

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
LAHONTAN REGION

BOARD ORDER NO. R6T-2008-(PROPOSED)
WDID 6A186000500

WASTE DISCHARGE REQUIREMENTS
FOR
CALIFORNIA DEPARTMENT OF CORRECTIONS AND REHABILITATION
HIGH DESERT STATE PRISON-LASSEN COUNTY
AND
CALIFORNIA CORRECTIONAL CENTER AT SUSANVILLE
WASTEWATER TREATMENT FACILITY

Lassen County

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

1. Discharger

On March 28, 2008, California Department of Corrections and Rehabilitation (CDCR) filed a complete report of waste discharge for planned modifications to expand the wastewater treatment and storage facility serving two California state prisons, the California Correctional Center at Susanville (CCC) and the High Desert State Prison-Lassen County (HDSP). For the purposes of this Order, the CDCR is the "Discharger."

2. Facility

For the purposes of this Order, the wastewater treatment and storage facility serving the CCC and the HDSP is referred to as the "Facility." The Facility discharges treated domestic sewage from the CCC and HDSP and has been in operation since 1995. Treated wastewater is subsequently disposed of by recycling on lands owned by the Discharger.

3. History of Regulation by the Water Board

Wastewater treatment and storage at the CCC has been regulated in a series of Board orders since the 1970s. The CCC wastewater treatment, storage, and agricultural disposal areas were expanded when the HDSP was constructed. On February 9, 1995, the Water Board adopted Board Order No. 6-95-23 establishing waste discharge requirements for the existing Facility.

On July 13, 2005, the Water Board adopted Cease and Desist Order No. R6T-2005-0016 in response to concerns with the Facility exceeding flow limitations, and elevated concentrations of nitrate associated with disposal of wastewater from the Facility in the ground water. The Order required the Discharger to implement immediate and long-term corrective actions to comply with waste

discharge requirements and/or expand the capacity of the Facility, as needed, in accordance with a compliance schedule. On July 13, 2005, the Water Board adopted Board Order No. 6-95-23A1 amending waste discharge requirements for the Facility by increasing the area authorized for wastewater disposal from 250 acres to 320 acres. On April 11, 2007, the Water Board adopted Board Order No. 6-95-23A2, amending waste discharge requirements for the Facility by increasing the allowable discharge from 365 million gallons per calendar year to 522 million gallons per calendar year, provided that agronomic application rates for water and nitrogen are maintained at all times in the disposal areas. Revised Monitoring and Reporting Program (MRP) requirements were also established under amendment No. 6-95-23A2.

4. Reason for Action

The Water Board is revising waste discharge requirements at the Discharger's request in order to establish waste discharge requirements for modifications to remodel and expand existing waste treatment and storage facilities, and for planned new waste treatment facilities and disposal areas. This Order establishes waste discharge requirements for operation of the expanded Facility and disposal areas, and regulates interim Facility waste treatment and disposal operations until the expansion is completed.

5. Facility Location

The Facility is located seven miles east of the City of Susanville (but is annexed to the City), in Lassen County, near the intersection of County Road A27 with Rices Canyon Road, APNs 117-150-01 and 23, in the Susanville Hydrologic Subunit, within portions of Sections 1, 2, 3, and 4 of the T29N, R13E, MDB&M, and portions of Sections 33 and 34 of T30N, R13E, MDB&M, as shown on Attachment "A," which is made part of this Order.

6. Description of Facility and Discharge

Discharge.

The discharge consists of treated sewage, kitchen and laundry wastes generated by prison inmates and staff at the CCC and HDSP. There are no prison industries that generate liquid waste streams that require pretreatment in order to meet waste discharge requirements. The Discharger currently provides staffing and services for approximately 8,800 inmates at the two prisons. The Facility also chlorinates the wastewater with liquid chlorine solution prior to use for irrigation. (For the purposes of this Order, the use of treated wastewater for crop irrigation is synonymous with the terms "recycling," "reuse," and "reclamation" of treated wastewater.) The chlorinated effluent is not sampled for coliform concentrations and therefore the irrigation water is considered secondary *undisinfected* recycled water as defined by California Code of Regulations, title

22, section 60301.900, and is suitable for use on fodder crops. Pursuant to section 60301.650 the wastewater is "oxidized wastewater" which means wastewater in which the organic matter has been stabilized, is nonputrescible, and contains dissolved oxygen.

Existing Facility:

The existing Facility will continue to be operated while upgrades are being completed. The existing Facility was designed to treat wastes using mechanical aeration followed by detention in oxidation ponds. Following treatment, wastewater is stored in ponds prior to being chlorinated and discharged to fodder crops via spray irrigation equipment. The treatment facilities are designed for an average flow rate of 1.4 million gallons per day (MGD), a peak daily flow of 2.1 million gallons, and a peak hourly flow rate of 4.2 MGD.

Grit removal, grinding, and screening are accomplished in the Facility headworks. The incoming waste is then pumped to parallel aeration ponds (two ponds, 11.35 million gallons each, floating aerators), and sedimentation ponds (two ponds, 5.4 million gallons each, nine feet deep). Following sedimentation, the treated effluent is stored in five storage ponds that predate the existing Facility (designated as storage ponds 1 through 5) and two storage ponds constructed in 1995 (designated as storage ponds 6 and 7), with a combined storage volume of 720 acre-feet. Wastewater is retained in storage ponds 1 through 7 over the winter months and used for fodder crop irrigation during the growing season.

As described above, two aeration ponds, two aerated sedimentation ponds and two additional storage ponds were built in association with the 1995 expansion. The new treatment and storage ponds were constructed with a mixture of native soils and bentonite and tested by the Discharger to determine soil permeability factors. Test results at various locations in the ponds indicated that soils met a permeability factor of 5.4×10^{-7} centimeters/second to limit estimated seepage of wastewater from the new ponds into the ground water beneath the Facility to rates of loss no greater than 500 gallons/acre/day. The older, earthen storage ponds (nos. 1-5) originally established for CCC wastewater were retained without modifications.

Proposed Facility:

Completion of system upgrades to increase the ability to treat and store more wastewater at the Facility is proposed by December 31, 2009, to comply with Cease and Desist Order No. R6T-2005-0016. The proposed expansion will assist the Discharger to achieve compliance with requirements by increasing the capacity to treat and store additional waste for agricultural reuse at agronomic rates. The proposed expansion will increase treatment capacity, as follows: the average of daily flows for each month will increase from 1.4 MGD to 1.8 MGD; maximum flow during any day will increase from 2.1 MG to 2.7 MG; and the

maximum flow rate during any hour will increase from 4.2 MGD to 5.4 MGD (5.4 MGD for one hour is equivalent to 225,000 gallons in one hour).

Proposed major modifications to the Facility include the following: improvements to the headworks (new course and fine screens, presses to compact inert screened material prior to disposal), new influent pumps and force main; use of 60-mil high density polyethylene (HDPE) liners. The two existing, soil-lined primary ponds will be converted to secondary oxidation ponds. A major part of the upgrade includes lining the existing storage pond nos. 1 – 5, and the new treatment and storage ponds with HDPE. New ponds to be constructed with HDPE lining will include a primary/fermentation pond, two constructed wetland cells (10 acres each), and three new storage ponds (nos. 8, 9, and 10) increasing the storage capacity by 480 acre-feet.

7. Disposal Area

Treated wastewater from the storage ponds is chlorinated and disposed of by recycling on adjacent State of California owned land used to produce alfalfa fodder for non-dairy animals. Application is by spray irrigation. Rates vary with season and crop needs, and disposal is proposed to be at agronomic rates for the specific crop(s) grown. Based on an agronomic report produced by the Discharger in 2007, agronomic rates of water and nitrogen application may be maintained while using up to 60 inches of recycled wastewater annually on areas growing alfalfa. For the purposes of this Order, the term "disposal area" and acreages cited include multiple spray-irrigation application areas where wastewater is or will be directly applied, and not the applicable nearby protected and setback areas, and tailwater controls (basins).

Existing Disposal Area:

Chlorinated wastewater is pumped to approximately 320 acres of alfalfa (designated as the Upper West Irrigation Field, Lower West Irrigation Field, and East Irrigation Field) located to the north and northeast of the Facility storage ponds, as depicted on Attachment "A." The existing disposal area has two tail water ponds to capture field runoff. Disposal in these areas will continue during and after the planned 2008-2009 Facility modifications.

