

CALIFORNIA REGIONAL WATER QUALITY CONTROL REGIONAL BOARD
CENTRAL VALLEY REGION

ORDER NO. R5-2002-0221

WASTE DISCHARGE REQUIREMENTS
FOR
MOUNTAIN OF ATTENTION SANCTUARY
JOHANNINE DAIST COMMUNION
LAKE COUNTY

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

1. Waste Discharge Requirements Order No. 93-090, adopted by the Regional Board on 25 June 1993, prescribes requirements for a discharge of 10,000 gallons per day (gpd) average daily flow of domestic wastewater from the Johannine Daist Communion religious retreat to three stabilization ponds.
2. The retreat (Mountain of Attention Sanctuary) is owned and operated by the Johannine Daist Communion (hereafter referred to as Discharger). The retreat (APN 115-017-02) is located at 12040 North Siegler Road in Southeast Lake County in Section 19, T12N, R7W and Section 24, T12N, R8W, MBD&M. The retreat is shown on Attachment A, which is attached and made part of this Order by reference.
3. Order No. 93-090 is neither adequate nor consistent with current plans and policies of the Regional Board.
4. Currently, raw wastewater from the existing system flows via gravity to a communitor prior to entering an unlined partially aerated lagoon for treatment. The partially treated effluent is stored in two unlined storage ponds where the effluent is used for spray irrigation on a 2-acre area.
5. The Discharger submitted a Report of Waste Discharge (ROWD) for an upgrade to the existing sewage disposal system. The upgrade is proposed to address the following specific concerns regarding the system:
 - a. Inadequate detention time and treatment in the lagoon(s) for peak flows. Average daily flow rates are estimated to be approximately 10,000 gpd with peak short-term events of 25,000 gpd.
 - b. Unlined ponds located directly adjacent to Siegler Canyon Creek.
 - c. Inadequate storage volume for winter rainfall conditions. Current storage volume is limited to a few days resulting in irrigation during inclement weather to avoid overflow to the existing ponds.
6. The proposed upgrade to the system will be completed in three phases (Phase I through Phase III) and will include the following:
 - a. Phase I includes the lining of a newly constructed storage pond that will be lined with a single 60-mil HDPE liner. The pond will be lined prior to the 2002 wet season and provide approximately 75,300 ft³ (563,000 gallons) of storage.

- b. Phase II consists of lining the two existing aeration treatment ponds that will have a combined capacity of approximately 45,700 ft³ (342,000 gallons). The ponds will be lined with a 60-mil HDPE synthetic liner.
 - c. Phase III consists of constructing and lining a new storage pond that will provide approximately 84,000 ft³ (628,000 gallons) of storage and adding a 1.5-acre spray irrigation area. The ponds will be lined with a 60-mil HDPE synthetic liner.
7. The existing and proposed wastewater treatment and storage ponds and the spray irrigation areas are shown on Attachment B, which is attached herein and made part of this Order by reference.
8. The Discharger has relied on spray irrigation during the wet season to alleviate their storage capacity issues, however, due to seasonal high groundwater at the site, the irrigation area tends to become saturated. Past irrigation practices have resulted in discharges to surface water drainage courses.
9. In 1996, Lake County Division of Environmental Health Department evaluated the site for subsurface disposal. Soil mantles were excavated at the site to the west and east of Siegler Canyon Road and were indicative of temporarily perched/permanent groundwater water levels ranging from 49 to 62 inches below grade on the east side and less than 12 inches below grade on the west side of Siegler Canyon Road. Based on these conditions, the Lake County concluded that the site conditions did not meet Lake County standards and subsurface disposal was denied.
10. Based on the shallow groundwater at the site in the irrigation area, this Order prohibits wet weather irrigation of wastewater. In addition, the Discharger proposes to line the existing and proposed ponds with a synthetic liner to mitigate the separation to groundwater.
11. Soil in the vicinity is a butte gravelly sand.
12. There are no existing groundwater monitoring wells located at the facility. This Order requires the discharge to install a monitoring well network to assess background and down gradient water quality of the treatment and storage ponds. The wells shall be installed to such a depth that will allow monitoring of the first encountered groundwater bearing zone. The Discharger is required to evaluate whether the discharge of waste is threatening or has caused groundwater to contain waste constituents in concentrations statistically greater than background water quality.
13. This Order does not allow degradation of groundwater beneath the treatment ponds and the irrigation area.
14. The water supply for the retreat is provided from groundwater supply wells.
15. The treatment system upon implementation of the proposed upgrades will provide treatment and control of the discharge that incorporates:
 - a. Technology for secondary treatment of municipal wastewater;
 - b. Recycling of wastewater;

