CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
LAHONTAN REGION

BOARD ORDER 6-00-57A04
WDID 6B190107069

AMENDED WASTE DISCHARGE REQUIREMENTS

FOR

COUNTY SANITATION DISTRICT NO. 20 OF LOS ANGELES COUNTY
PALMDALE WATER RECLAMATION PLANT

Los Angeles County

The California Regional Water Quality Control Board, Lahontan Region (Lahontan Water Board) finds:

1. Discharger

For the purposes of this Board Order, County Sanitation District 20 of Los Angeles County is referred to as the "Discharger. The Discharger submitted information to the Lahontan Water Board as part of a Report of Waste Discharge for revised Waste Discharge Requirements under Water Code section 13260. On April 30, 2007, the Discharger completed its application.

2. Order History

On June 14, 2000, the Lahontan Water Board adopted Board Order 6-00-57 revising requirements for the Discharger's existing secondary treatment facilities located at its 30th Street East and 40th Street East sites. The Discharger's secondary-treated wastewater is recycled at the Effluent Management Site located adjacent to its 40th Street East site. Reuse of the treated wastewater at the agriculture site is regulated under Board Order 6-00-57 and its amendments, summarized as follows:

Board Order	Date	Purpose
6-00-57-A01	April 14, 2004	Expanded area of agriculture site
6-00-57-A02	July 26, 2004	Name all users of treated wastewater
6-00-57-A03	July 13, 2005	Expanded area of agriculture site

3. Reason for Action

The Lahontan Water Board is amending Board Order 6-00-57 to establish Waste Discharge Requirements for the discharge to three new storage reservoirs with a synthetic liner system. The proposed storage reservoirs are expected to be completed in December 2010 and will be located approximately 10 miles

northeast of the proposed tertiary treatment plant. Issuance of Waste Discharge Requirements is a condition for a State Revolving Fund loan, which the Discharger will use to fund a portion of the cost to construct the facilities.

4. Facilities

The proposed facilities regulated by this amendment are the following:

a. A 15 MGD tertiary treatment plant, which will upgrade the level of treatment so that the quality of effluent generated at the Palmdale Water Reclamation Plant will be disinfected tertiary-treated wastewater;

b. Three lined storage reservoirs.

5. Facilities Locations

a. Existing Facilities

The existing primary and secondary treatment facilities, and the existing agriculture site, are located approximately two miles northeast of central Palmdale in Antelope Valley as shown in Attachment "A", which is made a part of this Order. The primary treatment facilities are located at the 30th Street East site. Secondary treatment is provided by oxidation ponds located at both the 30th and 40th Street East sites. The agriculture site is located adjacent to the oxidation ponds at the 40th Street East site.

b. Proposed Project Facilities

The proposed tertiary treatment plant will be located adjacent to the existing primary treatment facilities at the 30th Street East site. The proposed new storage reservoirs will be located approximately 10 miles to the northeast adjacent to the intersection of 120 Street East with Avenue L.

6. Biosolids

The proposed tertiary treatment plant will include dissolved air flotation units that will thicken waste activated sludge. Existing and proposed digesters will process both primary sludge and thickened waste activated sludge. Mechanical dewatering with centrifuges and a truck loading station will be provided to dewater and load digested sludge for off-site disposal/reuse at an authorized reuse or disposal site. Existing sludge drying beds may be used as a backup to mechanical dewatering, for air-drying of dewatered sludge cake, and for air-drying of sludge generated during digester cleaning operations. The two drying beds each have a surface area of 0.2 acres and are lined with four inches of asphalt concrete.

7. Land Ownership

The 30th Street East and 40th Street East sites are located on land owned by the Discharger. The proposed storage reservoirs are located on land that the Discharger is currently acquiring. The agriculture site is located on land owned by the City of Los Angeles.

8. Effluent Quality

Table 1 summarizes effluent quality data for the existing secondary treatment plant and expected quality for the tertiary treatment plant. The data for the tertiary treatment plant is based on design data for the plant. Data for the secondary treatment plant is based on sampling results in 2006. As stated in the Discharger's 2025 Facilities Plan/EIR, the tertiary treatment plant replaces the existing secondary treatment with the activated sludge secondary treatment process. This process includes nitrification/denitrification capability. This process is needed to implement the Discharger's Containment and Remediation Plan (September 15, 2004) that addresses the cleanup of groundwater containing excessive nitrates under the Discharger's Effluent Management Site.

Table 1
Concentrations in Effluent (Annual Average)

Constituents	Secondary treatment plant effluent	Tertiary treatment plant effluent
Total Coliform (MPN/100 ml)	< 23	<2.2
Turbidity (NTUs)	---	<5
Suspended Solids	160	<5
Soluble Biochemical Oxygen Demand (mg/L)	<16 (result based on filtered samples)	<5
Total Dissolved Solids (mg/L)	550	550
Total Nitrogen (mg/L as N)	40	<10
Disinfection By-Products:		
Trihalomethanes (µg/L)	<30	<30
Total haloacetic acids (µg/L)	<30	<30

9. Authorized Storage/Recycling Sites

This amendment authorizes the discharger to:

a. Discharge disinfected secondary-treated effluent to proposed storage reservoirs 1, 2 and 3 until July 25, 2011, and thereafter discharge only tertiary-treated effluent in the reservoirs.

b. Reuse tertiary-treated and disinfected secondary treated wastewaters for non-potable uses at the Discharger's 30th Street East site, 40th Street East site, proposed reservoir site, and for testing the proposed pipeline, which will be located between the 40th Street East site and the proposed

reservoir site. The non-potable uses include use for landscape irrigation, facility washdown, and soil compaction and dust control during construction of new facilities and for testing the proposed pipeline.