Proposed Disposal Area:

The proposed disposal area includes the existing disposal area and an additional 250 acres of disposal area (referred to as the North Circle Irrigation Field) that will be used to grow alfalfa, as depicted on Attachment "A." The completed Facility upgrades will bring total acreage available for production of fodder crops to 570 acres. This addition is expected to provide enough acres in production such that fields may be periodically fallowed (not used), and will assist the Discharger to maintain agronomic water and nutrient application rates on the

disposal areas. The proposed disposal area will include three new tail water ponds to capture run off from the disposal areas.

8. Sludge Treatment and Disposal

Currently sludge accumulates and is stored in the primary settling ponds and, to a lesser extent, in other ponds. Sludge accumulated in primary ponds scheduled for conversion to secondary ponds, and storage ponds 1 through 5, will be dried to a semi-solid consistency and mixed with soil to create a substrate for the two wetland cells to be constructed for wastewater treatment. No other sludge treatment or disposal is proposed by the Discharger. Based on the report of waste discharge, sludge may accumulate for 20 years or more in the proposed Facility prior to reaching levels that may necessitate removal. Sludge may be stored onsite indefinitely in the Facility ponds, or disposed of at an approved landfill. No other storage or reuse of sludge is authorized by this Order.

9. Authorized Disposal Area

The agricultural application areas described in Finding No. 7, above, are the only authorized disposal areas for wastewater. The authorized disposal areas for treated wastewater are located on State lands owned or administered by the California Department of Corrections and Rehabilitation.

10. Reclamation Requirements

The California Department of Public Health has established statewide reclamation criteria for the use of reclaimed water for irrigation of fodder crops not intended for use in the feed for dairy production. The criteria for wastewater used on fodder crops not intended for use in dairy production is found in the California Code of Regulations, title 22, section 60304, subdivision (d). The oxidized wastewater from the Facility is considered secondary recycled water and meets these criteria (independently of any subsequent chlorination process).

The Discharger has requested to use the treated wastewater for the construction of the upgrades for dust mitigation and for soil compaction. The Discharger will be required to follow regulations established by California Department of Public Health in California Code of Regulations, title 22, section 60307(b).

In accordance with California Water Code section 13523, the Water Board has consulted with the California Department of Public Health on the discharge from the wastewater treatment system to agricultural recycling areas. This Order includes requirements for reuse of the Facility wastewater as determined in consultation with the California Department of Public Health.

11. Site Geology

The predominant soils underlying the wastewater disposal area are Modoc-Truax complex, Cleghorn sandy loam, Ardep sandy loam, and Springmeyer sandy loam. The permeabilities of these soils range from moderately slow to moderately rapid. The Honlak loam, which is located within the southern buffer area of the proposed disposal site is poorly suited for irrigated crops because of high ground water. Faults beyond the site boundaries have the potential to cause strong earthquakes and ground shaking at the site. The Honey Lake/Fort Sage Fault Zone, 31 miles long and located eight miles southwest of the Facility, is the nearest potential seismically active area. The 1989 Uniform Building Code (UBC) indicates that the site is classified as Seismic Zone 3 and must have facilities constructed in accordance with the UBC Standards for Seismic Zone 3. Impoundment embankments have been constructed in accordance with requirements of the California Division of Safety of Dams.

12. Site Hydrology

Rainfall and snowmelt are primary sources of runoff from the Facility site. Industrial stormwater runoff from the Facility is subject to separate National Pollutant Discharge Elimination System (NPDES) permit requirements of the federal Clean Water Act, Section 402(p), and associated regulations applicable to sewage treatment facilities with average daily flows greater than one MGD. Storm water runoff from the disposal area and adjacent hills flows toward the south into the Honey Lake Valley, where storm water runoff either evaporates or reaches the Susan River. The Susan River flows into Honey Lake approximately 13 miles southeast of the Facility. Honey Lake is a terminal lake (no outflow) located near the California-Nevada border. Portions of the Facility are located within the boundary of the 100-year floodplain of the Susan River. Berms on wastewater ponds in the 100-year floodplain will prevent inundation by a flood of this magnitude. Adjacent to the authorized disposal area are riparian and marsh habitats that will be protected by a 200-foot-minimum open space buffer as shown in attachment "A." These buffer areas will not be affected by spray irrigation and agricultural development.

13. Site Hydrogeology

The Facility is located within the Honey Lake Valley ground water basin, a 490 square mile basin with internal drainage, which stores an estimated 16 million acre-feet of water (California Dept. of Water Resources, *California's Ground Water*, 1975). Ground water quality with respect to total dissolved solids (TDS) within this basin is described in the State Water Resources Control Board's 2002 *California 305(B) Report On Water Quality*, and indicates TDS averages 518 mg/l with a range of 89 – 2500 mg/l.

Local ground water quality may also be influenced by natural geothermal activity and/or geothermal fluids disposed of from the former Litchfield Geothermal Project (regulated under separate waste discharge requirements) located near the northerly boundary of the Facility site.

The prison draws water for municipal (MUN) use from two confined aquifers beneath the site consisting of interbedded, thin sand and gravel layers. The upper aquifer is located at a depth of 150 to 400 feet, and the lower aquifer begins at a depth of 625 to 655 feet. A mixture of ground waters from these two aquifers was analyzed in 1989. Results showed that the ground water was of better quality than that required to meet secondary drinking water standards (and some primary standards) for 24 tested parameters.

Prior to the Board Order update in 1995, the ground water was found to exist near the surface in a shallow unconfined aquifer underlying the Facility. Seasonally, ground water may rise to within ten feet or less of the pond bottoms. The nitrate concentrations in some monitoring wells have been observed infrequently in excess of the maximum contaminant levels for drinking water (10 mg/l for nitrate as N), with concentrations generally less than 5 mg/l. Water quality in the vicinity of the Facility has been regularly monitored with a network of ground water wells.

Local ground water movement follows the north-to-south topographic gradient towards the Susan River in the absence of significant human influences. However, the ground water was investigated during 2005-2006 due to an apparent increase of nitrates in the ground water in some monitoring wells and concern that the agricultural fields were being over-irrigated. The investigation indicated that the shallow ground water gradient observed in Facility and disposal area monitoring wells had shifted from the north-to-south topographic gradient towards the north and was influenced by pumping from two municipal production wells near the northern boundary of the property that draw substantial water for the prisons, as described further below.

14. Changes to Ground Water Gradients and Variability of Ground Water Data

The Discharger produced a ground water report (*Groundwater Technical Report Hydrogeologic Evaluation of the California Correctional Center Wastewater Treatment Facility*, September 7, 2005) that reviewed ground water data collected at the Facility and authorized disposal site between 1994 and 2005. The report evaluated available information collected by the Discharger on the ground water geology, chemistry, and ground water elevations. The report states (p. ii), ". . . the natural groundwater surface underlying the wastewater treatment facility most likely sloped from north to south; however, by 1994 discharge of geothermal heating water [from City of Susanville's Litchfield Geothermal Project] rich in chloride and TDS [total dissolved solids] had created a mound slightly

modifying previous groundwater flows. Moderate nitrate-N impact may have occurred downgradient (south) of the treatment ponds by 1994. Between 1995 and 1997 pumping from HDSP wells no. 217 and No. 218 reversed the groundwater gradient under most of the application areas capturing most, if not all, of the percolation from the sewer ponds and recharge from the application areas as the pumping depression has grown. Wells [for waste monitoring] that were formerly upgradient of the application areas are now downgradient of them and two . . . have gone dry from the declining water table in the pumping depression. The pre-1994 nitrate-N impacts south of the ponds diminished. Moderate to mild nitrate-N impacts appeared north of the ponds and started migrating northward toward the pumping wells. . . .”

The report preparer, Condor Earth Technologies, Inc., “concludes that natural background water quality at monitor wells is not available [at the site] and detection and evaluation of contamination can best be conducted with time-series plots of water chemistry. We recommend . . . that water quality at the supply wells be monitored for the arrival of nitrate, TDS, chloride, or other discharge constituents.”

Time-series plots of data obtained between 1994 and 2004 indicate overall decreasing trends for wells with elevated nitrate-N, with no monitoring well exceeding 10 mg/l of nitrate-N after August 1, 2001, and only a few wells consistently above 3 mg/l of nitrate-N, indicating areas of localized degradation. Trends with respect to other constituents are not readily apparent in the time-series plots. TDS in particular, is highly variable and ranges between from very low levels to thousands of mg/l in some monitoring wells, but most frequently occurs at levels at or below 2000 mg/l. One exception is monitoring well GW-6b, which decreased from a high of roughly 12,000 mg/l in 1996 to generally around 6000 mg/l after mid-2000.