- c. Lining of partially aerated treatment and storage ponds.
16. The State Department of Health Services (DHS) has established statewide water recycling criteria in Title 22, CCR, Section 60301 et. seq. (hereafter Title 22). DHS revised the water recycling criteria contained in Title 22 on 2 December 2000. The revised Title 22 requires that all wastewater used for recycling receive, at a minimum, secondary treatment. Title 22 does not define secondary treatment with respect to numerical limits for BOD₅ and total suspended solids (TSS). According to DHS, for uses not requiring disinfection, treated wastewater should, at a minimum, be adequately oxidized, contain dissolved oxygen near saturation levels, and be nonputrescible when applied to land. This Order uses numerical limits for BOD₅ and TSS ensure that the recycled wastewater meets the secondary treatment objectives for typical pond treatment pond systems.
17. Section 60303 of Title 22 states that water recycling requirements 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.
18. Section 60323(a) of Title 22 states that no person shall produce or supply reclaimed water for direct reuse from a proposed water reclamation plant unless an engineering report is submitted for review and approval by DHS and the Regional Board. If the Discharger intends to reuse the wastewater for beneficial use purposes, then per DHS guidelines a Title 22 engineering report shall be submitted to DHS and the Regional Board for review and approval.
19. Historical comments provided by DHS to the Discharger, regarding the irrigation practice, include the following:
 - a. Assurance that with the present treatment the pasture land is limited to fodder, fiber, and seed crops. Also, that no cattle will be allowed to graze while the spray area is still wet.
 - b. Fences should be posted with signs warning the public that reclaimed water is being used.
 - c. If the pasture land to be used for the reclamation is near the living quarters of the Communion, we would like a 100 foot buffer zone implemented to prevent any possible exposure to the effluent.

Basin Plan, Beneficial Uses, and Regulatory Considerations

20. The Basin Plan designates beneficial uses, establishes water quality objectives, contains implementation plans and policies for protecting waters of the basin, and incorporates by reference plans and policies adopted by the State Board. Pursuant to Section 13263(a) of the California Water Code, waste discharge requirements must implement the Basin Plan.
21. The facility lies within the Cache Creek Hydrologic Unit Area No. 511.00, as depicted on interagency hydrologic maps prepared by the Department of Water Resources in August 1986.

22. Surface water drainage is to Siegler Canyon Creek a tributary of Cache Creek. The beneficial uses of Cache Creek are municipal and domestic supply; agricultural irrigation and stock watering supply; industrial process and service supply; contact and non-contact recreation, other noncontact recreation; warm and potential cold freshwater habitat; warm and cold water spawning and wildlife habitat.
23. The beneficial uses of the underlying groundwater are municipal and domestic supply, agricultural supply, industrial service supply, and industrial process supply.
24. The Basin Plan encourages water recycling.
25. The United States Environmental Protection Agency (EPA) has promulgated biosolids reuse regulations in 40 CFR 503, *Standard for the Use or Disposal of Sewage Sludge*, which establishes management criteria for protection of ground and surface waters, sets application rates for heavy metals, and establishes stabilization and disinfection criteria.
26. The action to update waste discharge requirements for this facility is exempt from the provisions of the California Environmental Quality Act (CEQA), in accordance with the CCR, Title 14, Section 15261.
27. On 16 April 2002, Lake County Community Development Department, Building Division, issued a categorical exemption from the provisions of CEQA, in accordance with the CCR, Title 14, Section 15303 for the construction of the additional storage pond. The project was for a discretionary grading permit for the improvements to the wastewater treatment lagoons and/or ponds.
28. Section 13267(b)(1) of the CWC provides that: *“In conducting an investigation specified in subdivision (a), the Regional Board may require that any person who has discharged, discharges, or is suspected of having discharged or discharging, or who proposes to discharge waste within its region, or any citizen or domiciliary, or political agency or entity of this state who has discharged, discharges, or is suspected of having discharged or discharging, or who proposes to discharge, waste outside of its region that could affect the quality of waters within its region shall furnish, under penalty of perjury, technical or monitoring program reports which the regional board requires. The burden, including costs, of these reports shall bear a reasonable relationship to the need for the report and the benefits to be obtained from the reports. In requiring those reports, the Regional Board shall provide the person with a written explanation with regard to the need for the reports, and shall identify the evidence that supports requiring that person to provide the reports.”*
29. The technical reports required by this Order and the attached “Monitoring and Reporting Program No. R5-2002-0221” are necessary to assure compliance with these waste discharge requirements. The Discharger operates the facility that discharges the waste subject to this Order.
30. The California Department of Water Resources (DWR) sets standards for the construction and destruction of groundwater wells (hereafter DWR Well Standards), as described in *California*

Well Standards Bulletin 74-90 (June 1991) and *Water Well Standards: State of California Bulletin*

94-81 (December 1981). These standards, and any more stringent standards adopted by the State or county pursuant to CWC Section 13801, apply to all monitoring wells.