10. Geology and Hydrogeology

The geologic material underlying the proposed storage reservoir site consists of sand, silt and clay underlain by fractured granitic bedrock at a depth of 300 feet, based on the boring log for a temporary monitoring well RB-15A located near the center of the site. Groundwater is present in the fractured bedrock and is of low yield. The regional aquifer is present about 0.5 miles west of the site based on recent groundwater level measurements at two supply wells (Well Numbers 007N010W33J001S and 007N010W33J002S). Additional hydrogeologic analysis is needed to determine the hydraulic relationship between the groundwater at the reservoir site and the regional aquifer.

An un-named fault is located near the up gradient (south) edge of the proposed storage reservoir site[1] (see Attachment C). The Discharger's Report of Waste Discharge indicates the fault is not a potentially (or recently) active fault as defined under the Public Resources Code, Division 2, Chapter 7.5, section 2622 (Alquist-Priolo Earthquake Fault Zoning Act).

11. Groundwater Quality

Background water quality in the Lancaster and Buttes Hydrologic Areas is generally of excellent quality with TDS of 350 mg/L and nitrate (as N) of approximately 1.0 mg/L[2]. Water quality at the storage reservoir site is unknown except for one groundwater sample collected from temporary monitoring well RB-15A. While the groundwater recovery in well RB-15A was very slow, the results as measured on March 23, 2007 exhibited a total dissolved solids concentration of 346 mg/L and a nitrate (as N) concentration of 0.19 mg/L.

The storage reservoir site will contain one or more compliance monitoring wells. The number, location, and depths of the wells will be determined upon completion of additional hydrogeologic analysis. The discharger will determine background water quality through sampling these wells over a 12 month period prior to filling the first reservoir.

---

[1] Bloyd, R.M., 1967, *Water Resources of the Antelope Valley - East Kern Water Agency, California*, U.S. Geological Survey Open-File Report

[2] Duell, L. F. Jr., 1987, *Geohydrology of the Antelope Valley Area California and Design for a Groundwater Quality Monitoring Network*, U.S. Geological Survey-Water Resources Investigations Report 84-4081.

12. Receiving Waters

The receiving waters at the storage reservoir site are the groundwaters of the Antelope Valley.

13. Lahontan Basin Plan

The Lahontan Water Board adopted a Water Quality Control Plan for the Lahontan Region (Basin Plan), which became effective on March 31, 1995, and this Order implements the Basin Plan as amended.

14. Beneficial Uses

The beneficial uses of the groundwaters of the Antelope Valley as set forth and defined in the Basin Plan are:

a. Municipal and Domestic Supply (MUN);
b. Agricultural Supply (AGR);
c. Industrial Service Supply (IND); and
d. Freshwater Replenishment (FRSH).

15. Consideration of Water Code Section 13241 Factors

Section 13263 of the Water Code requires that the Lahontan Water Board, when prescribing Waste Discharge Requirements, take into consideration five specific factors in section 13241 of the Water Code. The Board has considered these factors as follows.

a. Past, Present, and Probable Future Beneficial Uses of Water

The receiving waters are the groundwaters of the Antelope Valley Groundwater Basin. The ground water basin is presently in an overdraft condition. The beneficial uses of the groundwater include Municipal and Domestic Supply (MUN) and Agriculture Supply (AGR). The receiving water limits in this Order are to maintain the most sensitive beneficial uses, Municipal and Domestic Supply and Agricultural Supply.

b. Environmental Characteristics of the Hydrographic Unit under Consideration, Including the Quality of Water Available Thereto

The hydrographic unit for the receiving waters is the Antelope Groundwater Basin. Hydrogeologic characteristics of the Basin are described in Finding 10. Because of past ongoing use of groundwater for domestic and agricultural purposes, the ground water basin is presently in an overdraft condition. In general, the quality of groundwater in the basin is sufficient to support the beneficial uses MUN and AGR.

c. Water Quality Conditions That Could Reasonably be Achieved Through the Coordinated Control of All Factors, Which Affect Water Quality in the Area

The current and future beneficial uses and existing water quality in the area will be maintained.

d. Economic Considerations

Facilities regulated under this Order are for upgrading the Discharger's existing facilities. The revenue source for upgrading the facility is service charges and connection fees. Service charge is projected to increase to approximately $381 per year. The state wide median cost for wastewater collection and treatment is $290 per year.

e. The Need for Developing Housing within the Region

The Discharger is committed to providing treatment capacity for new housing. The District will expand facilities with sufficient lead time to accommodate population growth. In addition, Recycling of treated wastewater will help offset the amount of future limited supply of fresh water in the Valley.

f. The Need to Develop and Use Treated Wastewater

The Discharger's current oxidation ponds produces an effluent for only limited reuses described in California Code of Regulations, title 22. The proposed tertiary treatment plant will upgrade the level of treatment and produce an effluent that is acceptable for all uses described in California Code of Regulations, title 22. This will maximize the potential for reuse.

16. California Environmental Quality Act (CEQA)

In accordance with CEQA, the Discharger, acting as the lead agency, certified an Environmental Impact Report (EIR) on October 18, 2005 for its 2025 Plan project. The EIR found that the proposed project would not pose a significant impact on the environment. The EIR states that activated sludge secondary treatment with nitrification/denitrification capability is needed to implement the Containment and Remediation Plan (September 15, 2004) to reduce nitrate pollution in groundwater beneath the Effluent Management Site. The discharger also states in the EIR that the storage reservoirs will contain tertiary-treated effluent. The Discharger's application includes an additional mitigation measure consisting of synthetically lining the proposed reservoirs to mitigate potential adverse affects on groundwater quality. This Order includes requirements to ensure this mitigation measure is implemented and effective.

