Sharon Runner, Assemblywoman, District 36
California State Senate, 17th District
Supervisor Michael D. Antonovich, Los Angeles Co Supervisor, 5th District
Donald R. Knabe, Los Angeles Co Supervisor, 4th District
James C. Ledford, Jr, Mayor – City of Palmdale
James Root, Mayor Pro Tem, City of Palmdale
Bob Tune, City Manager, City of Palmdale
Frank Roberts, Mayor, City of Lancaster
James R. Williams, City of Lancaster
Dennis Davenport, Acting City Manager, City of Lancaster
Peter Mok, Asc / EMVC, Air Force Plant 42
Robin Stankoff, Wright Patterson AFB
Bob Pierotti, CA State Dept of Water Resources
Scott Harris, CA Dept of Fish and Game
Verra Vecchio, CA Dept of Health Services, Office of Drinking Water
Sandy Houck, CA SWRCB, Office of Water Recycling DCWP
Judy Hohman, US Fish & Wildlife Service
Lloyd Huff, Chief, Los Angeles County DHS Cross Connection/Water Pollution Section
Kathleen Burr, Executive Director, Los Angeles County Farm Bureau
Dennis Lamoreaux, Palmdale Water District
Claudette L. Roberts, Palmdale Water District
Andy D. Rutledge, President, Antelope Valley- East Kern Water Agency
Isaac Barcelona, Palmdale Chamber of Commerce
Julie Drake, Antelope Valley Press
Lee Harrington, Harrington Farms
Antelope Valley Farming, LLC
Tony Moon, President, Greater Antelope Valley Economic Alliance
Diane Carlton, Greater Antelope Valley Assoc of Realtors
Gretchen Gutierrez, Building Industry Assoc., Antelope Valley Chapter
Steve Malicott, CEO, Antelope Valley Chamber of Commerce
Barbara Firseck, President, East Lancaster Property & Homeowners Assoc
Ron Ferrell, Vice President, Roosevelt Rural Town Council
Lyle Talbot
Marta Williamson
Julie Kyle
Chris Lynch, Jones Hall
Bill Huck, Stone and Youngberg
Mark Munchnick, Palmdale Chamber of Commerce
Rudy F. Camarena, Antelope Valley Hispanic Chamber of Commerce

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
LAHONTAN REGION

**AMENDED MONITORING AND REPORTING
PROGRAM NO. 00-57-A03
WDID NO. 6B190107069**

FOR

**LOS ANGELES COUNTY SANITATION DISTRICT NO. 20
AND THE CITY OF LOS ANGELES WORLD AIRPORTS
PALMDALE WATER RECLAMATION PLANT**

Los Angeles County

Monitoring and Reporting Program (MRP) 00-57, for the Los Angeles County Sanitation District No. 20 and City of Los Angeles World Airports (Dischargers), Palmdale Water Reclamation Plant (Facility), was revised as MRP 00-57A01, which updated and specified additional monitoring and reporting requirements for the Dischargers, became effective on February 26, 2004.

Board Order No. 6-00-57, which specified Waste Discharge Requirements (WDRs) and Water Recycling Requirements (WRRs) for the Dischargers, was subsequently amended in Board Order No. 6-00-57A01, which became effective on April 14, 2004, to authorize an expansion of the Effluent Management Site (EMS) for the Facility, to include Section 15, T6N, R11W, SBB&M, and to remove areas previously included in the authorized EMS, which are no longer applicable. In conjunction, amended MRP 00-57A02 was adopted for Section 15.

Monitoring and Reporting Program No. 00-57-A01 is amended as follows, effective within the first full month after signature (November 2004 period).

Monitoring and Reporting Program, 00-57-A01, Section I – MONITORING, E. Vadose Zone Monitoring – is replaced as follows.

E. Vadose Zone Monitoring

The existing vadose zone monitoring system consists of seven lysimeters as indicated on Attachment "A" of Board Order No. 6-00-57. Many of these lysimeters are dry or located in less than optimal locations. This system is inadequate and will be replaced.

The Discharger submitted a Draft Conceptual Vadose Zone Monitoring Plan on April 1, 2004 and Addendum on July 22, 2004 as a part of the sampling and analysis reporting requirement contained in Section II.A.1. The Plan was revised on August 19, 2004. Upon acceptance of the Discharger's Vadose Zone Monitoring Plan, soil pore-fluid shall be collected from lysimeters identified in the accepted plan.

1. Lysimeters must be positioned in the appropriate locations and depths to provide a vertical distribution of vadose zone pore-fluid chemistry below the land spreading and irrigated areas of the EMS. Data collected from this vadose zone monitoring program shall be adequate to assist in the evaluation of irrigation efficiency at agricultural re-use.