Based on the foregoing, this Order includes new reporting requirements that require the Discharger to develop a method to analyze the ground water data collected from existing and proposed monitoring wells to determine if ground water is being degraded or adversely affected by the discharge. The Discharger will be required to perform an annual analysis to complete this reporting requirement.

15. Basin Plan

The Water Board adopted a Water Quality Control Plan for the Lahontan Basin (Basin Plan) that became effective on March 31, 1995. This Order implements the Basin Plan.

16. Receiving Waters

The receiving waters for the discharge are the ground waters of the Honey Lake Valley Basin (Department of Water Resources Basin No. 6-4).

17. Beneficial Uses of Ground Water

The present and probable future beneficial uses of the ground waters of the Honey Lake Valley Basin (Department of Water Resources Basin No. 6-4), as set forth and defined in the Basin Plan are:

- a. municipal and domestic supply;
- b. agricultural supply;
- c. industrial service supply;
- d. freshwater replenishment; and
- e. wildlife habitat.

18. Policy for Maintaining High Quality Waters

State Water Resources Control Board Resolution No. 68-16 requires the Water Board, in regulating the discharge of waste, to (A) maintain existing high quality waters of the State until it is demonstrated that any change in quality will be consistent with maximum benefit to the people of the State, will not unreasonably affect present and anticipated beneficial uses, and will not result in water quality less than that described in State or Regional Water Board policies; and (B) require that any activity which produces or may produce a waste or increased volume or concentration of waste and which discharges or proposes to discharge to existing high quality waters must meet waste discharge requirements which will result in the best practicable treatment or control of the discharge necessary to assure that (a) a pollution or nuisance will not occur and (b) the highest water quality consistent with maximum benefit to the people of the State will be maintained.

Ground water quality varies, does not meet all water quality objectives established to serve prescribed beneficial uses, and thus may not be considered "existing high quality waters." Degradation of the quality of the waters of the State is not anticipated or authorized as a result of the discharge, however. The existing ground water quality in the vicinity of the Facility will be maintained or improved as a result of the proposed Facility modifications.

The Discharger currently utilizes both soil-lined and unlined percolation ponds for storing the treated effluent. Domestic wastewater contains constituents such as TDS, pathogens, nitrates, organics, metals and oxygen demanding substances (BOD). The discharge from the Facility may currently be causing or contributing to infrequent violations of applicable water quality objectives in ground water for

certain constituents such as nitrate, as described in this Order and Cease and Desist Order No. R6T-2005-0016, due to excessive percolation from unlined Facility ponds.

The upgraded wastewater treatment plant is designed to minimize the infiltration of wastewater to ground water to the extent feasible by including 60 mil HDPE liners for all proposed waste treatment and storage areas not previously lined (as described in this Order). Such HDPE liners currently meet or exceed best practicable technology-based control requirements. The proposed 60 mil HDPE liners have a permeability of 1.7×10^{-9} cm/sec (for water vapor), which will limit leakage loss rates to practically undetectable levels when taking into consideration the uncertainties and variability in measuring or estimating inflow and outflow, pond surface elevations, and annual pond evaporation. Residual percolation from the Facility ponds following the upgrades is expected to be negligible relative to the amount of ground water flowing beneath the Facility. The water quality effects of pond percolation are not expected to be readily detectable in the groundwater.

The proposed increase in discharge volume allows for an increase in the total loading of pollutants discharged to agricultural operations by the Discharger. However, the land application and wastewater reuse area for the discharge is being simultaneously increased in proportion to the flow increase so that the mass increase is not significant on an area basis (applied water and nutrients per acre will not increase). Maintaining agronomic rates of application of water and nutrients for the crops grown in the reuse/disposal areas include excess water to leach salts from the soils in the crop root zone. Based on current and proposed agricultural practices and existing ground water quality in the vicinity of the fields, salts or other wastewater constituents will not adversely affect the ground water quality in a manner that would impair the water for beneficial uses. Wastewater that is not evaporated is beneficially reused for agriculture and thus supports State goals of increasing beneficial wastewater reuse while providing the Discharger capacity to house its current inmate population.

The upgraded Facility will also provide, for the first time, a polishing level of treatment by providing 20 acres of lined, constructed wetlands. Effluent limitations for BOD and settleable solids, and receiving water limitations protective of beneficial uses, have been carried over from the previous Order. The effluent and receiving water limitations continue to be protective of water quality, the flow increase is not expected to contribute to the degradation of water quality in Honey Lake Valley ground water basin, and any adverse impact on existing water quality and beneficial uses of water from the discharge will be insignificant. These waste discharge requirements will ensure the highest water quality consistent with maximum benefit to the people of the State will be maintained. Monitoring at ground water monitoring stations around the surface

impoundments and the irrigation areas is included in this Order to verify the foregoing.

19. Other Considerations and Requirements for Discharge

Pursuant to California Water Code section 13241 the requirements of this Order take into consideration:

(a) Past, present, and probable future beneficial uses of water.

This Order identifies existing ground water quality and past, present and probable future beneficial uses of water as described in finding nos. 13 and 16. The proposed discharge will not adversely affect present or probable future beneficial uses of water, including domestic water supply, agricultural supply and wildlife habitat.

(b) Environmental characteristics of the hydrographic unit under consideration, including the quality of water available thereto.

Finding nos. 11, 12, and 13 describe the environmental characteristics and quality of water available. As described in finding nos. 13 and 14, the total dissolved solids concentrations range from less than 100 mg/l to approximately 12,000 mg/l and may be influenced by natural geothermal waters entering the aquifer available for domestic supply.

(c) Water quality conditions that could reasonably be achieved through the coordinated control of all factors that affect water quality in the area.

The requirements of this Order, including application of waste water at agronomic rates and the lining of storage ponds will result in improved ground water quality. The Water Board has waste discharge requirements regulating the discharge of geothermal fluids from the adjacent Litchfield Geothermal project (Board Order No. 6-97-070). The Water Board will use its existing authority and waste discharge requirements to ensure protection of water quality from these discharges.

(d) Economic considerations.

This Order authorizes the Discharger to expand and upgrade its wastewater treatment and disposal system as proposed by the Discharger. The Order accepts the Discharger's proposal for 60 mil pond liners and land application at agronomic disposal rates as meeting the best practicable control method for protecting ground water quality from percolation of waste constituents in pond and disposal areas.

(e) The need for developing housing within the region.

The Discharger is not responsible for developing housing within the region other than to house California inmates. This Order provides for additional capacity to treat and control wastewater from the Facility.

(f) The need to develop and use recycled water.

This Order provides for increased appropriate use of recycled water. See finding no. 17.

20. California Environmental Quality Act

The Discharger, acting as California Environmental Quality Act (CEQA, Public Resources Code Section 21000, et seq.) Lead Agency certified the Final Environmental Impact Report (EIR) for the *Wastewater Treatment Plant Improvement Project for High Desert State Prison and California Correctional Center* (Project, SCH #2005102005) in June 2006. The Final EIR provides a detailed record concerning project effects. The Final EIR includes alternatives analyzed, legal, economic and technical considerations, operational descriptions, and other information crucial to understanding the Project proposal, and sets forth the basis for including or excluding mitigation measures for various identified impacts.

Following certification of the Final EIR, the Discharger/Lead Agency developed the specific plans for the Project, and noted that several changes were introduced to the Project that were not analyzed in the 2006 Project EIR, which was based on a conceptual facilities plan developed in 2004. In an April 13, 2008 Memorandum to the California Department of General Services, the Discharger/Lead Agency analyzed the proposed changes relative to the Project EIR and determined that preparation of a subsequent or supplemental EIR, as required in California Code of Regulations, title 14, section 15162 or 15163, is not necessary and set forth the reasons therein.

When an EIR has been prepared for a project, a Responsible Agency shall not approve the project as proposed, pursuant to California Code of Regulations, title 14, Section 15096, subdivision (g)(2), if the agency finds any feasible alternative or feasible mitigation measures within its powers that would substantially lessen or avoid any significant effect the project would have on the environment. In order to comply with Section 15096, subdivision (g)(2), the Water Board, acting as a CEQA Responsible Agency, has evaluated the significant and potentially significant impacts to water quality identified in the Project's Final EIR and the April 13, 2008 Memorandum to the California Department of General Services. The Water Board has determined that significant or potentially significant effects of the Project on water quality identified in the Final EIR are adequately

addressed or are mitigated to levels of insignificance by either the requirements in the Final EIR, and the requirements in this Board Order pertaining to storage pond liners construction, flow limits, agronomic usage requirements, and reclamation requirements.