To accelerate the elimination of Effluent Management Site recycling above the crop agronomic needs, the District proposes to store secondary effluent until the tertiary treatment plant is complete. This action required the District to submit an EIR addendum. The addendum reflects the storage of disinfected secondary effluent for approximately one year between the completion of the reservoirs and the tertiary treatment plant. The Notice of Determination was issued July 26, 2007. The use of synthetic liners, the presence of natural clay soils under the reservoirs, and application of strict construction practices will limit the amount and rate of leakage from the reservoirs such that there will be no measurable affect on groundwater quality.

17. Technical and Monitoring Reports

The fact that the Discharger is seeking coverage under waste discharge requirements issued by the Lahontan Water Board for one or more proposed discharges supports the requirement that the Discharger submit technical and monitoring reports in compliance with this Order and the attached Monitoring and Reporting Program so that the data may be collected to determine conditions in the receiving water.

18. Notification of Interested Parties

The Lahontan Water Board has notified the Discharger and interested persons of its intent to amend Waste Discharge Requirements for the discharge.

19. Consideration of Public Comments

The Lahontan Water Board, in a public meeting held August 29, 2007, heard and considered all comments pertaining to the discharge.

IT IS HEREBY ORDERED that the Discharger shall comply with the following:

I. DISCHARGE SPECIFICATIONS

A. Effluent Limitations

1. The discharge to the storage reservoirs shall not have a pH of less than 6.0 nor more than 9.0. A pH over 9.0 is allowed if the Discharger has demonstrated it results from biological processes within the treatment plant.

2. The discharge to the storage reservoirs shall have a dissolved oxygen concentration of not less than 1.0 mg/L.

3. The discharge to the storage reservoirs shall not exceed the following limits:

Parameter	Units	30 Day Mean[3]	7 Day Mean	Daily Maximum[4]
BOD[5]	mg/L	10	15	30

4. The discharge to the storage reservoirs shall meet the water quality specified by the definition of tertiary treated recycled water as defined in Title 22, *CCR*, section 60301.230.

5. The limits in I.A.3 and I.A.4 are effective July 25, 2011. Prior to July 25, 2011, the discharge to the storage reservoirs shall not exceed a mean BOD of 30 mg/L in a 30 day period, and shall not exceed a BOD of 45 mg/L.

B. Receiving Water Limitations (Beneath Storage Reservoirs)

The discharge shall not cause a violation of the following water quality objectives for the groundwaters of the Antelope Valley.

1. Bacteria - Groundwaters shall not contain concentrations of coliform organisms attributable to human wastes.

2. Chemical Constituents (except for nitrate and total dissolved solids) - Groundwaters shall not contain concentrations of chemical constituents in excess of the maximum contaminant level (MCL) or secondary maximum contaminant level (Secondary MCL) based upon drinking water standards specified in the following provisions of California Code of Regulations, title 22: Table 64431-A of section 64431 (Inorganic Chemicals), Table 6444-A of section 64444 (Organic Chemicals), Table 64433.2-B of section 64433.2 (Fluoride), Table 64449-A of section 64449 (Secondary Maximum Contaminant Levels-Consumer Acceptance Limits), and Table 64449-B of section 64449 (Secondary Maximum Contaminant Levels-Ranges). This incorporation-by-reference is prospective including future changes to the incorporated provisions as the changes take effect.

3. Radioactivity - Radionuclides shall not be present in concentrations that are deleterious to human, plant, animal, or aquatic life, or that

[3] The arithmetic mean of lab results for 24 hour composite samples collected during a period of 30 days, respectively.
[4] Daily maximum limitations must be applied to the values of the measurements obtained for any single 24-hour composite sample (or daily discharge rate).
[5] Biochemical Oxygen Demand (five day, 20° C) of an unfiltered sample.

result in the accumulation of radionuclides in the food chain to an extent that it presents a hazard to human, plant, animal, or aquatic life. Waters shall not contain concentrations of radionuclides in excess of limits specified in the California Code of Regulations, title 22, chapter 15, article 5, section 64443.

4. Taste and Odors - Groundwaters shall not contain taste or odor-producing substances in concentrations that cause nuisance (California Water Code section 13050(m)) or that adversely affect waters for beneficial uses.

5. Nitrate and total dissolved solids. Groundwater at this site shall not contain nitrate and total dissolved solids above background water quality concentrations.

   a. Background nitrate quality will be determined in each compliance monitoring well using the upper 99% confidence interval for the first eight nitrate samples collected from the well over a 12 month period.

   b. Background total dissolved solids quality will be determined in each compliance monitoring well using the upper 99% confidence interval for the first eight total dissolved solids samples collected from the well over a 12 month period.

C. General Requirements and Prohibitions

1. There shall be no discharge, bypass, or diversion of untreated or treated wastewater, sludge, grease, or oils from the transport, treatment, or authorized storage/recycling sites (described in the Finding 9) to adjacent land areas or surface waters.

2. Surface flow, or visible discharge of untreated or treated wastewater from the authorized storage/recycling sites (described in Finding 9) to adjacent land areas or surface waters is prohibited.

3. All facilities used for collection, transport, treatment, or disposal of waste regulated by this Order shall be adequately protected against overflow, washout, inundation, structural damage or a significant reduction in efficiency resulting from a storm or flood having a recurrence interval of once in 100 years.

4. The discharge shall not cause a pollution, as defined in California Water Code section 13050, subdivision (l), or a threatened pollution.

5. The treatment or the discharge shall not cause a nuisance, as defined in California Water Code section 13050, subdivision (m).

6. The disposal of waste residue, including sludge, shall be in a manner in compliance with all local, state, and federal requirements.

7. Treated wastewater used for dust control or soil compaction must be applied at a rate and amount that does not cause runoff or excessive ponding.

8. The proposed tertiary treatment plant must be designed and operated as described in the findings of this Order and the Discharger's application referenced in Finding 1.

9. The tertiary treatment plant must be maintained at maximum operating efficiency in compliance with this Order.

10. The discharge of waste, as defined in the California Water Code, which causes violation of any narrative Water Quality Objective contained in the Basin Plan, including the Non-Degradation Objective, is prohibited.