2. Use of conventional ceramic soil suction lysimeters instead of pan lysimeters is acceptable.
3. Soil moisture sensors shall be placed at depths of 2, 3, 5, 10 and 14 feet below ground surface at each vadose zone monitoring station to signal the arrival of soil moisture as it approaches each lysimeter.
4. The District shall remove all non-operational vacuum suction lysimeters from the old vadose zone monitoring network and report completion no later than **January 1, 2006**.
5. The vadose zone monitoring system shall be sufficient to adequately monitor pore-moisture fluid from all representative soil types, irrigation methods and crop types.
6. Vadose zone monitoring shall be for the parameters and frequencies described in Table 1 below.

Table 1. Vadose Zone Parameters & Frequencies

Parameter	Units	Frequency
Total Kjeldahl Nitrogen	mg/L as N	Quarterly
Nitrate Nitrogen	mg/L as N	Quarterly
Ammonia Nitrogen	mg/L as N	Quarterly
Nitrite Nitrogen	mg/L as N	Quarterly
Total Dissolved Solids	mg/L	Quarterly
Bromoform	µg/L	Annually
Chloroform	µg/L	Annually
Dibromochloromethane	µg/L	Annually
Dichlorobromomethane	µg/L	Annually

7. Vadose zone monitoring shall be performed at the locations described in Table 2, below.

Table 2. Vadose Zone Monitoring Stations

Section	Pivot/Location	Number of Stations
9	1A0	1
	No. 2	1
	1AK – Cajon Loamy Sand	1
10	Pivot 5	1
	Pivot 7	3
	Pivot 1	1
	Pistachio Tree Farm	To Be Determined upon Final Acceptance of Vadose Sampling and Analysis Plan
11	Pivot 4 - Cajon Loamy Sand	1
15	Pivot 12	1

Monitoring and Reporting Program, 00-57-A01, Section I.G.2. – Effluent Management Site Monitoring – is replaced as follows.

- “2. The following shall be reported in the Effluent Management Site Monitoring Report on a quarterly basis.
 - a. Monthly analyses and a summary, by a certified soil scientist or qualified agronomist, of the amount of water and nitrogen applied or is available to the crops per irrigated field (see I.G.1.b. above). The analyses must compare the actual water and nitrogen applications to those predicted in the Annual Cropping Plan and discuss any significant differences. Additionally, this monthly report must include an evaluation of the actual crop production using normally accepted quantifiable measure of crop growth status to that projected in the Annual Cropping Plan at harvest.
 - b. For each harvest completed during the quarter, the report must include the total amount of nitrogen harvested based on the results of site-specific plant tissue analyses. Conservative estimates of the amount of nitrogen harvested may be used in lieu of site-specific plant tissue analysis provided the estimate is justified by literature references. The production from the field may be determined by multiplying the number of bales by an average bale weight. The results of this calculation must be compared to the total amount of nitrogen applied to the crop from all sources (wastewater, other water, and fertilizer) or available during production. Any significant differences must be addressed in the context of this crop and any modifications needed to the overall Farm Management Plan or Annual Cropping Plan.
 - c. Recycled water balance for the quarter and the crop cycle including: the amount of water applied to each field (see G.1.b. above), water losses due to irrigation efficiency, evapotranspiration, and the amount of water in storage in the vadose zone or available for percolation below the root zone. These values must be compared to the values proposed in the Annual Cropping Plan and any significant differences must be addressed. If recycled water is blended with non-recycled water to meet the increased water demand during warmer seasons, the quantity and percentage of recycled water and the total water applied shall be determined and reported. Nitrogen content of non-recycled water shall also be determined and reported.

Monitoring and Reporting Program, 00-57-A01, Section I.G.3. – Effluent Management Site Monitoring – is replaced as follows.


3. Monthly, the Discharger shall make a Recycled Water Treatment and Use Report that includes, but is not limited to the following:
 - a. Evidence of public and worker notification of the use of undisinfected reclaimed water, including use area posting as required in Cal. Code of Regs. Title 22, Section 60310(g).
 - b. Evidence of effective ongoing worker training in the safe handling of undisinfected reclaimed water, and log of maintenance activity showing use of undisinfected recycled water stopped during required maintenance, and flow stoppage prior to harvest. Record of trainers/trainees, when and what subjects covered.
 - d. List and location of special equipment provided to workers for handling undisinfected recycled water (i.e. gloves, respirators, and eye protection), record of provision and provisioner.
 - e. Provisions for worker hygiene in the field when using undisinfected reclaimed water, such as provision and quantity of freshwater washdown water and protective measures for food and drink handling.
 - f. Results of a daily use area inspection (when recycled water is used) to ensure that application of recycled water is consistent with use area criteria specified in Cal. Code of Regs, Title 22, Sections 60304(d) and 60310. Findings of the inspections shall be recorded in a permanent logbook maintained at the facility.
 - g. The Operating Records as required in Cal. Code of Regs, Title 22, Section 60329 to demonstrate that all recycled water applied complies with the State Department of Health Services water recycling requirements specified in the Order. The information should include verification that the treatment levels from disinfected secondary recycled water were achieved and that the methods of recycled water application were implemented as required in Title 22, Cal. Code of Regs, Section 60304(d).