The monitoring and reporting program requires the Discharger to produce a separate Construction Quality Assurance Report on the liner construction, monitor ground water for significant trends and report on the agronomic rates both planned and applied on the irrigation fields.

21. Notification of Interested Parties

The Water Board has notified the Discharger and all known interested agencies and persons of its intent to adopt revised waste discharge requirements.

22. Consideration of Interested Parties

The Water Board, in a public meeting on July 23-24, 2008 heard and considered all comments pertaining to the discharge.

IT IS HEREBY ORDERED that Board Order No. 6-95-23 and amendments No. 6-95-23A1 and No. 6-95-23A2 be rescinded except for enforcement purposes and, pursuant to California Water Code section 13263, the Discharger must comply with the following requirements.

I. DISCHARGE SPECIFICATIONS

A. Discharge/Effluent Limitation

1. Flow Rate Limitation

- a. The discharge of wastewater to the authorized disposal site must not exceed 522 million gallons in a calendar year (January 1 to December 31). Agronomic application rates for water and nitrogen must be maintained at all times and may reduce the total amount of discharge below the 522 million gallon annual maximum.
- b. After written notice has been received from the Discharger that all upgrades and Facility modifications described in the Discharger's March 28, 2008 report of waste discharge are completed, the discharge of wastewater to the authorized disposal site must not exceed 657 million gallons in a calendar year (January 1 to December 31). Agronomic application rates for water and nitrogen must be maintained at all times and may reduce the total amount of discharge below the 657 million gallon annual maximum.

2. All wastewater made available for storage and disposal must not contain pollutant concentrations in excess of the following limits.

<u>Parameter</u>	<u>Units</u>	<u>30-day Mean</u>	<u>30- day Maximum</u>
Biochemical Oxygen Demand	mg/l	30	45
Methylene Blue Active Substances	mg/l	1.0	2.0

3. All wastewater made available for recycling at the authorized disposal sites must have a pH of not less than 6.5 pH units nor more than 8.5 pH units. A pH over 8.5 is allowed if this results from a biological process within the treatment plant or storage ponds.
4. Wastewater discharged to storage ponds must have a dissolved oxygen concentration of 1 mg/l or greater.

B. Reclamation Requirements

1. All effluent made available for spray irrigation of fodder and fiber crops, and seed crops not eaten by humans, must meet requirements for undisinfected "secondary recycled water" in California Code of Regulations, title 22, section 60301.900.
2. The irrigation sites must be graded to prevent persistent ponding of wastewater that promotes the breeding of mosquitoes.
3. The irrigation sites must be properly fenced to restrict public access.
4. The discharge volume of treated wastewater must not exceed agronomic rates for the specific crop(s) grown.
5. The discharge of total nitrogen must not exceed agronomic rates for the specific crop(s) grown.
6. No irrigation with, or impoundment of, undisinfected secondary recycled water shall take place within 150 feet of any domestic water supply well.
7. The discharge must not cause over spray, mist or runoff to enter dwellings, designated outdoor eating areas or food handling facilities.
8. The discharge must not cause overspray, mist or runoff to reach a drinking water fountain.
9. All areas where recycled water is used that are accessible to the public shall be posted with signs that are visible to the public, in size no less than 4 inches high by 8 inches wide that include the following wording: "Recycled Water -Do Not Drink." Each sign shall display an international symbol similar to that shown in Figure 60310-A in the California Code of Regulations, title 22, section 60310. An alternative sign and language may be used but it must be acceptable to the California Department of Public Health and the Water Board Executive Officer.

10. The Discharger must comply with specifications of the California Department of Public Health concerning reuse of wastewater and contingency planning for treatment upsets, including preparation and submittal of such engineering or monitoring reports as may be required pursuant to Title 22.
11. All effluent made available for use for dust control and compaction must meet requirements for "disinfected secondary-23 recycled water" in California Code of Regulations, title 22, section 60307(b). Disinfected secondary-23 recycled water as defined in California Code of Regulations, title 22, section 60301.225 means recycled water that has been oxidized and disinfected so that the median concentration of total coliform bacteria in the disinfected effluent does not exceed a most probable number (MPN) of 23 per 100 milliliters utilizing the bacteriological results of the last seven days from which analyses have been completed and the number of total coliform bacteria does not exceed an MPN of 240 per 100 milliliter in more than one sample in any 30 day period.

C. Receiving Water Limitations

The discharge of treated wastewater shall not cause the presence of the following substances or conditions in the ground waters of the Honey Lake Valley ground water basin:

1. Any perceptible color, odor, taste or foaming.
2. Coliform organisms attributable to human waste.
3. Toxic substances in concentrations that individually, collectively or cumulatively cause detrimental physiological responses in human, plants, animals, or aquatic life.
4. Identifiable chlorinated hydrocarbons, organophosphates, carbonates, and other pesticides and herbicide groups, in summations, in excess of the lowest detectable levels.
5. Concentrations of chemical constituents in excess of the maximum contaminant levels or secondary maximum contaminant levels based upon drinking water standards specified by the more restrictive of the California Code of Regulations, Title 22, Division 4, Chapter 15, or 40 CFR, part 141.

D. General Requirements and Prohibitions

1. There shall be no discharge, bypass, or diversion of raw or partially treated sewage, grease, or oils from the collections, transport, treatment or disposal facilities to adjacent land areas or surface waters.
2. Surface flow or visible discharges of sewage or sewage effluent as, or from the authorized disposal site to adjacent land areas or surface water is prohibited.
3. The vertical distance between the treated effluent and the lowest point on a pond dike must not be less than two feet.

4. The discharge shall not cause pollution as defined in section 13050 of the California Water Code, or threatened pollution.
5. Neither the treatment nor the discharge shall cause a nuisance as defined in the section 13050 of the California Water Code.
6. The discharge of wastewater except to the authorized disposal area is prohibited. The authorized disposal area is shown on Attachment "A," page 1 of 2.
7. The integrity of the pond liners shall be maintained throughout the life of the ponds and shall not be diminished as the result of any maintenance or cleaning operation.

II. PROVISIONS

A. Special Provisions for Pond Construction

1. A Construction Quality Assurance (CQA) Plan was submitted to the Water Board with the report of waste discharge. The CQA Plan includes construction specifications and other specifications for correctly installing the HDPE liners, including but not limited to, subgrade preparation, inspection frequencies for liner construction, testing specifications for both destructive testing and non-destructive HDPE liner testing, and qualifications for the CQA Officer and the CQA inspector. All HDPE pond liners must be constructed in accordance with construction specifications and requirements of the CQA Plan.
2. No discharge may occur to a new pond or a newly-lined, existing pond until the Water Board Executive Officer accepts a report from the CQA Officer that certifies the pond or ponds have been constructed in accordance with the design and tested as required by the CQA plan. CQA reports may be submitted independently for each pond liner installed to allow that pond to go into use prior to the entire project or all ponds being complete.

B. Standard Provisions

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

C. Monitoring and Reporting

1. Pursuant to section 13267 of the California Water Code, the Discharger must comply with Monitoring and Reporting Program No. 2008-(Proposed) as specified by the Executive Officer.
2. The Discharger must comply with the "General Provisions for Monitoring and Reporting," dated September 1, 1994, which is attached to and made part of Monitoring and Reporting Program No. 2008-(Proposed).