11. The discharge of waste that causes violation of any numeric WQO contained in the Basin Plan is prohibited.

II. PROVISIONS

A. Groundwater Monitoring System

1. Pursuant to the California Water Code, section 13267, the Discharger must submit to the Lahontan Water Board by **November 30, 2007** a work plan to install a groundwater monitoring system consisting of a minimum of one groundwater monitoring well between the storage reservoirs and the regional aquifer. The work plan shall include actions to determine background water quality at the reservoir site and the hydraulic relationship between the groundwater at the reservoirs and the regional aquifer.

2. Pursuant to the California Water Code, section 13267, the Discharger must submit to the Lahontan Water Board by **December 31, 2008** the site hydrogeologic investigation report. The report shall include a workplan for groundwater compliance monitoring well installation at the proposed storage reservoir site.

3. Before beginning discharge of treated wastewater to the reservoirs, the Discharger must complete installation of the monitoring well(s) in accordance with an approved workplan and complete a minimum of eight total dissolved solids and nitrate sampling rounds for the wells and then calculate the existing water quality at well as specified in Discharge Specification I.B.5. The results of the calculations and data used to make the calculations must be included in the quarterly self monitoring report for the period following the date the samples were collected. A State of California, Well Completion Report Form must be completed for each well and included in the quarterly self monitoring report following the quarter the well(s) is installed. A copy of the completed form must be provided to the California Department of Water Resources as required by California Water Code section 13751 and County of Los Angeles, which permits and enforces its local water well standards.

B. Abandoned Wells (Storage Reservoir Site)

At least three months before discharging treated wastewater to the proposed storage reservoirs, the Discharger must complete the following: (1) conduct an investigation to determine the locations of all abandoned wells located at (and within) 100 feet of the site for the proposed reservoirs, (2) properly destroy the abandoned wells in accordance with State and local regulations and (3) submit a report to the Lahontan Water Board on the investigation and destruction of abandoned wells.

C. Operator Certificates

The tertiary treatment plant must be supervised by persons possessing a wastewater treatment plant operator certificate of appropriate grade pursuant to California Code of Regulations, title 23, section 3670 et seq.

D. Standard Provisions

The Discharger must comply with the "Standard Provisions for Waste Discharge Requirements," dated September 1, 1994, in Attachment "D" which is made part of this Order.

E. Monitoring and Reporting

1. Pursuant to the California Water Code, section 13267, the Discharger must comply with Amended Monitoring and Reporting Program No. 6-00-57A05 as specified by the Executive Officer which is made a part of this Order. Reports requested under the Monitoring and Reporting Program are being required to monitor

the effects on water quality from known or suspected discharges of waste to waters of the State as a result of releases of treated wastewater regulated by this Order.

2. The Discharger must comply with the "General Provisions for Monitoring and Reporting," dated September 1, 1994, which is attached to and made a part of the Monitoring and Reporting Program.

I, Harold J. Singer, Executive Officer, do hereby certify that the foregoing is a full, true, and correct copy of an Order adopted by the California Regional Water Quality Control Board, Lahontan Region, on August 29, 2007.