Monitoring and Reporting Program, 00-57-A01, Section II - REPORTING, B. Submittal Periods, Item 3 - is changed as follows.

3. An annual monitoring report for the period from January to December shall be submitted by March 1st of each year. The report must contain:

- a. A summary and evaluation of the monthly and quarterly information in Reporting Requirement II.B.1 and II.B.2, which also includes compliance status;
- b. The names and grades of all the certified operators;
- c. Chemical Use Monitoring reporting information discussed in section I.H;
- d. The annual Federal Biosolids Report

Ordered by:



HAROLD J. SINGER
EXECUTIVE OFFICER

Dated: October 13, 2004



31-370.40.4A

California Regional Water Quality Control Board Lahontan Region



Alan C. Lloyd Ph.D.
Agency Secretary

Victorville Office
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<http://www.waterboards.ca.gov/lahontan>

Arnold Schwarzenegger
Governor

August 1, 2005

WDID NO. 6B190107069

James F. Stahl, Gen Mgr
Co Sanitation Dist of Los Angeles
P.O. Box 4998
Whittier, CA 90607-4998
Attn: Stephen Maguin

Paul Green, Chief Operating Officer
Environmental Management Division
Los Angeles World Airports
PO Box 92216, WPC
Los Angeles, CA 90009-2216
Attn: Gary Brown

ADOPTED BOARD ORDER NO. 6-00-57A03 and MONITORING AND REPORTING PROGRAM NO. 6-00-57A04 FOR AMENDED WASTE DISCHARGE REQUIREMENTS (WDRS) AND AMENDED MONITORING AND REPORTING PROGRAM - LOS ANGELES COUNTY SANITATION DISTRICT NO. 20 AND THE CITY OF LOS ANGELES WORLD AIRPORTS; PALMDALE WATER RECLAMATION PLANT, LOS ANGELES COUNTY

Enclosed are the original signed Board Orders for Waste Discharge Requirements No. 6-00-57A03 and Monitoring and Reporting Program No. 6-00-57A04 which were adopted at the Regional Water Quality Control Board meeting held in Bishop, California on July 13, 2005.

Sincerely,

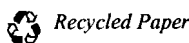
Rebecca Phillips
Office Technician

Enclosure: Adopted Board Order

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California Environmental Protection Agency



**CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
LAHONTAN REGION**

**AMENDED MONITORING AND REPORTING
PROGRAM NO. 00-57-A04
WDID NO. 6B190107069
FOR
LOS ANGELES COUNTY SANITATION DISTRICT NO. 20
PALMDALE WATER RECLAMATION PLANT**

Los Angeles County

The Monitoring and Reporting Program for the Los Angeles County Sanitation District No. 20, Palmdale Water Reclamation Plant (Facility), is as follows:

1. MRP 6-00-57-A01, effective February 26, 2004;
2. MRP 6-00-57-A02, effective April 14, 2004;
3. MRP 6-00-57-A03, effective October 13, 2004; and
4. MRP 6-00-57-A04, effective July 13, 2005."

The Monitoring and Reporting Program is being amended, effective within the first full month after signature, for the following reasons:

1. Installation of an additional vadose zone station in the tree farm;
2. Monitoring effectiveness of the chlorine disinfection system;
3. Sampling of new groundwater monitoring wells for the nitrate plume delineation; and
4. Monitoring recycled water use on Sections 14 and 16.

The District submitted a Sampling and Analysis Plan (SAP) dated April 26, 2005 that replaces the SAP dated June 18, 2004. The SAP describes sample collection methods, monitoring well purging procedures and laboratory reporting limits, quality control and assurance methods. That SAP is acceptable. It must be kept current and revised as necessary based on modified sampling and/or laboratory procedures, methods or locations.

Monitoring and Reporting Program, 00-57-A01, Section I – MONITORING, A. Flow Monitoring – is amended by adding the following.

8. The flow of recycled water to each center pivot irrigation system for each month shall be recorded. This information shall be used to assess the crop agronomic water and nutrient needs.

Monitoring and Reporting Program, 00-57-A01, Section I – MONITORING, C. Facility Effluent Monitoring – is amended by adding the following:

Table 1 – Disinfection Monitoring

Parameter	Units	Sample Type	Frequency
Total coliform	MPN/100 mL	Grab	Daily
Chlorine residual	mg/L	Grab	Weekly
Sodium hypochlorite demand	Kg/day	Record	Daily

Include a compliance evaluation with each monthly self-monitoring report evaluating the effluent coliform concentrations with respect to the applicable Title 22 criteria for recycled water use.

Monitoring and Reporting Program, 00-57-A01, Section I – MONITORING, D. Groundwater Monitoring – is replaced as follows.