31. The discharge authorized herein and the treatment and storage facilities associated with the discharge, except for discharges of residual sludge and solid waste, are exempt from the requirements of Title 27, California Code of Regulations (CCR), Section 20005 et seq. (hereafter Title 27). The exemption, pursuant to Section 20090(a) of Title 27, is based on the following:
 - a. The waste consists primarily of domestic sewage and treated effluent;
 - b. The waste discharge requirements are consistent with water quality objectives; and
 - c. The treatment and storage facilities described herein are associated with a municipal wastewater treatment plant.
32. State regulations that prescribe procedures for detecting and characterizing the impact of waste constituents from waste management units on groundwater are found in Title 27. While the wastewater treatment facility is exempt from Title 27, the data analysis methods of Title 27 are appropriate for determining whether the discharge complies with the terms for protection of groundwater specified in this Order.
33. Pursuant to California Water Code Section 13263(g), discharge is a privilege, not a right, and adoption of this Order does not create a vested right to continue the discharge.

Public Notice

34. The Regional Board considered all the above and the supplemental information and details in the attached Information Sheet, which is incorporated by reference herein, in establishing the following conditions of discharge.
35. The Regional Board consulted with DHS and has considered their recommendations regarding the public health aspects of water recycling.
36. The Regional Board has notified the Discharger and interested agencies and persons of its intent to prescribe waste discharge requirements for this discharge, and has provided them with an opportunity for a public hearing and an opportunity to submit their written views and recommendations.
37. The Discharger and interested agencies and persons were notified of the intent to prescribe waste discharge requirements for this discharge, and provided an opportunity for a public hearing and an opportunity to submit their written views and recommendations.

IT IS HEREBY ORDERED that, pursuant to Sections 13263 and 13267 of the California Water Code, Order No. 93-090 is rescinded and the Johannine Daist Communion, its agents, successors, and assigns,

in order to meet the provisions contained in Division 7 of the California Water Code and regulations adopted hereunder, shall comply with the following:

[Note: Other prohibitions, conditions, definitions, and some methods of determining compliance are contained in the attached "Standard Provisions and Reporting Requirements for Waste Discharge Requirements" dated 1 March 1991.]

A. Discharge Prohibitions

1. The direct or indirect discharge of wastes to surface waters or surface water drainage courses is prohibited.
2. The bypass or overflow of untreated or partially treated waste is prohibited.
3. The application of the effluent to areas other than the irrigation area is prohibited.
4. The discharge of sewage or untreated wastewater from the collection system at any point upstream of a wastewater treatment ponds is prohibited. Discharge of treated wastewater downstream of the treatment plant, other than at the approved disposal areas, is prohibited.
5. The discharge of waste classified as 'hazardous' under Section 2521, Chapter 15 of Title 23 or 'designated', as defined in Section 13173 of California Water Code is prohibited.
6. The discharge of septage to the treatment system is prohibited.

B. Discharge Specifications

1. The monthly average dry weather wastewater flow shall not exceed 10,000 gpd.
2. Public contact with wastewater shall be precluded or controlled through such means as fences and signs, or acceptable alternatives.
3. No waste constituent shall be released or discharged, or placed where it will be released or discharged, in a concentration or in a mass that causes violation of the Groundwater Limitations.
4. Objectionable odors originating at the facility shall not be perceivable beyond the limits of the property owned by the Discharger.
5. As a means of discerning compliance with Discharge Specification No. 4, the dissolved oxygen content in the upper one foot of any wastewater storage pond shall not be less than 1.0 mg/L.
6. Wastewater ponds shall be managed to prevent breeding of mosquitoes. In particular,

- a. An erosion control program shall be implemented to ensure that small coves and irregularities are not created around the perimeter of the water surface.
 - b. Weeds shall be minimized through control of water depth, harvesting, or herbicides.
 - c. Dead algae, vegetation, and debris shall not accumulate on the water surface.
7. The facility shall have sufficient treatment, storage, and disposal capacity to accommodate allowable wastewater flow and design seasonal precipitation and ancillary inflow and infiltration during the winter months. Design seasonal precipitation shall be based on total annual precipitation using a return period of 100 years, distributed monthly in accordance with historical rainfall patterns.
 8. Freeboard in any pond shall never be less than two feet as measured from the water surface to the lowest point of overflow.
 9. On or about 15 October of each year, available pond storage capacity shall at least equal the volume necessary to comply with Discharge Specifications B.7 and B.8.
 10. The pond effluent shall not have a pH less than 6.5 or greater than 9.0.