Harold J. Singer

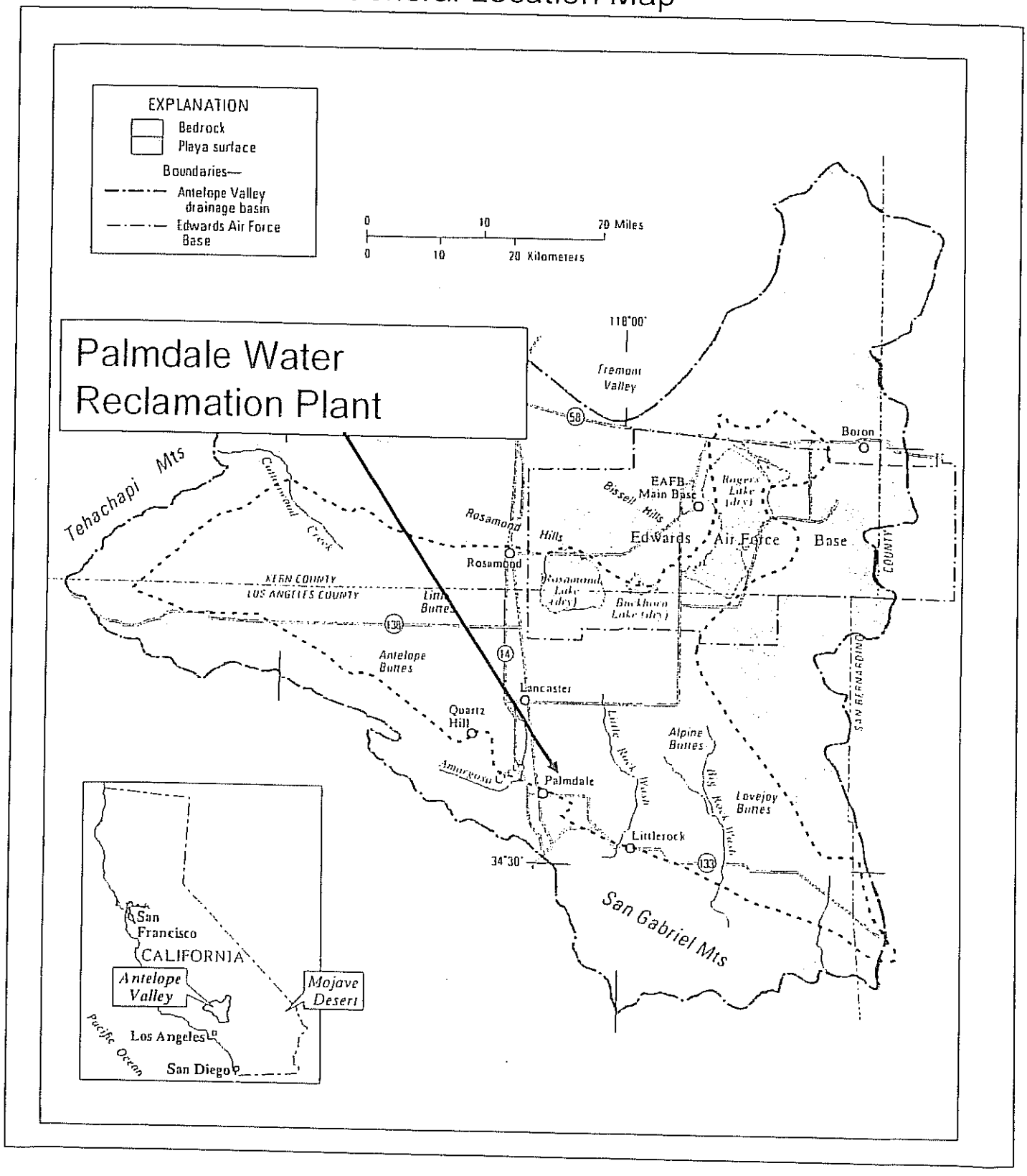
HAROLD J. SINGER
EXECUTIVE OFFICER

Attachments: A. General Location Map
B. General Facilities Locations
C. Map of Proposed Storage Reservoirs
D. Standard Provisions for Waste Discharge Requirements

MC/rp BO2007/PalmdaleWDRs/6-00-57A04 WDR LACSD20

ATTACHMENT A

General Location Map



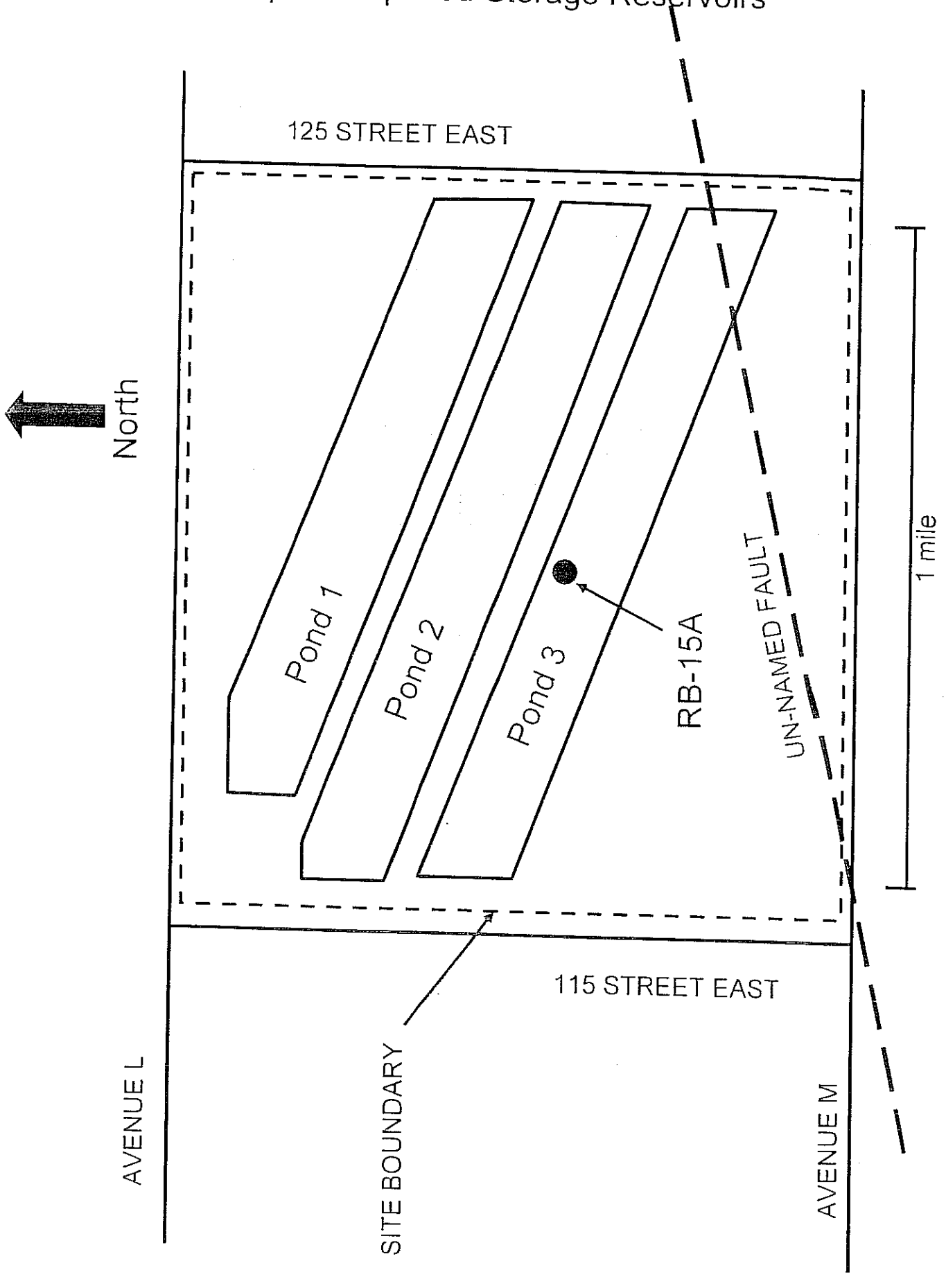
Modified from Figure 1, *Simulation of Groundwater Flow and Land Subsidence, Antelope Valley Ground-Water Basin*, USGS, 2003

Attachment B

General Facilities Location

ATTACHMENT C

Map of Proposed Storage Reservoirs



ATTACHMENT D

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
LAHONTAN REGION

STANDARD PROVISIONS
FOR WASTE DISCHARGE REQUIREMENTS

1. Inspection and Entry

The Discharger shall permit Regional Board staff:

a. to enter upon premises in which an effluent source is located or in which any required records are kept;

b. to copy any records relating to the discharge or relating to compliance with the Waste Discharge Requirements (WDRs);

c. to inspect monitoring equipment or records; and

d. to sample any discharge.