A. Ground Water Monitoring

The ground water monitoring system is intended to evaluate the effects of the discharge from the unlined secondary oxidation/percolation ponds and land disposal and agricultural re-use operations. The network consists of the following wells.

Table 1 – Groundwater Monitoring Wells

Well	Well Screen Interval (feet bgs, see SAP, Table 3)	Location (Section No.)	Landowner
MW-1	360 – 400	21	Airport
MW-2	480 – 540	20	District
MW-4	289 – 334	9	Airport
MW-15	284 – 329	3	Airport
MW-16	286 – 331	10	Airport
MW-17	245 – 290	12	Airport
MW-18	290 – 335	11	Airport
MW-19	290 – 335	3	Airport
MW-20	257 – 295	9	Airport
MW-21	300 – 339	2	Airport
MW-22	282 – 320	4	Airport
MW-23	268 – 397	16	District
MW-24	304 – 328	15	Airport
MW-25	320 – 349	17	Airport
MW-26	361 – 372	2	Airport
MW-27	390 – 399	2	Airport
MW-28	420 – 430	4	Airport
MW-29	490 – 500	4	Airport
MW-31	483 – 518	19	Airport
MW-32	372 – 395	18	Airport
MW-33	362 – 376	8	Airport
MW-35	302 – 336	34	Sol A Leshin Trust
MW-37	318 – 352	1	Airport
MW-38	281 – 315	24	Airport
MW-39	306 – 345	23	Airport
MW-46	510 – 549	20	Airport
MW-51	330 – 339	16	District

Table 2 – Groundwater Supply Wells

Well	Well Screen Interval (feet bgs, see SAP, Table 3)	Location (Section No.)	Landowner
DW4-2	410 – 430 470 – 490 650 - 670	5	AFP –42
17D1	380 – 771	17	Airport
LAWA 7	414 - 626	8	Airport
SW-1	Not Available	10	Airport
SW-2	376 – 706	9	Airport
SW-5	Not Available	21	Airport
SW-7	Not Available	9	Airport
SW-8	170 - 650	4	Airport
SW-9	Not Available	3	Airport
SW-10	Not Available	9	Airport
SW-13	Not Available	11	Airport

Additional wells may be added as necessary to delineate the nitrate plume. The Sampling and Analysis Program must be updated accordingly.

Beginning immediately, grab samples shall be collected from the monitoring and supply wells.

To the extent possible ground water samples obtained from monitoring wells shall be collected from the top five feet of the aquifer. Ground water samples obtained from water supply wells shall be collected from the uppermost portion of the aquifer, to the maximum extent possible.

The Discharger must monitor these water supply wells at the required frequencies; unless factors beyond the Discharger's control prevent sampling. These factors include, but are not limited to, a supply well that is dismantled or out of service. The District must make an effort to monitor supply wells that are used during the quarter but are not in use on the day that samples are typically collected. Each factor shall be noted in the Monitoring report.

All monitoring and supply well samples shall be analyzed to determine the magnitude of the following parameters:

Table 3 – Groundwater Monitoring Parameters

Parameter	Units	Frequency
Kjeldahl nitrogen	mg/L as N	Quarterly
Nitrate nitrogen	mg/L as N	Quarterly
Ammonia nitrogen	mg/L as N	Quarterly
Methyl blue active substances	mg/L	Quarterly
Total Dissolved Solids	Mg/L	Quarterly
Chloride	mg/L	Quarterly
Sodium	mg/L	Quarterly
Sulfate	mg/L	Quarterly
Total organic carbon	mg/L	Quarterly
Total petroleum hydrocarbons	ug/L	Annually (*)
Bromoform	ug/L	Annually (*)
Chloroform	ug/L	Annually (*)
Dibromochloromethane	ug/L	Annually (*)
Dichlorobromomethane	ug/L	Annually (*)
Total Cyanides	ug/L	Annually (*)
Total Phenols	ug/L	Annually (*)
Volatile Organics	ug/L	Annually (*)
Base/Neutral Extractable Organics	ug/L	Annually (*)
Acid Extractable Organics	ug/L	Annually (*)
Heavy Metals	ug/L	Annually (*)
Pesticides	Ug/L	Annually (*)
Methyl Tertiary Butyl Ether	ug/L	Annually (*)

The Volatile Organics, Base/Neutral Extractable Organics, Acid Extractable Organics, Heavy Metals and Pesticides shall be from the US EPA List of Priority Pollutants (Attachment B). Monitoring for PCBs (Constituent No.'s 119 – 125, Attachment B) and dioxin (Constituent No. 16, Attachment B) is not required.

For parameters marked with an (*), the Discharger may propose to reduce the sampling frequency to once every three years on a case by case basis. A reduced sampling is contingent upon the Executive Officer's approval. The Sampling and Analysis Plan shall be modified accordingly.