C. General Solids Disposal Specifications

Sludge, as used in this document, means the solid, semisolid, and liquid residues removed during primary, secondary, or advanced wastewater treatment processes. Solid waste refers to grit and screenings generated during preliminary treatment. Residual sludge means sludge that will not be subject to further treatment at the treatment ponds. Biosolids refers to sludge that has been treated and tested and shown to be capable of being beneficially and legally used pursuant to federal and state regulations as a soil amendment for agriculture, silviculture, horticulture, and land reclamation activities.

1. Sludge and solid waste shall be removed from screens, sumps, ponds, and clarifiers as needed to ensure optimal plant operation.
2. Treatment and storage of sludge generated by the treatment/storage ponds shall be confined to the Dischargers facility, and shall be conducted in a manner that precludes infiltration of waste constituents into soils in a mass or at concentrations that will violate the Groundwater Limitations of this Order.
3. Any storage of residual sludge, solid waste, and biosolids at the treatment/storage ponds shall be temporary, and the waste shall be controlled and contained in a manner that minimizes leachate formation and precludes infiltration of waste constituents into soils in a mass or at concentrations that will violate the Groundwater Limitations of this Order.

4. Residual sludge, biosolids, and solid waste shall be disposed of in a manner approved by the Executive Officer and consistent with Title 27. Removal for further treatment, disposal, or reuse at disposal sites (i.e., landfills, WWTPs, composting sites, soil amendment sites) operated in accordance with valid waste discharge requirements issued by a Regional Water Quality Control Board will satisfy this specification.
5. Use of biosolids as a soil amendment shall comply with valid waste discharge requirements issued by a Regional Water Quality Control Board. In most cases, this will mean the General Biosolids Order (State Water Resources Control Board Water Quality Order No. 2000-10-DWQ, *General Waste Discharge Requirements for the Discharge of Biosolids to Land for Use as a Soil Amendment in Agricultural, Silvicultural, Horticultural, and Land Reclamation Activities*). For a biosolids use project to be covered by the General Biosolids Order, the Discharger must file a complete Notice of Intent and receive a Notice of Applicability for each project.
6. Use and disposal of biosolids shall comply with the self-implementing federal regulations of Title 40, Code of Federal Regulations (CFR), Part 503, which are subject to enforcement by the U.S. EPA, not the Regional Board. If during the life of this Order, the State accepts primacy for implementation of 40 CFR 503, then the Regional Board may also initiate enforcement where appropriate.

D. Irrigation Area Specifications

1. Recycled wastewater used for irrigation shall meet the criteria contained in Title 22, CCR, Section 60301 et seq. (hereafter Title 22).
2. Pond Effluent discharged to the irrigation area shall not exceed the following limitations:

<u>Constituents</u>	<u>Units</u>	<u>Average Monthly</u>	<u>Average Daily</u>
BOD ¹	mg/l	45	90
Total Suspended Solids	mg/l	45	90

¹ 5-day, 20°C biochemical oxygen demand

3. The BOD seasonal average loading rate to the reclamation area shall not exceed 100 lb/acre/day.
4. Neither the treatment nor the use of reclaimed water shall cause a pollution or nuisance as defined by Section 13050 of the CWC.
5. The use of reclaimed water shall not cause degradation of any water supply.