2. Reporting Requirements

a. Pursuant to California Water Code 13267(b), the Discharger shall immediately notify the Regional Board by telephone whenever an adverse condition occurred as a result of this discharge; written confirmation shall follow within two weeks. An adverse condition includes, but is not limited to, spills of petroleum products or toxic chemicals, or damage to control facilities that could affect compliance.

b. Pursuant to California Water Code Section 13260 (c), any proposed material change in the character of the waste, manner or method of treatment or disposal, increase of discharge, or location of discharge, shall be reported to the Regional Board at least 120 days in advance of implementation of any such proposal. This shall include, but not be limited to, all significant soil disturbances.

c. The Owners/Discharger of property subject to WDRs shall be considered to have a continuing responsibility for ensuring compliance with applicable WDRs in the operations or use of the owned property. Pursuant to California Water Code Section 13260(c), any change in the ownership and/or operation of property subject to the WDRs shall be reported to the Regional Board. Notification of applicable WDRs shall be furnished in writing to the new owners and/or operators and a copy of such notification shall be sent to the Regional Board.

d. If a Discharger becomes aware that any information submitted to the Regional Board is incorrect, the Discharger shall immediately notify the Regional Board, in writing, and correct that information.

e. Reports required by the WDRs, and other information requested by the Regional Board, must be signed by a duly authorized representative of the Discharger. Under Section 13268 of the California 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.

f. If the Discharger becomes aware that their WDRs (or permit) are no longer needed (because the project will not be built or the discharge will cease) the Discharger shall notify the Regional Board in writing and request that their WDRs (or permit) be rescinded.

3. Right to Revise WDRs

The Regional Board reserves the privilege of changing all or any portion of the WDRs upon legal notice to and after opportunity to be heard is given to all concerned parties.

4. Duty to Comply

Failure to comply with the WDRs may constitute a violation of the California Water Code and is grounds for enforcement action or for permit termination, revocation and re-issuance, or modification.

5. Duty to Mitigate

The Discharger shall take all reasonable steps to minimize or prevent any discharge in violation of the WDRs which has a reasonable likelihood of adversely affecting human health or the environment.

6. Proper Operation and Maintenance

The Discharger shall at all times properly operate and maintain all facilities and systems of treatment and control (and related appurtenances) that are installed or used by the Discharger to achieve compliance with the WDRs. Proper operation and maintenance includes adequate laboratory control, where appropriate, and appropriate quality assurance procedures. This provision requires the operation of backup or auxiliary facilities or similar systems that are installed by the Discharger, when necessary to achieve compliance with the conditions of the WDRs.

7. Waste Discharge Requirement Actions

The WDRs may be modified, revoked and reissued, or terminated for cause. The filing of a request by the Discharger for waste discharge requirement modification, revocation and re-issuance, termination, or a notification of planned changes or anticipated noncompliance, does not stay any of the WDRs conditions.

8. Property Rights

The WDRs do not convey any property rights of any sort, or any exclusive privileges, nor does it authorize any injury to private property or any invasion of personal rights, nor any infringement of federal, state or local laws or regulations.

9. Enforcement

The California Water Code provides for civil liability and criminal penalties for violations or threatened violations of the WDRs including imposition of civil liability or referral to the Attorney General.

10. Availability

A copy of the WDRs shall be kept and maintained by the Discharger and be available at all times to operating personnel.

11. Severability

Provisions of the WDRs are severable. If any provision of the requirements is found invalid, the remainder of the requirements shall not be affected.

12. Public Access

General public access shall be effectively excluded from treatment and disposal facilities.

13. Transfers

Providing there is no material change in the operation of the facility, this Order may be transferred to a new owner or operation. The owner/operator must request the transfer in writing and receive written approval from the Regional Board's Executive Officer.

14. Definitions

a. "Surface waters" as used in this Order, include, but are not limited to, live streams, either perennial or ephemeral, which flow in natural or artificial water courses and natural lakes and artificial impoundments of waters. "Surface waters" does not include artificial water courses or impoundments used exclusively for wastewater disposal.

b. "Ground waters" as used in this Order, include, but are not limited to, all subsurface waters being above atmospheric pressure and the capillary fringe of these waters.

15. Storm Protection

All facilities used for collection, transport, treatment, storage, or disposal of waste shall be adequately protected against overflow, washout, inundation, structural damage or a significant reduction in efficiency resulting from a storm or flood having a recurrence interval of once in 100 years.

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
LAHONTAN REGION

AMENDED MONITORING AND REPORTING PROGRAM 6-00-57A05
WDID NO. 6B190107069

FOR

COUNTY SANITATION DISTRICT NO. 20 OF LOS ANGELES COUNTY
PALMDALE WATER RECLAMATION PLANT

Los Angeles County

The Monitoring and Reporting Program (MRP) for County Sanitation District 20 of Los Angeles County (Discharger) consists of this MRP and the following: (A) MRP 6-00-57A01, effective February 26, 2004; (B) MRP 6-00-57A02, effective April 14, 2004; (C) MRP 6-00-57A03, effective October 13, 2004; and (D) MRP 6-00-57A04, effective July 13, 2005. The MRP is being amended to include monitoring and reporting requirements for the proposed tertiary treatment plant and storage reservoirs.