Wells shall be purged in accordance with standard practice. If low-flow well purge methods are used, the samples should not be collected parameters have stabilized and turbidity is less than 5 NTU. If low-flow well purging is used, well purge rates should be less than 1 L/min for sample collection. Well purge methods and extracted water volumes and rates shall be reported.

Field parameters shall be determined in all monitoring and supply wells each time they are sampled to determine the following. The final field parameters from each well shall be reported in a separate table.

Table 4 – Field Parameters

Parameter	Units
Static water depth	Feet below ground surface
Electrical conductivity	uS/cm
pH	pH units
Temperature	Degrees C
Dissolved Oxygen	mg/L
Turbidity	NTU
Color	Visual

Ground water monitoring reports shall contain running graphs and trend analyses of total dissolved solids and nitrate as N for ground water monitoring well data.

Semi-annually, an updated figure(s) showing the groundwater nitrate plume and total dissolved solids concentrations shall be included.

Monitoring and Reporting Program, 00-57-A01, Section I – MONITORING, E. Vadose Zone Monitoring – is replaced as follows.

E. Vadose Zone Monitoring

The existing vadose zone monitoring system consists of seven lysimeters as indicated on Attachment "A" of Board Order No. 6-00-57. Many of these lysimeters are dry or located in less than optimal locations. This system is being replaced and a new network being installed with the first samples planned for collection in May 2005.

1. Lysimeters must be positioned in the appropriate locations and depths to provide a vertical distribution of vadose zone pore-fluid chemistry below the land spreading and irrigated areas of the EMS. Data collected from this vadose zone monitoring program shall be adequate to assist in the evaluation of irrigation efficiency at agricultural re-use.
2. Use of conventional ceramic soil suction lysimeters instead of pan lysimeters is acceptable.
3. Soil moisture sensors shall be placed at depths of 2, 3, 5, 10 and 14 feet below ground surface at each vadose zone monitoring station to signal the arrival of soil moisture as it approaches each lysimeter.
4. The District shall remove all non-operational vacuum suction lysimeters from the old vadose zone monitoring network and report completion no later than **January 1, 2006**.
5. The vadose zone monitoring system shall be sufficient to adequately monitor pore-moisture fluid from all representative soil types, irrigation methods and crop types.

6. Vadose zone monitoring shall be for the parameters and frequencies described in Table 1 below.

Table 3. Vadose Zone Parameters & Frequencies

Parameter	Units	Frequency
Total Kjeldahl Nitrogen	mg/L as N	Quarterly
Nitrate Nitrogen	mg/L as N	Quarterly
Ammonia Nitrogen	mg/L as N	Quarterly
Nitrite Nitrogen	mg/L as N	Quarterly
Total Dissolved Solids	mg/L	Quarterly
Bromoform	µg/L	Annually
Chloroform	µg/L	Annually
Dibromochloromethane	µg/L	Annually
Dichlorobromomethane	µg/L	Annually

7. Vadose zone monitoring shall be performed at the stations described in Table 2, below and shown on Figure 1. Station numbers refer to the field center pivot number.

Table 2. Vadose Zone Monitoring Stations

Station ID	Location	Shallow Pressure / Vacuum Samplers	Deep Pressure Vacuum Samplers	Passive Capillary Lysimeter	Soil Moisture Monitoring
		(ft bgs)	(ft bgs)	(ft bgs)	(ft bgs)
VZ 1	Pivot 1	5	14	4.75	2, 3, 5, 10, 14
VZ 4	Pivot 4	5	14	5.00	2, 3, 5, 10, 14
VZ 5	Pivot 5	5	14	5.00	2, 3, 5, 10, 14
VZ 7	Pivot 7	5	14	4.58	2, 3, 5, 10, 14
VZ 7A	Pivot 7	5	N/A	4.67	N/A
VZ 7B	Pivot 7	5	N/A	4.33	N/A
VZ 12	Pivot 12	5	14	4.50	2, 3, 5, 10, 14
VZ 14	Pivot 14	5	14	4.67	2, 3, 5, 10, 14
VZ 15	Pivot 15	5	14	4.33	2, 3, 5, 10, 14
VZ 19	Pivot 19	5	14	5.00	2, 3, 5, 10, 14
VZ P	Pistachio Orchard	5	14	5.00	2, 3, 5, 10, 14
*	Section 14	*	*	*	*