D. Operator Certification

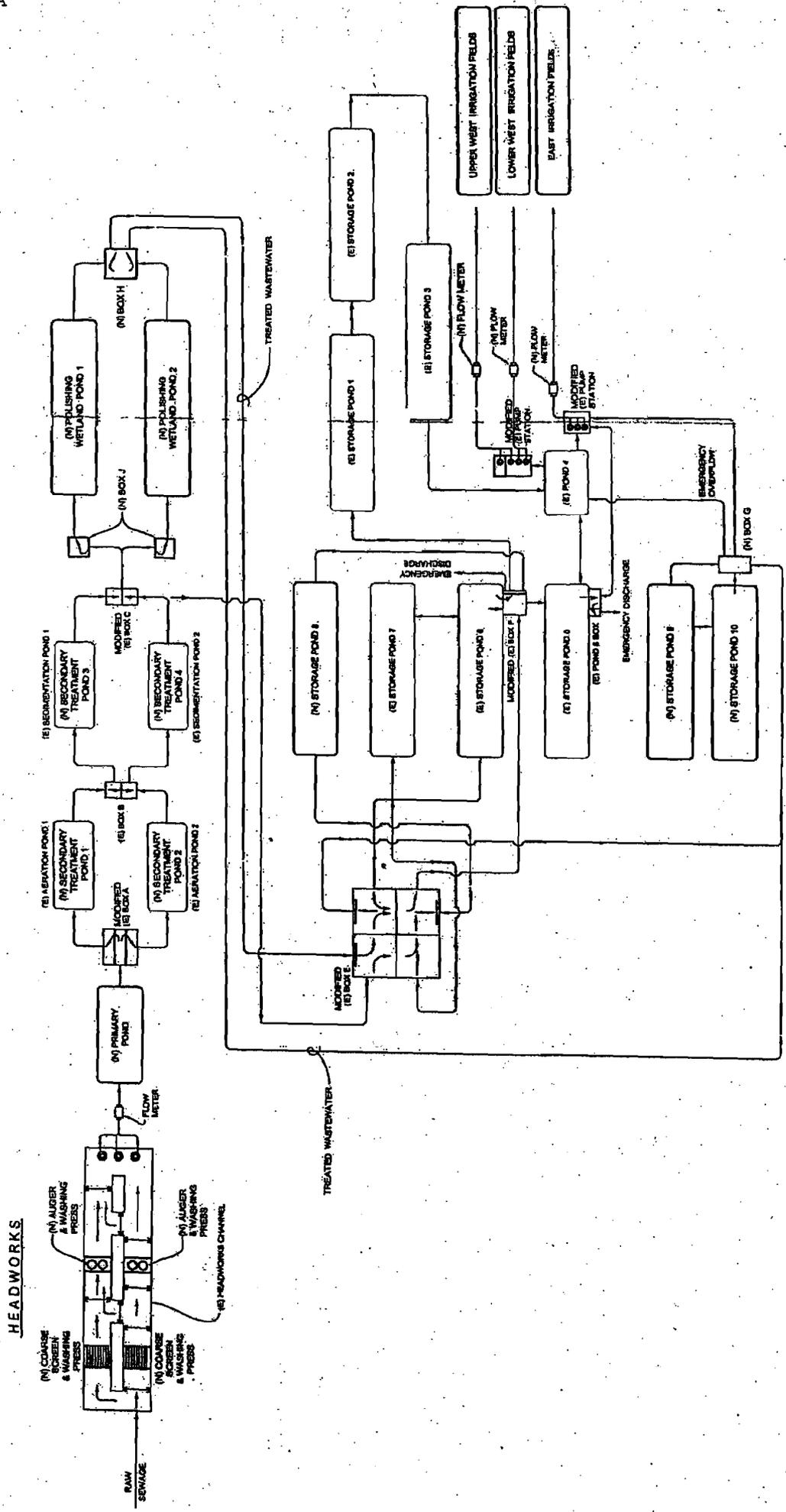
The Discharger's wastewater treatment plant must be supervised by personnel possessing a wastewater treatment plant operator certificate of the appropriate grade pursuant to the California Code of Regulations, title 23, division 3, chapter 26,

I, Harold J. Singer, Executive Officer, do hereby certify that the foregoing is full, true and correct copy of an Order adopted by the California Regional Water Quality Control Board, Lahontan Region, on July 23, 2008.

HAROLD J. SINGER
EXECUTIVE OFFICER

Attachment A: Overall Site Plan; Facility and Disposal Areas
Attachment B: Standard Provisions for Waste Discharge Requirements

PROPOSED



ATTACHMENT B

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

**MONITORING AND REPORTING
PROGRAM NO. 2008-(PROPOSED)
WDID NO. 6A186000500
FOR
CALIFORNIA DEPARTMENT OF CORRECTIONS AND REHABILITATION
HIGH DESERT STATE PRISON
AND
CALIFORNIA CORRECTIONAL CENTER AT SUSANVILLE
WASTEWATER TREATMENT FACILITY**

Lassen County

I. MONITORING

A. Flow Monitoring

The following must be recorded in a permanent logbook:

1. The total volume, in millions of gallons (MG), of wastewater flow to the treatment Facility for each day.
2. The total volume, in MG, of wastewater flow to the treatment Facility for each month.
3. The maximum flow rate, in millions of gallons per day (MGD), of wastewater to the treatment Facility that occurs each day.
4. The calculated average flow rate, in MGD, of wastewater to the treatment Facility for each month.
5. The total volume, in MG, of wastewater flow to each field in the authorized disposal area for each month. Separate flow volumes must be recorded for any supplemental non-wastewater applied to the fields for agricultural purposes.
6. Visual observations of surface runoff from the fields in the authorized disposal area to the tailwater collection basin for each day that wastewater is applied. Indicate whether the tailwater basin is dry, moist, or ponded with water, and whether water from the basin is being reapplied to the fields or is overflowing. If no runoff reached the tailwater basin on a given day, indicate that no tailwater runoff occurred.

7. The freeboard (distance from the top of the lowest part of the dike to the wastewater surface in a pond) at the beginning of each month in each wastewater pond, and the minimum freeboard in each pond for each month. Ponds not containing wastewater must be so noted.
8. Flow measuring devices must be calibrated annually, at a minimum.

B. Facility Influent Monitoring

Samples of the wastewater influent to the Facility, collected upstream of all treatment units, must be analyzed to determine the magnitude of the following parameters:

<u>Parameter</u>	<u>Units</u>	<u>Type of Sample¹</u>	<u>Frequency</u>
pH	pH units	Grab	Monthly
BOD ²	mg/L	Grab	Monthly
Nitrate Nitrogen	mg/L as N	Grab	Monthly
Kjeldahl Nitrogen	mg/L as N	Grab	Monthly
Ammonia Nitrogen	mg/L as N	Grab	Monthly
Total Dissolved Solids	mg/L	Grab	Monthly

C. Facility Effluent Monitoring

Samples of the wastewater effluent from the treatment Facility will be collected in two locations for different parameters. One location is storage pond number 4 (indicated as "P" in the table below) prior to pumping to the irrigated fields, and the other location is after the chlorination process (indicated as "AC" in the table below). The after-chlorination samples are required only during periods when irrigation is occurring. The samples must be analyzed to determine the magnitude of the following parameters:

¹ Samples as defined for respective parameters in current Sampling and Analysis Plan, Attachment A, General Provision 1.d., 1.f. and 1.g.

² Biochemical Oxygen Demand (5-day, 20°C) of an unfiltered sample.

<u>Parameter</u>	<u>Units</u>	<u>Type of Sample</u> ¹	<u>Frequency</u>	<u>Location</u>
Dissolved Oxygen	mg/L	Grab	Monthly	P
pH	pH units	Grab	Monthly	P
Temperature	°C	Grab	Monthly	P
BOD ²	mg/L	Grab	Monthly	P
Total Suspended Solids	mg/L	Grab	Monthly	P
MBAS ³	mg/L	Grab	Quarterly	P
Total Dissolved Solids	mg/L	Grab	Quarterly	P
Nitrate Nitrogen	mg/L as N	Grab	Quarterly	P
Kjeldahl Nitrogen	mg/L as N	Grab	Quarterly	P
Ammonia Nitrogen	mg/L as N	Grab	Quarterly	P
Chloride	mg/L	Grab	Quarterly	AC
Sodium	mg/L	Grab	Quarterly	AC
Total Organic Carbon	mg/L	Grab	Quarterly	AC
Total Hardness	mg/L	Grab	Annually	AC
Oil and Grease	mg/L	Grab	Annually	P
Bromoform	µg/L	Grab	Annually	AC
Chloroform	µg/L	Grab	Annually	AC
Dibromochloromethane	µg/L	Grab	Annually	AC
Dichlorobromomethane	µg/L	Grab	Annually	AC
Heavy Metals ⁴	mg/L	Grab	Annually	AC
Volatile Organics ⁴	µg/L	Grab	Annually	AC
Base/Neutral Extractable Organics ⁴	µg/L	Grab	Annually	AC
Acid Extractable Organics ⁴	µg/L	Grab	Annually	AC

D. Monitoring effluent used for dust control and construction

The Discharger must collect samples daily for total coliform bacteria testing when treated wastewater is used for dust control or in construction. The samples must be collected after disinfection is accomplished and prior to any distribution of the treated wastewater. The samples must be taken from the disinfected effluent and must be analyzed by an approved laboratory.

E. Ground Water Monitoring

1. The Discharger must install five new ground water monitoring wells as part of the upgrade to the Facility. The new monitoring wells are

¹ Samples as defined for respective parameters in Sampling and Analysis Plan; see Attachment A, General Provision 1.d., 1.f. and 1.g.

² Biochemical Oxygen Demand (5 day, 20°C) of a filtered effluent sample.