I. MONITORING

A. Flow Monitoring

The following data shall be recorded in a permanent logbook and the information submitted according to the frequency listed:

1. The total volume, in million gallons (MG), of flow to the tertiary treatment plant for each day and month.

2. The calculated average flow rate, in million gallons per day (MGD) of flow to the tertiary treatment plant calculated for each month.

3. Storage reservoirs: The freeboard (the vertical distance between the top of the water level and the lowest point of a dike or overflow structure) for each reservoir shall be monitored and recorded weekly, and reported in the monitoring report.

B. Effluent Monitoring (Disinfected Tertiary-Treated Wastewater)

Samples of disinfected tertiary-treated wastewater shall be collected from the tertiary treatment plant and analyzed to determine the magnitude of the following parameters and the additional parameters listed in the attached Table No. 1:

Parameter	Units	Type	Minimum Frequency
Flow	MGD	Flow Meter and Recorder	Continuous
Turbidity[1]	NTU	Turbidity meter and recorder	Continuous
Total chlorine residual	mg/L	Chlorine residual meter & recorder	Continuous
Modal contact time[2]	Minutes	Calculated	Daily
CT value[3]	mg-minutes/L	Calculated	Daily
Total coliform bacteria	MPN/100ml	Grab sample	Daily
Dissolved Oxygen	mg/L	Grab	Weekly
Temperature	°C	Grab	Weekly

C. Groundwater Monitoring (Proposed Storage Reservoirs)

Before the discharge to the reservoir, the discharge shall establish background water quality. Discharge Specification II.C of the attached Order requires the Discharger to conduct a hydrogeological investigation and to install a minimum of one groundwater compliance monitoring well.

Beginning immediately, the Discharger shall collect samples from temporary monitoring well (well RB-15A) and any additional wells installed during the hydrogeologic investigation for a period of 1 year and analyze the samples to determine groundwater gradient, direction, and water quality (see Table 2).

---

[1] For each 24-hour period, record and report the average turbidity, amount of time (minutes) the turbidity exceeded five (5) NTUs (if any), and the maximum turbidity.

[2] The modal contact time at the highest and lowest flows shall be recorded and reported for each 24-hour period where there is production of disinfected tertiary treated wastewater. The "modal contact time" is 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. For the purpose of this determination, modal contact time shall be derived from a predetermined plot correlating modal contact times to varying flow conditions. (*22CCR§60301.600*)

[3] When chlorine is used as the disinfectant in production of disinfected tertiary treated wastewater, the lowest CT value shall be calculated for each 24-hour period. CT (mg-minutes per liter) = chlorine residual (mg/L) x modal contact time (minutes). To calculate the lowest value, first record the following data for the 24-hour period:

a. Modal contact time under highest flow and corresponding total chlorine residual at that time.
b. Lowest total chlorine residual and corresponding modal contact time.
c. Highest total chlorine residual and corresponding modal contact time.
d. Modal contact time under lowest flow and corresponding total chlorine residual at that time.

Next, calculate CT values for each of the four conditions, above. The lowest of the four calculated CT values is the lowest CT for the period.

Before discharging treated wastewater to the storage reservoirs, the Discharger shall complete installation of the additional required compliance monitoring wells and complete the following minimum numbers of sampling rounds for parameters listed in Table No. 2 (attached):

1. Eight rounds for total dissolved solids (TDS) and nitrate in each compliance monitoring well, and

2. Two rounds for the other parameters in each compliance monitoring well.

After beginning the discharge of treated- wastewater to the storage reservoirs, the Discharger shall collect samples from the wells and analyze the samples to determine the magnitude of the parameters listed in Table 2 in accordance with the frequency in that table.

Field parameters shall be determined in all monitoring wells each time they are sampled to determine the following.

Parameters	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

The field parameters from each well shall be reported in a separate table.

D. Data Presentation for Compliance Determinations (Proposed Storage Reservoirs Site)

Annual monitoring reports shall contain:

1. An 11" x 17" copy of a site plan showing the site boundaries, reservoirs, groundwater monitoring wells, and groundwater and land surface elevations. The site plan shall include ground water equipotential lines in the upper portion of the aquifer.

2. Graphs showing long-term trends of groundwater elevations as measured in groundwater monitoring wells.

3. Graphs (concentration versus time) showing long-term trends in concentrations of the following constituents in groundwater monitoring wells: TDS and Nitrate,

4. Graphs (concentration versus time) showing long-term trends in concentrations of the following constituents in the tertiary-treated effluent: BOD, CBOD, COD, N03, Kjeldahl Nitrogen, Ammonia, Turbidity, and Chlorine residual.

E. Biosolids Monitoring (Proposed Tertiary Treatment Plant and Storage Reservoirs)

The following shall be recorded monthly and reported in the quarterly monitoring reports:

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 reuse or disposal method. The type of crop grown, if biosolids are directly land applied at an offsite location,

3. Cumulative total quantity of biosolids currently stored on site including the quantity of biosolids added during this monitoring period.

The Discharger shall include in each monitoring report the amount and type of all grit and screenings hauled off site for disposal or recycle. The person or company doing the hauling and the legal point of disposal or recycle shall also be recorded.

F. Operation and Maintenance Monitoring

A brief summary of any operational problems and maintenance activities shall be submitted to the Water Board with each quarterly monitoring report.

This summary shall discuss:

1. Any major modifications or additions to the treated wastewater conveyance, treatment, or storage facilities.

2. Any major maintenance conducted on the treated wastewater conveyance, treatment, or storage facilities.

3. Any major problems occurring in the treated wastewater conveyance, treatment, or storage facilities.

4. The calibration of any wastewater flow measuring devices.

G. Laboratory Analyses

1. General

Sample results greater than or equal to the reported Minimum Level (ML) shall be reported as measured by the laboratory (i.e., the measured chemical concentration in the sample). Sample results less than the reported ML, but greater than or equal to the laboratory's Method Detection Limit (MDL), shall be reported as "Detected, but Not Quantified," or DNQ. The estimated chemical concentration of the sample shall also be reported. For the purposes of data collection, the laboratory shall write the estimated chemical concentration next to DNQ as well as the words "Estimated Concentration" (may be shortened to "Est. Conc."). The laboratory may, if such information is available, include numerical estimates of the data quality for the reported result. Numerical estimates of data quality may be percent accuracy, (+/- a percentage of the reported value), numerical ranges (low to high), or any other means considered appropriate by the laboratory.