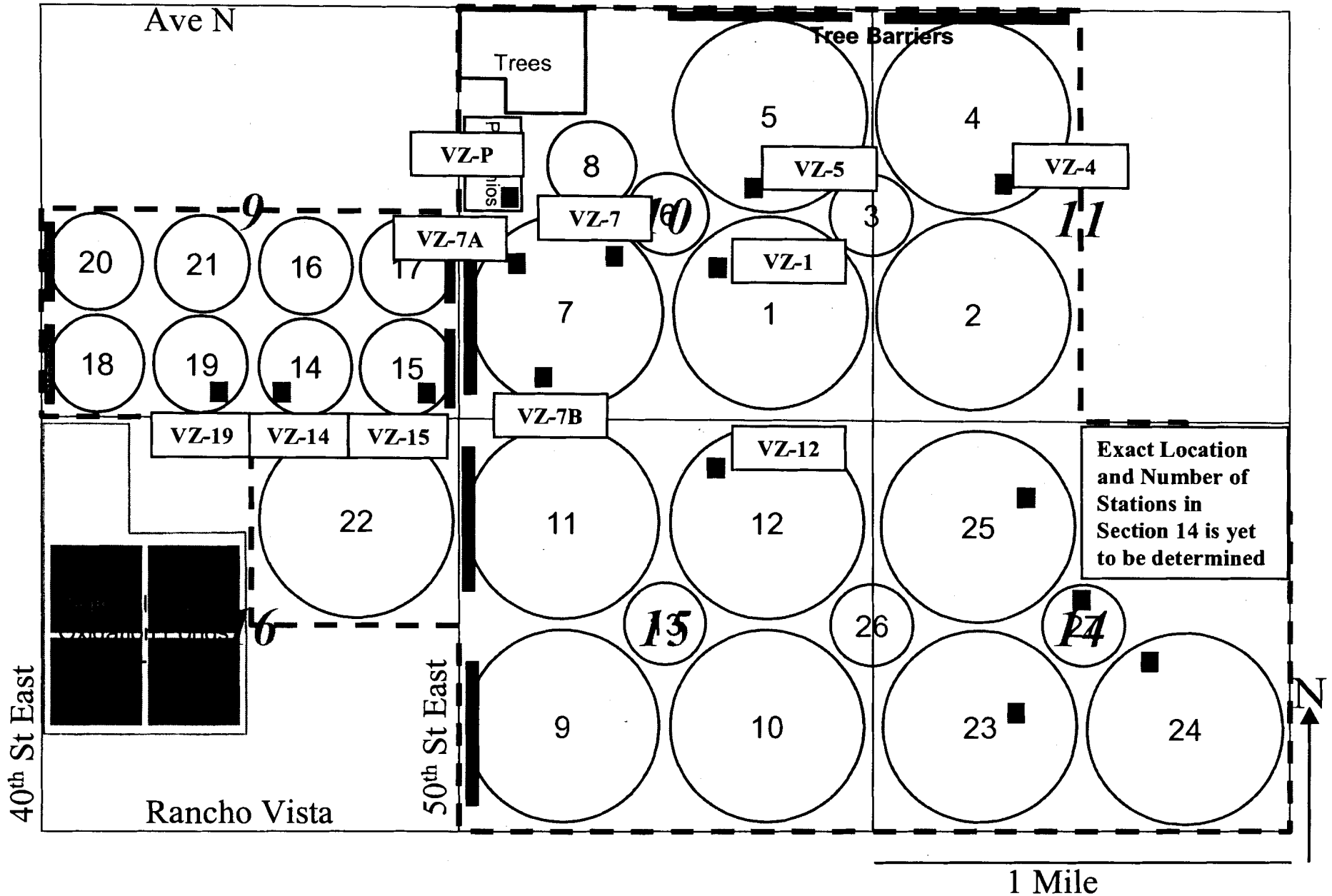
Site indicated by (*) will be installed in the fall 2005 similar to VZ-19