³ Methylene Blue Active Substances

⁴ Analyses must be conducted for the Priority Pollutants shown in Attachment B.

designated GW-17 through GW-21. A report documenting the completion of the ground water monitoring wells must be submitted by **June 15, 2009** and include the following:

- a. A final map to scale that shows all of the monitoring wells from GW-3 to GW-16 (existing) and GW-17 to GW-21 (proposed).
 - b. The driller's report or drilling log for each monitoring well constructed, reporting on the lithology and indicating the elevation where first ground water is encountered. The report must also include details on the construction of the well (i.e., depth of casing, material the casing is made of, length of sanitary seal, etc.).
 - c. Provide a list of monitoring wells and initially designate each well as up gradient, down gradient, or within the Facility or disposal area boundaries.
2. The existing ground water monitoring system consists of 16 monitoring wells designated as listed below. Monitoring wells SV-GW 17 through SV-GW-21 have been proposed by the CDCR to monitor new facilities and must be constructed and sampled at least once prior to using the new facilities. The following is the list of monitoring wells existing and proposed.

Existing Wells

GW-2C	GW-3,	GW-4	GW-5	GW-6
GW-7	GW-8	GW-9	GW-10	GW-11
GW-12	GW-13	GW-14	GW-15	GW-16B
GW-16C				

Proposed Wells

GW-17	GW-18	GW-19	GW-20	GW-21
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All monitoring wells listed above, and any well subsequently installed and approved by the Executive Officer must be sampled for the parameters listed below. Proposed wells must be sampled for all constituents at least once, with quarterly and "every fifth year" sampling thereafter in accordance with the parameters listed below. Grab samples collected from the upper 20 feet, or the entire thickness (whichever is less), of the uppermost ground water-bearing zone of the monitoring wells must be analyzed to determine the magnitude of the following parameters:

<u>Parameter</u>	<u>Units</u>	<u>Frequency</u>
Kjeldahl Nitrogen	mg/L as N	Quarterly
Nitrate Nitrogen	mg/L as N	Quarterly
Ammonia Nitrogen	mg/L as N	Quarterly
MBAS ¹	mg/L	Quarterly
Chloride	mg/L	Quarterly
Sodium	mg/L	Quarterly
Sulfate	mg/L	Quarterly
Total Dissolved Solids	mg/L	Quarterly
Bromoform	µg/L	Every fifth year ³
Chloroform	µg/L	Every fifth year ³
Dibromochloromethane	µg/L	Every fifth year ³
Dichlorobromomethane	µg/L	Every fifth year ³
Volatile Organics ²	µg/L	Every fifth year ³
Base/Neutral Extractable Organics ²	µg/L	Every fifth year ³
Acid Extractable Organics ²	µg/L	Every fifth year ³
Heavy Metals ²	mg/L	Every fifth year ³

3. Each time a monitoring well is sampled, and prior to well purging as specified below, the elevation (feet above mean sea level) of ground water in each well must be measured, recorded and reported.
4. Well Purging
 - i. Well volume is the volume of water in the submerged portion of a well casing. Ground water samples must be collected only after at least three well volumes have been removed, and temperature, electrical conductivity, and pH measurements have stabilized to approximately $\pm 10\%$ for each successive well volume removed.
 - ii. The field measurements of purged water volume, temperature, electrical conductivity and pH during purging must be reported with the results of ground water analyses. Parameter values must be reported in the following units:

¹ Methylene Blue Active Substances

² Analyses must be conducted for the Priority Pollutants shown in Attachment B.

³ For constituents sampled and tested every 5th year, the results must be included in the Annual Report or if not sampled, the date the constituents were last sampled must be provided with the next planned sample collection year.

<u>Parameter</u>	<u>Units</u>
Temperature	°C or °F
Electrical Conductivity	mmhos/cm or dS/m
pH	pH units

- iii. Static water elevation prior to sampling, well casing diameter, bottom elevation, and total well volumes removed prior to sampling must be reported with the results of ground water analyses.

E. Wind Speed Monitoring

A wind velocity (anemometer) and direction recording device must measure and record the following parameters when spray irrigation is occurring:

<u>Parameter</u>	<u>Units</u>	<u>Frequency</u>
Maximum Wind Speed	miles per hour	Daily
Wind Direction during the Maximum Wind Speed	azimuth	Daily

F. Annual Health and Safety Compliance Monitoring

The Discharger is required to maintain documents on file including, but not limited to, the following:

1. Evidence of public and worker notification of the use of undisinfectated reclaimed water.
2. Evidence of effective ongoing worker training in the safe handling of undisinfectated reclaimed water, and log of maintenance activity showing use of undisinfectated recycled water stopped during required maintenance, and flow stoppage prior to harvest. Record of trainers/trainees, when and what subjects covered.
3. List of special equipment provided to workers for handling undisinfectated recycled water (i.e. gloves, respirators, and eye protection), record of provision and the locations of protected equipment storage.
4. Provisions for worker hygiene in the field when using undisinfectated reclaimed water, such as provision and quantity of freshwater washdown water and protective measures for food and drink handling.

G. Authorized Disposal Site Monitoring

The Discharger must record dates when irrigation is occurring at the authorized disposal sites. For each authorized disposal site, the Discharger must monitor and record the following information:

1. Acreage being irrigated; when a disposal site is not be irrigated, report that no irrigation is occurring.
2. Crop names and types (i.e. fodder, seed or other).
3. The date irrigation began and ended.
4. Approximate planting dates.
5. Approximate harvest dates and the estimated tonnage of harvest.
6. Irrigation method.
7. The volume of recycled wastewater applied to each field in production.
8. Nitrogen concentrations in tissue samples of harvested crops.
9. Total nitrogen in representative soil samples from the disposal sites.
10. Observations of irrigation tailwater collection basins or storm water runoff control facilities. The Discharger must record dates of irrigation and inspections and note and report any water discharged as runoff outside of the authorized disposal site.
11. For each day of irrigation, maximum daily wind speed and direction, time of maximum daily wind speed and direction, and dates the discharge is shut down due to high winds.

H. Chemical Use Monitoring

The Discharger must record the names and chemical compositions, locations, quantities, and dates of application of all chemical fertilizers, herbicides and pesticides applied to any crop grown on the Authorized Disposal Site in a permanent logbook. Chemical use information must be submitted to the Water Board on an annual basis.

I. Operation and Maintenance

The Discharger must maintain a log of any operational problems and maintenance activities that may affect effluent quality or disposal site operations and submit the information to the Water Board with each quarterly monitoring report.

This summary report must discuss:

1. Any modifications or additions to the wastewater conveyance system, treatment facilities, or disposal/water recycling facilities.
2. Any major maintenance conducted on the wastewater conveyance system, treatment facilities, or disposal/water recycling facilities.
3. Any major problems occurring in wastewater conveyance system, treatment facilities, or disposal/water recycling facilities.
4. The calibration of any wastewater flow measuring devices.
5. Total quantity of solids in the sedimentation ponds during the monitoring period. If a pond is out of service for drying solids prior to their reuse in the wetland cells or offsite disposal to authorized landfill, it must be reflected in the report. (This reporting requirement ends when the primary sedimentation ponds are converted to secondary oxidation ponds.)
6. Cumulative total quantity of solids currently on site in the primary fermentation pond including the quantity of solids added during the monitoring period.

II. REPORTING

A. General Provisions

1. The Discharger must comply with the "General Provisions for Monitoring and Reporting," dated September 1, 1994, which is attached to and made part of this Monitoring and Reporting Program.
2. The Discharger must attach to any monitoring report provided to the Water Board a certified cover letter containing the information in Attachment C. The information contained in the certified cover letter must clearly identify any violations of this Order, discuss corrective actions taken or planned, and propose a time schedule for completing identified corrective actions. Identified violations

must include a description of the requirement that was violated and a description of the violation. An example cover letter is provided in Attachment C, which is made part of this Monitoring and Reporting Program.