6. Public contact with recycled wastewater shall be controlled through use of fences and cautionary signs, and/or other appropriate means. Perimeter warning signs indicating that recycled water is in use shall be posted at least every 500 feet along the property boundary and at each access road entrance to the properties. The contents of these signs shall be as described in Section 60310 of Title 22. Each sign shall be in English and Spanish languages.
7. Direct or windblown spray shall be confined to the disposal area and shall be prevented from contacting outdoor eating areas, drinking water facilities, living quarters, or surface watercourses.
8. The Discharger shall comply with the following setbacks within the land application areas:

<u>Setback Distance (feet)</u>	<u>To</u>
25	Property Lines
30	Public Roads
100	Domestic/Irrigation Wells

9. A 100-foot buffer shall be maintained around the spray field and between any surface water drainage course and the wetted area produced during spray disposal.
10. Recycled water shall be used in compliance with Title 22, Article 3, "Uses of Recycled Water." Recycled water shall not be used for irrigation food of crops for human consumption, nor shall it be used in recreational impoundments.
11. The perimeter of the existing and proposed irrigation areas shall be graded to control runoff and prevent ponding along public roads or other public areas.
12. Recycled water for irrigation shall be managed to minimize erosion, runoff, and movement of aerosols.
13. Application of recycled wastewater to the irrigation area shall be at reasonable rates considering crop, soil, climate and irrigation management system. The nutrient loading of the irrigation area, including the nutritive value of organic and chemical fertilizers and of the recycled water, shall not exceed crop demand.
14. Irrigation with recycled water shall not be performed within 24 hours before, during, or within 24 hours after any precipitation event, nor shall it be performed when the irrigation area is saturated.
15. Upon completion of the improvements to the treatment and storage ponds, application of recycled water shall be limited to the dry season from 15 March to 1 November of each year.

16. Recycled water controllers, valves, etc., shall be affixed with recycled water warning signs and the quick couplers and sprinkler heads shall be of a type, or secured in a manner, that permits operation by authorized personnel only.
17. The irrigation area shall be managed to prevent breeding of mosquitoes. In particular:
 - a. There shall be no standing water on the irrigation parcel areas 48 hours after effluent application to a parcel ceases;
 - b. Ditches must be maintained essentially free of emergent, marginal, and floating vegetation, and;
 - c. Low-pressure and unpressurized pipelines and ditches accessible to mosquitoes shall not be used to store effluent.

E. Groundwater Limitations

The discharge, in combination with other sources, shall not cause underlying groundwater to contain waste constituents in concentrations statistically greater than background water quality, except for coliform. For bacteria, the most probable number of total coliform organisms shall be less than 2.2/100 ml over any 7-day period.

F. Provisions

1. The following technical reports shall be submitted pursuant to Section 13267 of the California Water Code. All technical reports required herein that involve planning, investigation, evaluation, or design, or other work requiring interpretation and proper application of engineering or geologic sciences, shall be prepared by or under the direction of persons registered to practice in California pursuant to California Business and Professions Code sections 6735, 7835, and 7835.1. To demonstrate compliance with sections 415 and 3065 of Title 16, CCR, all technical reports must contain a statement of the qualifications of the responsible registered professional(s). As required by these laws, completed technical reports must bear the signature(s) and seal(s) of the registered professional(s) in a manner such that all work can be clearly attributed to the professional responsible for the work.
 - a. By **1 July 2003**, the Discharger shall submit workplan that includes the design plans and time schedule for the completion of the improvements (pond lining, storage pond construction and irrigation area addition) to be completed during Phase II and III improvements. Phase II improvements shall be completed by **1 October 2004**. Phase III improvements shall be completed by **1 October 2005**.
 - b. Within **30 days** upon completion of the improvements outlined in Provision F.1.a, the Discharger shall submit a report detailing the improvements that were

completed. In addition, supporting documentation shall be submitted to demonstrate that the Discharger is in compliance with Discharge Specification B.7.

- c. By **1 March 2003**, the Discharger shall submit a groundwater monitoring well installation workplan, for characterization of groundwater quality. The workplan shall describe the installation of monitoring wells that will provide an adequate monitoring well network to evaluate groundwater quality upgradient and downgradient of the treatment and disposal fields. Every monitoring well shall be constructed to yield representative samples from the uppermost layer of the uppermost aquifer and to comply with applicable well standards. The workplan shall be consistent with, and include the items listed in, the first section of Attachment C, *"Items to be Included in a Monitoring Well Installation Workplan and a Monitoring Well Installation Report of Results."*
 - d. By **1 July 2003**, the Discharger shall submit a groundwater well installation report prepared and signed by a registered geologist, certified engineering geologist, or civil engineer registered or certified by the State of California. The report shall be consistent with, and include the items listed in, the second section of Attachment C. Groundwater monitoring shall commence as prescribed in the attached MRP Order No. R5-2002-0221.
2. The Discharger shall comply with the Monitoring and Reporting Program No. R5-2002-0221, which is part of this Order, and any revisions thereto as ordered by the Executive Officer.
 3. The Discharger shall comply with the "Standard Provisions and Reporting Requirements for Waste Discharge Requirements", dated 1 March 1991, which are attached hereto and made part of this Order by reference. This attachment and its individual paragraphs are commonly referenced as "Standard Provision(s)."
 4. The Discharger shall use the best practicable cost-effective control technique(s) including proper operation and maintenance, to comply with discharge limits specified in this order.
 5. As described in the Standard Provisions, the Discharger shall report promptly to the Regional Board any material change or proposed change in the character, location, or volume of the discharge.
 7. The Discharger shall report to the Regional Board any toxic chemical release data it reports to the State Emergency Response Commission within 15 days of reporting the data to the Commission pursuant to section 313 of the "Emergency Planning and Community Right to Know Act of 1986."
 8. The Discharger shall not allow pollutant-free wastewater to be discharged into the wastewater collection, treatment, and disposal system in amounts that significantly diminish the system's capability to comply with this Order. Pollutant-free wastewater