Ordered by: Harold J. Singer
HAROLD J. SINGER
EXECUTIVE OFFICER

Dated: July 13, 2005

Attachments: A – Vadose Zone Monitoring Stations
B – Priority Pollutants

ATTACHMENT A - MRP PALMDALE WATER RECLAMATION PLANT VADOSE ZONE MONITORING STATION LOCATIONS



Attachment "B" - Priority Pollutants

Controlling Water Quality Criterion for						
CTR #	Constituent	CAS Number	Basis	Criterion Concentration (ug/L or noted) (1)	Minimum Reporting Level (ug/L or noted)	Suggested Test Methods
VOLATILE ORGANICS						
28	1,1-Dichloroethane	75343	Primary MCL	5	1	EPA 8260B
30	1,1-Dichloroethene	75354	National Toxics Rule	0.057	0.5	EPA 8260B
41	1,1,1-Trichloroethane	71556	Primary MCL	200	2	EPA 8260B
42	1,1,2-Trichloroethane	79005	National Toxics Rule	0.6	0.5	EPA 8260B
37	1,1,2,2-Tetrachloroethane	79345	National Toxics Rule	0.17	0.5	EPA 8260B
75	1,2-Dichlorobenzene	95501	Taste & Odor	10	2	EPA 8260B
29	1,2-Dichloroethane	107062	National Toxics Rule	0.38	0.5	EPA 8260B
31	1,2-Dichloropropane	78875	Calif. Toxics Rule	0.52	0.5	EPA 8260B
101	1,2,4-Trichlorobenzene	120821	Public Health Goal	5	5	EPA 8260B
76	1,3-Dichlorobenzene	541731	Taste & Odor	10	2	EPA 8260B
32	1,3-Dichloropropene	542756	Primary MCL	0.5	0.5	EPA 8260B
77	1,4-Dichlorobenzene	106467	Primary MCL	5	2	EPA 8260B
17	Acrolein	107028	Aquatic Toxicity	21	5	EPA 8260B
18	Acrylonitrile	107131	National Toxics Rule	0.059	2	EPA 8260B
19	Benzene	71432	Primary MCL	1	0.5	EPA 8260B
20	Bromoform	75252	Calif. Toxics Rule	4.3	2	EPA 8260B
34	Bromomethane	74839	Calif. Toxics Rule	48	2	EPA 8260B
21	Carbon tetrachloride	56235	National Toxics Rule	0.25	0.5	EPA 8260B
22	Chlorobenzene (mono chlorobenzene)	108907	Taste & Odor	50	2	EPA 8260B
24	Chloroethane	75003	Taste & Odor	16	2	EPA 8260B
25	2-Chloroethyl vinyl ether	110758	Aquatic Toxicity	122 (2)	1	EPA 8260B
26	Chloroform	67663	OEHA Cancer Risk	1.1	0.5	EPA 8260B
35	Chloromethane	74873	USEPA Health Advisory	3	2.0	EPA 8260B
23	Dibromochloromethane	124481	Calif. Toxics Rule	0.41	0.5	EPA 8260B
27	Dichlorobromomethane	75274	Calif. Toxics Rule	0.56	0.5	EPA 8260B
36	Dichloromethane	75092	Calif. Toxics Rule	4.7	2	EPA 8260B
33	Ethylbenzene	100414	Taste & Odor	29	2	EPA 8260B
88	Hexachlorobenzene	118741	Calif. Toxics Rule	0.00075	1	EPA 8260B
89	Hexachlorobutadiene	87683	National Toxics Rule	0.44	1	EPA 8260B
91	Hexachloroethane	67721	National Toxics Rule	1.9	1	EPA 8260B
94	Naphthalene	91203	USEPA IRIS	14	10	EPA 8260B
38	Tetrachloroethene	127184	National Toxics Rule	0.8	0.5	EPA 8260B
39	Toluene	108883	Taste & Odor	42	2	EPA 8260B
40	trans-1,2-Dichloroethylene	156605	Primary MCL	10	1	EPA 8260B
43	Trichloroethene	79016	National Toxics Rule	2.7	2	EPA 8260B
44	Vinyl chloride	75014	Primary MCL	0.5	0.5	EPA 8260B

SEMI-VOLATILE ORGANICS

60	1,2-Benzanthracene	56553	Calif. Toxics Rule	0.0044	5	EPA 8270C
85	1,2-Diphenylhydrazine	122667	National Toxics Rule	0.04	1	EPA 8270C
45	2-Chlorophenol	95578	Taste and Odor	0.1	2	EPA 8270C
46	2,4-Dichlorophenol	120832	Taste and Odor	0.3	1	EPA 8270C
47	2,4-Dimethylphenol	105679	Calif. Toxics Rule	540	2	EPA 8270C
49	2,4-Dinitrophenol	51285	National Toxics Rule	70	5	EPA 8270C
82	2,4-Dinitrotoluene	121142	National Toxics Rule	0.11	5	EPA 8270C
55	2,4,6-Trichlorophenol	88062	Taste and Odor	2	10	EPA 8270C
83	2,6-Dinitrotoluene	606202	USEPA IRIS	0.05	5	EPA 8270C
50	2-Nitrophenol	25154557	Aquatic Toxicity	150 (3)	10	EPA 8270C
71	2-Chloronaphthalene	91587	Aquatic Toxicity	1600 (4)	10	EPA 8270C
78	3,3'-Dichlorobenzidine	91941	National Toxics Rule	0.04	5	EPA 8270C
62	3,4-Benzofluoranthene	205992	Calif. Toxics Rule	0.0044	10	EPA 8270C