B. Quarterly Reports

The Discharger must submit quarterly reports containing the monitoring data and information required to be collected during the monitoring period in accordance with the following schedule:

<u>Monitoring Period</u>	<u>Report Due Date</u>
January 1 - March 31	April 30
April 1 - June 30	July 30
July 1 - September 30	October 30
October 1 - December 31	January 30

C. Annual Report

An annual report must be submitted by January 30 of each year. The annual report must provide the following:

1. A summary and evaluation of the information obtained for the prior year in Monitoring and Reporting Program section I.G., which also includes an evaluation of compliance status with agronomic application rate requirements for water and nitrogen.
2. Graphical and tabular presentation of all the influent and effluent monitoring data obtained from the previous year.
3. Ground water reports that include multi-year graphs and trend analyses for total dissolved solids, nitrate as N, and chloride data.
4. The direction of the ground water flow under the Facility and authorized disposal sites must be calculated for each quarter and presented in the annual report with accompanying monitoring well static water level data. A graphical representation of the ground water flow direction and elevations for each quarterly sampling event of the year must be shown on scaled maps (one for each quarter) and included in the annual monitoring report.
5. The Discharger must annually review the ground water monitoring data and determine the ground water flow direction(s). These shall be reported and compared with similar data from the prior year. If the ground water shifts by more than 45 degrees the Discharger must propose additional monitoring wells to ensure the well system

will monitor the ground water quality in relation to the discharge, and a schedule for their completion, or provide a signed certification by a California-registered engineer or engineering geologist that additional wells are not needed to monitor the ground water quality in relation to the discharge.

6. If an existing monitoring well yields no water for sampling during two consecutive quarters, the Discharger must provide an explanation as to why the well is dry and provide a schedule in the report for the second consecutive quarter describing when and how the monitoring deficiency will be corrected (i.e., by re-drilling or replacing the dry monitoring well).
7. A summary of the compliance record and corrective actions needed or taken or planned to bring the discharge into full compliance with the waste discharge requirements.
8. The names and grades of all certified operators.

D. Other Reports

The following reports are due by **January 30** of each year and may be included with the first-quarter report or submitted separately.

1. Annual Health and Safety Compliance Monitoring Report

- i. Evidence of public and worker notification of the use of un-disinfected reclaimed water.
- ii. Evidence of effective ongoing worker training in the safe handling of un-disinfected reclaimed water. Record of trainers/trainees, when and what subjects covered.
- iii. List of special equipment provided to workers for handling un-disinfected recycled water (i.e. gloves, respirators, and eye protection), record of provision and the locations of protected equipment storage.
- iv. Provisions for worker hygiene in the field when using un-disinfected reclaimed water, such as provision and quantity of freshwater washdown water and protective measures for food and drink handling.

2. Authorized Disposal Site Monitoring Report

An Authorized Disposal Site Monitoring Report must be provided on an annual basis. The Authorized Disposal Site Monitoring Report must provide information including, but not limited to, the following:

- i. Annual analysis and summary, by a certified soil scientist, qualified agronomist, or other qualified professional⁶, of the amount of water and nitrogen applied or available to the crops for each irrigated field. The analysis must compare the actual water and nitrogen applications to those predicted in the Annual Cropping Plan for the previous year and discuss any significant differences. Additionally, this annual report must include an evaluation of the actual crop production at harvest to that projected in the previous year's Annual Cropping Plan.
- ii. For each harvest completed during the previous year, the report must include the total amount of nitrogen harvested based on the results of site-specific plant tissue analyses. Conservative (lower-bound) estimates of the amount of nitrogen harvested may be used in lieu of site-specific plant tissue analyses provided the estimate is justified by use of prior site-specific tissue analyses or literature references for alfalfa grown using recycled water. The production from the field may be determined by multiplying the number of bales by an average bale weight. The results of this calculation must be compared to the total amount of nitrogen applied to the crop from all sources (e.g., wastewater, other water, and fertilizer) or available in the soil during production. A comparison with the previous year's Annual Cropping Plan must be provided, and any significant differences from the Annual Cropping Plan must be addressed.
- iii. Recycled water balance for the crop cycle including: the amount of water applied to each field, water losses due to irrigation efficiency and evapotranspiration, and the amount of water in storage in the vadose zone or available for percolation below the root zone. These values must be compared to the values proposed in the Annual Cropping Plan for the previous year and any significant differences must be addressed. If recycled water is blended with non-recycled water to meet the water demand during warmer seasons, the quantity and percentage of recycled water and the total water applied must be determined

⁶ A statement of qualifications must be provided.

and reported. Nitrogen content of non-recycled water must also be determined and reported.

- iv. Information that demonstrates that all recycled water applied complied with the State Department of Health Services water recycling (reclamation) requirements. The information should include verification that the level of treatment required for water recycling was achieved and that the methods of recycled water application were implemented as required.
- v. Summary of daily wind speed(s) and direction(s) at the Authorized Disposal Site, indicating periods when irrigation ceased due to the potential to transport effluent offsite by high wind conditions. Additionally, the report must include a discussion of the factors that lead to a decision to continue irrigation when the wind speed exceeds the level defined by the Discharger as its best management practice for preventing off-site transport of reclaimed wastewater.
- vi. Monthly evaluation of the effectiveness of measures to prevent offsite drift of undisinfected recycled water aerosols.
- vii. Summary of maintenance activities such as maintenance of adequate setbacks from the property lines for the use of undisinfected reclaimed water, discing, deep discing, weed removal and recontouring at land spreading areas and irrigated fields.
- viii. Summary of daily inspections for ponding, offsite flow or offsite drift when irrigation with recycled water is occurring.
- ix. Provide information on any and all chemicals used on the agricultural fields.

3. Annual Cropping Report for the Calendar Year

An Annual Cropping Plan Report must include, but is not limited to, the following items describing the proposed cropping plan for the calendar year (items ii-v must be for each field and crop type).

- i. Names, addresses, and telephone numbers of users of reclaimed wastewater from the Facility, if other than the Discharger.
- ii. Volume of water usage expected based on crop needs (irrigation efficiency, evapotranspiration and need for

maintenance leaching). Provide basis for calculations, including data for irrigation efficiency as measured in the field using methods described in appropriate literature references (i.e., Intermountain Alfalfa Management, Publication 3366, University of California Division of Agriculture and Natural Resources, 1997).

- iii. Amount of nitrogen expected to be applied to the crop from all sources, including estimates of nitrogen available in the root zone based on annual soil testing.
- iv. Amount of nitrogen expected in the harvested crop per harvest and total amount expected to be removed from the field for the year.
- v. Describe the fate of nitrogen that has been applied, or that is available in the root zone, that is not accounted for in the crops harvested during the prior year.

4. Reports of Use of Recycled Water for Construction

The Discharger must provide results of coliform testing and estimate the amount of wastewater used during construction for each day and each month that recycled wastewater is used for construction. Monthly reports submitted with Attachment "C" and the daily data must be received within 15 days after the last day of the month that the recycled water was used.

5. Report of Method to Analyze Collected Ground Water Data

By July 30, 2009, the Discharger must produce a ground water analysis report for acceptance by the Executive Officer. The report must provide the following:

- i. A review of existing ground water data and a method for how new data will be analyzed, annually at a minimum, to determine if concentrations of total dissolved solids, nitrate as nitrogen and chloride in the ground water are changing in a manner that indicates ground water quality is being degraded due to waste discharges. The proposed analysis may compare up gradient and down gradient monitoring wells, provide interwell or intrawell statistical analyses, or propose other methods acceptable to the Executive Officer.

- ii. A comprehensive data analysis and proposed threshold concentrations of total dissolved solids, nitrate as nitrogen and chloride that would serve to indicate that degradation is occurring due to wastewater application. This report must also propose actions that will be taken if these thresholds are crossed and a timeline for completing the actions.
6. Annually, analyze the ground water data collected in accordance with the accepted methods and information in No. 5 above and provide an assessment of whether ground water degradation is occurring as a result of the Facility or disposal operation.