means rainfall, groundwater, cooling waters, and condensates that are essentially free of pollutants.

9. The Discharger shall submit to the Regional Board on or before each compliance report due date, the specified document or, if appropriate, a written report detailing compliance or noncompliance with the specific schedule date and task. If noncompliance is being reported, then the Discharge shall state the reasons for such noncompliance and provide an estimate of the date when the Discharger will be in compliance. The Discharger shall notify the Regional Board in writing when it returns to compliance with the time schedule.
10. In the event of any change in control or ownership of land or waste discharge facilities described herein, the Discharger shall notify the succeeding owner or operator of the existence of this Order by letter, a copy of which shall be immediately forwarded to this office.
11. At least **90 days** prior to termination or expiration of any lease, contract, or agreement involving disposal or recycling areas or off-site reuse of effluent, used to justify the capacity authorized herein and assure compliance with this Order, the Discharger shall notify the Regional Board in writing of the situation and of what measures have been taken or are being taken to assure full compliance with this Order.
12. The Discharger must comply with all conditions of this Order, including timely submittal of technical and monitoring reports as directed by the Executive Officer. Violations may result in enforcement action, including Regional Regional Board or court orders requiring corrective action or imposing civil monetary liability, or in revision or recession of this Order.
13. A copy of this Order shall be kept at the discharge facility for reference by operating personnel. Key operating personnel shall be familiar with its contents.
14. The Regional Board will review this Order periodically and will revise requirements when necessary.

WASTE DISCHARGE REQUIREMENTS ORDER NO. R5-2002-0221
MOUNTAIN OF ATTENTION SANCTUARY
JOHANNINE DAIST COMMUNION
LAKE COUNTY

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I, THOMAS R. PINKOS, Executive Officer, do hereby certify the foregoing is a full, true, and correct copy of an Order adopted by the California Regional Water Quality Control Regional Board, Central Valley Region, on 6 December 2002.

THOMAS R. PINKOS, Executive Officer

MMW: 12/6/02

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
CENTRAL VALLEY REGION

MONITORING AND REPORTING PROGRAM NO. R5-2002-0221
FOR

MOUNTAIN OF ATTENTION SANCTUARY
JOHANNINE DAIST COMMUNION
LAKE COUNTY

This monitoring and reporting program (MRP) incorporates requirements for the monitoring of the wastewater treatment and storage ponds and wastewater disposal system pursuant to Water Code Section 13267. The Discharger shall not implement any changes to this MRP unless and until a revised MRP is issued by the Executive Officer.

Sample collection stations shall be established such that the samples collected are representative of the nature and volume of the material(s) sampled. The date, time, and person conducting the monitoring shall be recorded for each monitoring event.

INFLUENT MONITORING

The wastewater treatment system is to be inspected on a daily basis. Samples of effluent shall be taken at the point of discharge to the primary aeration pond. At a minimum, effluent monitoring shall consist of the following:

<u>Constituents</u>	<u>Units</u>	<u>Sample Type</u>	<u>Sampling Frequency</u>	<u>Reporting Frequency</u>
Flow	gpd	Continuous	Daily	Monthly
pH ¹	pH units	Grab	Monthly	Monthly
Electrical Conductivity ¹	μmhos/cm	Grab	Monthly	Monthly
Total Dissolved Solids	mg/l	Grab	Quarterly	Quarterly
Total Nitrogen	mg/l	Grab	Quarterly	Quarterly
BOD ₅ ²	mg/l	Grab	Quarterly	Quarterly

¹ A hand held field unit may be used to measure pH, and electrical conductivity.