52	4-Chloro-3-methylphenol	59507	Aquatic Toxicity	30	5	EPA 8270C
48	4,6-Dinitro-2-methylphenol	534521	National Toxics Rule	13.4	10	EPA 8270C
51	4-Nitrophenol	100027	USEPA Health Advisory	60	10	EPA 8270C
69	4-Bromophenyl phenyl ether	101553	Aquatic Toxicity	122	10	EPA 8270C
72	4-Chlorophenyl phenyl ether	7005723	Aquatic Toxicity	122 (2)	5	EPA 8270C
56	Acenaphthene	83329	Taste and Odor	20	1	EPA 8270C
57	Acenaphthylene	208968	No Criteria Available		10	EPA 8270C
58	Anthracene	120127	Calif. Toxics Rule	9,600	10	EPA 8270C
59	Benzidine	92875	National Toxics Rule	0.00012	5	EPA 8270C
61	Benzo(a)pyrene (3,4-Benzopyrene)	50328	Calif. Toxics Rule	0.0044	2	EPA 8270C
63	Benzo(g,h,i)perylene	191242	No Criteria Available		5	EPA 8270C
64	Benzo(k)fluoranthene	207089	Calif. Toxics Rule	0.0044	2	EPA 8270C
65	Bis(2-chloroethoxy) methane	111911	No Criteria Available		5	EPA 8270C
66	Bis(2-chloroethyl) ether	111444	National Toxics Rule	0.031	1	EPA 8270C
67	Bis(2-chloroisopropyl) ether	39638329	Aquatic Toxicity	122 (2)	10	EPA 8270C
68	Bis(2-ethylhexyl) phthalate	117817	National Toxics Rule	1.8	5	EPA 8270C
70	Butyl benzyl phthalate	85687	Aquatic Toxicity	3 (5)	10	EPA 8270C
73	Chrysene	218019	Calif. Toxics Rule	0.0044	5	EPA 8270C
81	Di-n-butylphthalate	84742	Aquatic Toxicity	3 (5)	10	EPA 8270C
84	Di-n-octylphthalate	117840	Aquatic Toxicity	3 (5)	10	EPA 8270C
74	Dibenzo(a,h)-anthracene	53703	Calif. Toxics Rule	0.0044	0.1	EPA 8270C
79	Diethyl phthalate	84662	Aquatic Toxicity	3 (5)	2	EPA 8270C
80	Dimethyl phthalate	131113	Aquatic Toxicity	3 (5)	2	EPA 8270C
86	Fluoranthene	206440	Calif. Toxics Rule	300	10	EPA 8270C
87	Fluorene	86737	Calif. Toxics Rule	1300	10	EPA 8270C
90	Hexachlorocyclopentadiene	77474	Taste and Odor	1	5	EPA 8270C
92	Indeno(1,2,3-c,d)pyrene	193395	Calif. Toxics Rule	0.0044	0.05	EPA 8270C
93	Isophorone	78591	National Toxics Rule	8.4	1	EPA 8270C
98	N-Nitrosodiphenylamine	86306	National Toxics Rule	5	1	EPA 8270C
96	N-Nitrosodimethylamine	62759	National Toxics Rule	0.00069	5	EPA 8270C
97	N-Nitrosodi-n-propylamine	621647	Calif. Toxics Rule	0.005	5	EPA 8270C
95	Nitrobenzene	98953	National Toxics Rule	17	10	EPA 8270C
53	Pentachlorophenol	87865	Calif. Toxics Rule	0.28	1	EPA 8270C
99	Phenanthrene	85018	No Criteria Available		5	EPA 8270C
54	Phenol	108952	Taste and Odor	5	1	EPA 8270C
100	Pyrene	129000	Calif. Toxics Rule	960	10	EPA 8270C

INORGANICS

1	Antimony	7440360	Primary MCL	6	5	EPA 6020/200.8
2	Arsenic	7440382	Ambient Water Quality	0.018	1	EPA 6020/Hydride
15	Asbestos	1332214	National Toxics Rule/ Primary MCL	7 MFL	0.2 MFL >10um	EPA/600/R- 93/116(PCM)
3	Beryllium	7440417	Primary MCL	4	1	EPA 6020/200.8
4	Cadmium	7440439	Public Health Goal	0.07	0.25	EPA 1638/200.8
5a	Chromium (total)	7440473	Primary MCL	50	2	EPA 6020/200.8
5b	Chromium (VI)	18540299	Public Health Goal	0.2	5	EPA 7199/ 1636
6	Copper	7440508	National Toxics Rule	4.1 (6)	0.5	EPA 6020/200.8
14	Cyanide	57125	National Toxics Rule	5.2	5	EPA 9012A
7	Lead	7439921	Calif. Toxics Rule	0.92 (6)	0.5	EPA 1638
8	Mercury	7439976	National Toxics Rule		0.0005	EPA 1669/1631
9	Nickel	7440020	Calif. Toxics Rule	24 (6)	5	EPA 6020/200.8
10	Selenium	7782492	Calif. Toxics Rule	5	5	EPA 6020/200.8
11	Silver	7440224	Calif. Toxics Rule	0.71 (6)	1	EPA 6020/200.8
12	Thallium	7440280	National Toxics Rule	1.7	1	EPA 6020/200.8
13	Zinc	7440666	Calif. Toxics Rule	54/ 16 (6)	10	EPA 6020/200.8

PESTICIDES - PCBs

110	4,4'-DDD	72548	Calif. Toxics Rule	0.00083	0.05	EPA 8081A
109	4,4'-DDE	72559	Calif. Toxics Rule	0.00059	0.05	EPA 8081A
108	4,4'-DDT	50293	Calif. Toxics Rule	0.00059	0.01	EPA 8081A