Ordered by: _____ Dated: _____
HAROLD J. SINGER
EXECUTIVE OFFICER

- Attachments:
- A. General Provisions for Monitoring and Reporting
 - B. Priority Pollutant List
 - C. Certified Reporting Form Cover Letter

PROPOSED

ATTACHMENT A

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD LAHONTAN REGION

GENERAL PROVISIONS FOR MONITORING AND REPORTING

1. **SAMPLING AND ANALYSIS**

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

2. OPERATIONAL REQUIREMENTS

a. Sample Results

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

b. Operational Log

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

3. REPORTING

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

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

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

4. NONCOMPLIANCE

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

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file: general pro mrp

CTR Number	Parameter	CAS Number	Suggested Analytical Methods
1	Antimony	7440360	EPA 6020/200.8
2	Arsenic	7440382	EPA 1632
3	Beryllium	7440417	EPA 6020/200.8
4	Cadmium	7440439	EPA 1638/200.8
5a	Chromium (III)	16065831	EPA 6020/200.8
5a	Chromium (VI)	18540299	EPA 7199/1636
6	Copper	7440508	EPA 6020/200.8
7	Lead	7439921	EPA 1638
8	Mercury	7439976	EPA 1669/1631
9	Nickel	7440020	EPA 6020/200.8
10	Selenium	7782492	EPA 6020/200.8
11	Silver	7440224	EPA 6020/200.8
12	Thallium	7440280	EPA 6020/200.8
13	Zinc	7440666	EPA 6020/200.8
14	Cyanide	57125	EPA 9012A
15	Asbestos	1332214	EPA/600/R-93/116(PCM)
16	2,3,7,8-TCDD	1746016	EPA 8290 (HRGC) MS
17	Acrolein	107028	EPA 8260B
18	Acrylonitrile	107131	EPA 8260B
19	Benzene	71432	EPA 8260B
20	Bromoform	75252	EPA 8260B
21	Carbon Tetrachloride	56235	EPA 8260B
22	Chlorobenzene	108907	EPA 8260B
23	Chlorodibromomethane	124481	EPA 8260B
24	Chloroethane	75003	EPA 8260B
25	2-Chloroethylvinyl Ether	110758	EPA 8260B
26	Chloroform	67663	EPA 8260B
27	Dichlorobromomethane	75274	EPA 8260B
28	1,1-Dichloroethane	75343	EPA 8260B
29	1,2-Dichloroethane	107062	EPA 8260B
30	1,1-Dichloroethylene	75354	EPA 8260B
31	1,2-Dichloropropane	78875	EPA 8260B
32	1,3-Dichloropropylene	542756	EPA 8260B
33	Ethylbenzene	100414	EPA 8260B
34	Methyl Bromide	74839	EPA 8260B
35	Methyl Chloride	74873	EPA 8260B
36	Methylene Chloride	75092	EPA 8260B
37	1,1,2,2-Tetrachloroethane	79345	EPA 8260B
38	Tetrachloroethylene	127184	EPA 8260B
39	Toluene	108883	EPA 8260B
40	1,2-Trans-Dichloroethylene	156605	EPA 8260B
41	1,1,1-Trichloroethane	71556	EPA 8260B

CTR Number	Parameter	CAS Number	Suggested Analytical Methods
42	1,12-Trichloroethane	79005	EPA 8260B
43	Trichloroethylene	79016	EPA 8260B
44	Vinyl Chloride	75014	EPA 8260B
45	2-Chlorophenol	95578	EPA 8270C
46	2,4-Dichlorophenol	120832	EPA 8270C
47	2,4-Dimethylphenol	105679	EPA 8270C
48	2-Methyl-4,6-Dinitrophenol	534521	EPA 8270C
49	2,4-Dinitrophenol	51285	EPA 8270C
50	2-Nitrophenol	88755	EPA 8270C
51	4-Nitrophenol	100027	EPA 8270C
52	3-Methyl-4-Chlorophenol	59507	EPA 8270C
53	Pentachlorophenol	87865	EPA 8270C
54	Phenol	108952	EPA 8270C
55	2,4,6-Trichlorophenol	88062	EPA 8270C
56	Acenaphthene	83329	EPA 8270C
57	Acenaphthylene	208968	EPA 8270C
58	Anthracene	120127	EPA 8270C
59	Benzidine	92875	EPA 8270C
60	Benzo(a)Anthracene	56553	EPA 8270C
61	Benzo(a)Pyrene	50328	EPA 8270C
62	Benzo(b)Fluoranthene	205992	EPA 8270C
63	Benzo(ghi)Perylene	191242	EPA 8270C
64	Benzo(k)Fluoranthene	207089	EPA 8270C
65	Bis(2-Chloroethoxy)Methane	111911	EPA 8270C
66	Bis(2-Chloroethyl)Ether	111444	EPA 8270C
67	Bis(2-Chloroisopropyl)Ether	108601	EPA 8270C
68	Bis(2-Ethylhexyl)Phthalate	117817	EPA 8270C
69	4-Bromophenyl Phenyl Ether	101553	EPA 8270C
70	Butylbenzyl Phthalate	85687	EPA 8270C
71	2-Chloronaphthalene	91587	EPA 8270C
72	4-Chlorophenyl Phenyl Ether	7005723	EPA 8270C
73	Chrysene	218019	EPA 8270C
74	Dibenzo(a,h)Anthracene	53703	EPA 8270C
75	1,2-Dichlorobenzene	95501	EPA 8260B
76	1,3-Dichlorobenzene	541731	EPA 8260B
77	1,4-Dichlorobenzene	106467	EPA 8260B
78	3,3'-Dichlorobenzidine	91941	EPA 8270C
79	Diethyl Phthalate	84662	EPA 8270C
80	Dimethyl Phthalate	131113	EPA 8270C
81	Di-n-Butyl Phthalate	84742	EPA 8270C
82	2,4-Dinitrotoluene	121142	EPA 8270C
83	2,6-Dinitrotoluene	606202	EPA 8270C
84	Di-n-Octyl Phthalate	117840	EPA 8270C
85	1,2-Diphenylhydrazine	122667	EPA 8270C

CTR Number	Parameter	CAS Number	Suggested Analytical Methods
86	Fluoranthene	206440	EPA 8270C
87	Fluorene	86737	EPA 8270C
88	Hexachlorobenzene	118741	EPA 8260B
89	Hexachlorobutadiene	87863	EPA 8260B
90	Hexachlorocyclopentadiene	77474	EPA 8270C
91	Hexachloroethane	67721	EPA 8260B
92	Indeno(1,2,3-cd)Pyrene	193395	EPA 8270C
93	Isophorone	78591	EPA 8270C
94	Naphthalene	91203	EPA 8260B
95	Nitrobenzene	98953	EPA 8270C
96	N-Nitrosodimethylamine	62759	EPA 8270C
97	N-Nitrosodi-n-Propylamine	621647	EPA 8270C
98	N-Nitrosodiphenylamine	86306	EPA 8270C
99	Phenanthrene	85018	EPA 8270C
100	Pyrene	129000	EPA 8270C
101	1,2,4-Trichlorobenzene	120821	EPA 8260B
102	Aldrin	309002	EPA 8081A
103	alpha-BHC	319846	EPA 8081A
104	beta-BHC	319857	EPA 8081A
105	gamma-BHC	58899	EPA 8081A
106	delta-BHC	319868	EPA 8081A
107	Chlordane	57749	EPA 8081A
108	4,4'-DDT	50293	EPA 8081A
109	4,4'-DDE	72559	EPA 8081A
110	4,4'-DDD	72548	EPA 8081A
111	Dieldrin	60571	EPA 8081A
112	alpha-Endosulfan	959988	EPA 8081A
113	beta-Endosulfan	33213659	EPA 8081A
114	Endosulfan Sulfate	1031078	EPA 8081A
115	Endrin	72208	EPA 8081A
116	Endrin Aldehyde	7421934	EPA 8081A
117	Heptachlor	76448	EPA 8081A
118	Heptachlor Epoxide	1024573	EPA 8081A
119	PCB-1016	12674112	EPA 8082
120	PCB-1221	11104282	EPA 8082
121	PCB-1232	11141165	EPA 8082
122	PCB-1242	53469219	EPA 8082
123	PCB-1248	12672296	EPA 8082
124	PCB-1254	11097691	EPA 8082
125	PCB-1260	11096825	EPA 8082
126	Toxaphene	8001352	EPA 8081A

ATTACHMENT C

Date _____

California Regional Water Quality Control Board
Lahontan Region
2501 Lake Tahoe Boulevard
South Lake Tahoe, CA 96150

Facility Name:

Address:

Contact Person:

Job Title:

Phone:

Email:

WDR/NPDES Order Number:

WDID Number:

Type of Report (circle one):

Monthly Quarterly Semi-Annual Annual Other

Month(s) (circle applicable month(s)*:

JAN FEB MAR APR MAY JUN
JUL AUG SEP OCT NOV DEC

*annual Reports (circle the first month of the reporting period)

Year:

Violation(s)? (Please check one): _____ NO

_____ YES*

*If YES is marked complete a-g (Attach Additional information as necessary)

a) Brief Description of Violation:

b) Section(s) of WDRs/NPDES

Permit Violated:

c) Reported Value(s) or Volume:

d) WDRs/NPDES

Limit/Condition:

e) Date(s) and Duration of Violation(s):

f) Explanation of Cause(s):

g) Corrective Action(s)

(Specify actions taken and a schedule for actions to be taken)

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision following a system designed to ensure that qualified personnel properly gather and evaluate the information submitted. Based on my knowledge of the person(s) who manage the system, or those directly responsible for data gathering, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.

If you have any questions or require additional information, please contact _____ at the number provided above.

Sincerely,

Signature: _____

Name: _____

Title: _____