2. Disinfection By-Products (DBPs)

DBPs shall be analyzed using a laboratory method with the following Minimum Reporting Levels:

DBPs	Minimum Reporting Level (micrograms/Liter)
Total trihalomethanes (TTHM)	80
Bromodichloromethane	0.5
Bromoform	0.5
Chloroform	0.5
Dibromochloromethane	0.5
Haloacetic acids (five) (HAA5)	60
Monochloroacetic Acid	2
Dichloroacetic Acid	1
Trichloroacetic Acid	1
Monobromoacetic Acid	1
Dibromoacetic Acid	1
N-Nitrosodimethylamine (NDMA)	0.002

For NDMA analyses, the Discharger is considered to be in compliance with requirements pertaining to the method of laboratory analysis (contained in Provision 1.a, 1.b and 1.c of the attached General Provisions for Monitoring and Reporting), if the Discharger uses a modified USEPA method (e.g., USEPA method 1625) in order to achieve a reporting limit of two (2) nanogram per liter (ng/L).

3. Dioxins and polychlorinated biphenyls (PCBs)

Monitoring for dioxins and polychlorinated biphenyls (PCBs) is not required.

4. Chromium

Use appropriate USEPA approved methods that will quantify concentrations down to 0.0025 mg/l for hexavalent chromium and 0.05 mg/l for total chromium.

II. REPORTING

A. General Provisions and Reports

1. The Discharger shall comply with the "General Provisions for Monitoring and Reporting," (GPMR - Attachment "B") dated September 1, 1994, which is attached to and made part of this Monitoring and Reporting Program.

B. Submittal Periods

The Discharger must submit monitoring reports according to the following schedule:

1. The following reports must be provided on a monthly frequency in accordance with schedule contained in Monitoring and Reporting Programs 6-00-57A01, Section II.B.1:

   a. Flow Monitoring;
   b. Effluent Monitoring; and
   c. Operation and Maintenance Monitoring.

2. The following reports must be provided on a quarterly frequency in accordance with schedule contained in Monitoring and Reporting Programs 6-00-57A01, Section II.B.2:

   a. Effluent Monitoring (Data collected quarterly, semiannually and annually);
   b. Ground Water Monitoring;

3. The Biosolids Monitoring report must be provided on annual frequency in accordance with schedule contained in Monitoring and Reporting Programs 6-00-57A01, Section II.B.3 (as amended by Monitoring and Reporting Programs 6-00-57A03).

Ordered by: _____ Dated: August 29, 2007
HAROLD J. SINGER
EXECUTIVE OFFICER

Attachments: A. Tables 1 and 2
B. General Provisions for Monitoring and Reporting

MC/rp BO2007 Palmdale WDRs/6-00-57A05 LACSD20 MRP.doc

Table No. 1
Tertiary Treatment Plant Effluent

Parameter	Sampling Frequency (Effluent)	Type of Sample
pH	W	Grab
Biochemical Oxygen Demand (BOD)	M	24-hour composite
Carbonaceous BOD	M	24-hour composite
Chemical Oxygen Demand	M	24-hour composite
Total Organic Carbon	Q	24-hour composite
Methylene Blue Active Substances	Q	24-hour composite
Kjeldahl Nitrogen	M	24-hour composite
Nitrate Nitrogen	M	24-hour composite
Nitrite Nitrogen	M	24-hour composite
Ammonia Nitrogen	M	24-hour composite
Chloride	Q	24-hour composite
Sodium	Q	24-hour composite
Sulfate	Q	24-hour composite
Calcium	Q	24-hour composite
Magnesium	Q	24-hour composite
Total Dissolved Solids	Q	24-hour composite
Haloacetic acids (HAA5)	Q	Grab
Total Trihalomethanes (THMs)	Q	Grab
N-Nitrosodimethylamine (ND	Q	24-hour composite
Total Petroleum Hydrocarbons	Y	Grab
Total chromium	Y	24-hour composite
Hexavalent chromium	Y	Grab
Total Cyanides	Y	24-hour composite
Total Phenols	Y	24-hour composite
Volatile Organics	Y	Grab
Semivolatile Organics	Y	24-hour composite
Heavy Metals	Y	24-hour composite
Methyl Tertiary Butyl Ether	Y	Grab

W=Weekly, M=Monthly, Y =

Table No. 2
Groundwater Monitoring Wells, Proposed Reservoirs

Parameter	Sampling Frequency
pH	Q
Total Organic Carbon	Q
Methylene Blue Active Substances	Q
Kjeldahl Nitrogen	Q
Nitrate Nitrogen	Q
Nitrite Nitrogen	Q
Ammonia Nitrogen	Q
Chloride	Q
Sodium	Q
Sulfate	Q
Calcium	Q
Magnesium	Q
Total Dissolved Solids	Q
Haloacetic acids (HAA5)	Y
Total Trihalomethanes (THMs)	Y
N-Nitrosodimethylamine (NDMA)	Y
Total Petroleum Hydrocarbons	Y
Total chromium	Y
Hexavalent chromium	Y
Total Cyanides	Y
Total Phenols	Y
Volatile Organics	Y
Semivolatile Organics	Y
Heavy Metals	Y
Methyl Tertiary Butyl Ether	Y

Y = Annually, S = Semiannually and Q = Quarterly

ATTACHMENT B

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.