² 5-day, 20°C Biochemical Oxygen Demand.

TREATMENT AND STORAGE POND MONITORING

At a minimum each of the treatment and storage ponds shall be monitored for the following:

<u>Constituent</u>	<u>Units</u>	<u>Type of Sample</u>	<u>Sampling Frequency</u>	<u>Reporting Frequency</u>
Freeboard	±0.1 feet	Measurement	Weekly	Monthly
Dissolved Oxygen ^{1,2}	mg/L	Grab	Weekly	Monthly

<u>Constituent</u>	<u>Units</u>	<u>Type of Sample</u>	<u>Sampling Frequency</u>	<u>Reporting Frequency</u>
pH ²	pH units	Grab	Weekly	Monthly
Electrical Conductivity ²	µmhos/cm	Grab	Weekly	Monthly
Odors	--	Observation	Weekly	Monthly
Levee condition ³	--	Observation	Weekly	Monthly

¹ Samples shall be collected at a depth of one foot from each pond in use, opposite the inlet. Samples shall be collected between 0700 and 0900 hours.

² A hand held field unit may be used to measure dissolved oxygen, pH, and electrical conductivity.

³ Pond containment levees shall be observed for signs of seepage or surfacing water along the exterior toe of the levees. If surfacing water is found, then a sample shall be collected and tested for total coliform organisms.

IRRIGATION DISPOSAL FIELD MONITORING

Inspections of the irrigation disposal field shall be conducted daily during periods of irrigation. Inspections will be comprised of a physical evaluation of the disposal site to determine whether waste being applied in such a manner that there is no discharge to surface water or surface water drainage courses. The ground in the immediate vicinity and surrounding each disposal site shall be assessed to determine the presence of saturation or ponding of effluent on the ground surface. The inspection report shall include any findings of springs. Evidence of erosion, field saturation, ponding, runoff, accumulation of solids, presence of nuisance such as odors, vectors or insects, and other relevant field conditions shall be observed and recorded. The notations shall also document any corrective actions taken with respect to observations made. A copy of the entries made in the log during each month shall be submitted along with quarterly monitoring reports.

GROUNDWATER MONITORING

Upon the completion of the installation of groundwater monitoring wells, groundwater samples shall be collected and analyzed, at a minimum, for the parameters listed below. This sampling regime shall commence the **3rd Quarter 2003**. Sample collection and analysis shall follow standard EPA protocol.

<u>Constituents</u>	<u>Units</u>	<u>Sample Type</u>	<u>Sampling Frequency</u>	<u>Reporting Frequency</u>
Depth to water	(± 0.01) feet	Measured	Quarterly	Quarterly
pH ¹	pH units	Grab	Quarterly	Quarterly
Electrical Conductivity ¹	µmhos/cm	Grab	Quarterly	Quarterly
Total Coliform Organisms	MPN/100 ml	Grab	Quarterly	Quarterly
Total Dissolved Solids	mg/l	Grab	Quarterly	Quarterly
Nitrate (as Nitrogen)	mg/l	Grab	Quarterly	Quarterly
Elevation ²	(± 0.01) feet	Calculated	Quarterly	Quarterly

<u>Constituents</u>	<u>Units</u>	<u>Sample Type</u>	<u>Sampling Frequency</u>	<u>Reporting Frequency</u>
Hydraulic Gradient	feet/feet	Calculated	Quarterly	Quarterly
General Minerals ³	mg/l	Grab	Annually	Annually

¹ A hand held field unit may be used to measure pH and electrical conductivity.

² The Mean Sea Level Elevation shall be used to determine the direction and gradient of groundwater flow.

³ General Minerals shall include at least the following compounds: calcium, potassium, sodium, chloride, nitrate, sulfate, total dissolved solids, electrical conductivity, pH, total alkalinity, and total hardness.

Prior to collecting samples, monitoring wells shall be adequately purged to remove water that has been standing within the well screen and casing that may not be chemically representative of formation water. Depending on the hydraulic conductivity of the geologic setting, the volume removed during purging is typically from 3 to 5 volumes of the standing water within the well casing and screen, or additionally the filter pack pore volume.

Prior to monitoring well purging and sampling, the Discharger shall measure the water level in each well. The Discharger shall report water level data as groundwater depth (in feet and hundredths) and as groundwater surface elevation (in feet and hundredths above mean sea level). The Discharger shall include in its quarterly submittal of groundwater elevation data, a contour map based on said data showing the gradient and direction of groundwater flow under/around the Facility and effluent disposal area(s).

SOLIDS MONITORING

The kitchen grease trap, and any sediment trap/oil and grease separators shall be inspected monthly to assure adequate treatment and perform solids removal as necessary.

A report on all solids monitoring shall be reported to the Board in the annual report due by 1 February of each year. The frequency and volume of solids removed from the tanks shall be included in the annual report.

REPORTING

In reporting the monitoring data, the Discharger shall arrange the data in tabular form so that the date, the constituents, and the concentrations are readily discernible. The data shall be summarized in such a manner to clearly illustrate compliance with waste discharge requirements. The results of any monitoring done more frequently than required at the locations specified in the Monitoring and Reporting Program shall be reported to the Board.

A. Quarterly Monitoring Reports

Quarterly Monitoring Reports shall be submitted to the Regional Board by the **1st day of February** (4th Quarter Report), **May** (1st Quarter Report), **August** (2nd Quarter Report), and **November** (3rd Quarter Report). The Quarterly Reports shall include the results of all regular monthly monitoring data generated and the results of groundwater monitoring performed. At a minimum, the report shall contain:

1. A narrative description of all preparatory, monitoring, sampling, and analytical testing activities. The narrative shall be sufficiently detailed to verify compliance with the WDRs, this MRP, and the Standard Provisions and Reporting Requirements. The narrative shall be supported by field logs for each well documenting depth to groundwater; parameters measured before, during, and after purging; method of purging; calculation of the casing volume; and total volume of water purged.
2. Calculation of groundwater elevations, an assessment of the groundwater flow direction and gradient on the date of measurement, comparison to previous flow direction and gradient data, and discussion of seasonal trends, if any.
3. A narrative discussion of the analytical results for all media and locations monitored, including spatial and temporal trends, with reference to summary data tables, graphs, and appended analytical reports (as applicable).
4. A comparison of monitoring data to the discharge specifications, groundwater limitations, and surface water limitations, and explanation of any violation of those requirements.
5. Summary data tables of historical and current water table elevations and analytical results.
6. A scaled map showing relevant structures and features of the facility, the locations of monitoring wells and other sampling stations, and groundwater elevation contours referenced to mean sea level datum.
7. Copies of laboratory analytical report(s).

B. Annual Monitoring Reports

An Annual Report shall be prepared as the fourth quarter monitoring report and shall include all monitoring data required in the monthly/quarterly schedule. The Annual Report shall be submitted to the Regional Board by **1 February of each year** and shall include the following:

1. If requested by staff, tabular and graphical summaries of all data collected during the year.
2. Data for monitoring and analysis performed on an annual basis.

3. An evaluation of the performance of the wastewater treatment system, as well as a forecast of the flows anticipated in the next year.
4. Summary information on the disposal of all biosolids including volume removed, method and location of disposal, analytical results, and whether the Discharger anticipates removing biosolids in the coming year.
5. A discussion of compliance and the corrective action taken, as well as any planned or proposed actions needed to bring the discharge into full compliance with the waste discharge requirements.
6. A discussion of any data gaps and potential deficiencies/redundancies in the monitoring system or reporting program.

If applicable, based on results of the groundwater monitoring program after a minimum of one year, the Discharger may request a reduction in the constituents monitored and/or sample frequency. If such reductions are warranted, this MRP may be revised by the Executive Officer.

As required by the California Business and Professions Code Sections 6735, 7835, and 7835.1, all groundwater monitoring reports shall be prepared under the direct supervision of a registered professional engineer or geologist and signed by the registered professional.

A letter transmitting the self-monitoring reports shall accompany each report. Such a letter shall include a discussion of requirement violations found during the reporting period, and actions taken or planned for correcting noted violations, such as operation or facility modifications. If the Discharger has previously submitted a report describing corrective actions and/or a time schedule for implementing the corrective actions, reference to the previous correspondence will be satisfactory. Pursuant to Standard Provisions, General Reporting requirements B.3, the transmittal letter shall contain the following statement by the Discharger, or the Discharger's authorized agent:

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

MONITORING AND REPORTING PROGRAM NO. R5-2002-0221
MOUNTAIN OF ATTENTION SANCTUARY
JOHANNINE DAIST COMMUNION
LAKE COUNTY

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The Discharger shall implement the above monitoring program as of the date of this Order.

Ordered by: _____
THOMAS R. PINKOS, Executive Officer

_____ 6 December 2002 _____
(Date)

MMW: 12/6/02