

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
CENTRAL VALLEY REGION

ORDER NO. R5-2008-0004

WASTE DISCHARGE REQUIREMENTS
FOR
TEJON-CASTAC WATER DISTRICT
TEJON RANCHCORP
TEJON INDUSTRIAL COMPLEX WASTEWATER TREATMENT FACILITY
KERN COUNTY

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

1. The Tejon-Castac Water District (hereafter District) owns and operates a wastewater treatment facility (WWTF) that serves the Tejon Industrial Complex. The Tejon Ranchcorp owns the land on which the WWTF and Industrial Complex resides. The District and Tejon Ranchcorp are hereafter referred to as Discharger. The Discharger submitted a Report of Waste Discharge (RWD) on 30 November 2004, for modification and expansion of the existing WWTF. The RWD proposes to expand the WWTF from a monthly average discharge flow of 0.05 to 0.1 million gallons per day (mgd). The WWTF provides sewerage for a hotel, gas stations, restaurants, shower and restrooms areas, convenience stores, and industrial warehouses.
2. The WWTF is on the west side of Interstate Five at Laval Road, approximately ten miles north of Lebec, in Section 6, T10N, R19W, MDB&M, as shown on [Attachment A](#), which is attached hereto and made part of this Order by reference.
3. Waste Discharge Requirements (WDRs) Order No. 99-076, adopted on 11 June 1999, was issued to Tejon Ranchcorp, which previously owned and operated the WWTF prior to the formation of the District. Order No. 99-076 restricted the monthly average discharge flow to 0.05 mgd. The Tejon Ranchcorp initially proposed to exclusively recycle disinfected tertiary-treated effluent on landscaped areas surrounding the Industrial Complex. The WDRs prescribed effluent limits for 5-day biochemical oxygen demand (BOD₅), total suspended solids (TSS), settleable solids (SS), total coliform organisms (TCO), and turbidity, as well as electrical conductivity (EC).
4. The purpose of this Order is to rescind WDRs Order No. 99-076 and prescribe requirements that reflect the WWTF.
5. The RWD presents information on site conditions and the wastewater treatment process. The Discharger proposes to exclusively discharge to two storage ponds, one lined (Pond 1) and one unlined (Pond 2). The Discharger's long-term plan is to construct a new WWTF that will serve its discharge, the discharge from the Tejon Industrial Complex to the east of I-5, and eventually the discharge from TravelCenters of America, also east of I-5. The discharge from the TravelCenters WWTF is currently regulated by separate WDRs (Order No. 5-01-002). The Discharger indicates that it plans to submit an RWD in support of a flow increase up to 0.8 mgd at full build-out.

Wastewater Treatment Facility

6. The WWTF consists of the wastewater collection system, influent pump station, headworks with a comminuter, bar screen and flow meter, an aerated flow equalization basin, and a dissolved air floatation (DAF) unit (installed in September 2007). Wastewater from DAF unit is discharged to reactor #1 of the Santec WWTF (WWTF-1). From reactor #1 wastewater is discharged to the STM-Aerotor WWTF (WWTF-2). WWTF-1 is designed to treat 0.05 mgd, and is an extended aeration package plant. WWTF-2 is also designed to treat 0.05 mgd and is a fixed film process. The WWTF is designed to filter using a sand filtration followed by ultraviolet light disinfection prior to discharge to ponds (Ponds 1 and 2). Effluent from Ponds 1 and 2 is then recycled on 14-acres of landscaped areas (Landscaped Use Area) as shown on [Attachment A](#). Pond 1 is 1.26 acres and equipped with a compacted clay liner. Pond 2 is 1.13 acres and is unlined. [Attachment B](#), which is attached hereto and made part of this Order by reference, depicts a process flow diagram of the WWTF.
7. Originally, and as reflected in WDRs Order No. 99-076, the WWTF consisted only of WWTF-1. As flows increased, the Discharger submitted a RWD for the installation of WWTF-2. Due to deficiencies in treatment from WWTF-1 and WWTF-2, the filtration and disinfection facilities were not adequate. Therefore, the Discharger has never consistently met the effluent limits specified in Order No. 99-076 and, therefore, is unable to recycle effluent on the Landscaped Use Area.
8. Due, in part, to the WWTF's inability to consistently provide adequate treatment and recycle effluent, discharge was exclusively to the lined Pond 1. In the winter months, Pond 1 will occasionally overflow to Pond 2 maintaining two feet of freeboard in Pond 1. The Discharger submitted a water balance that shows that Ponds 1 and 2 provide adequate storage capacity for flows up to at least 0.1 mgd with no recycling during a 100-year rainfall return frequency.
9. Fluctuations in flow occur from the variance in traffic during peak holiday and summer travel.
10. Self-monitoring data from December 2006 through November 2007 characterize the discharge as follows:

<u>Constituent/Parameter</u>	<u>Units</u>	<u>Influent</u>	<u>Effluent</u>
Monthly average flow	mgd	0.06	--
5-day biochemical oxygen demand (BOD) ₅	mg/L	516	33
Total suspended solids (TSS)	mg/L	453	58
Settleable solids (SS)	mL/L	--	10
Total coliform organisms (TCO)	MPN/100 mL	--	>1,600
Total nitrogen	mg/L	60 ¹	--
Electrical conductivity (EC)	µmhos/cm	--	1183

¹ Based on influent concentrations collected during a pilot test program for the 2004 RWD. Effluent characterized during the pilot test program used different technology than currently proposed and therefore is not shown in the table. During the study, influent total nitrogen values ranged from 31 to 110 mg/L.

11. The EC of the WWTF effluent is about 600 to 700 $\mu\text{mhos/cm}$ over source water.
12. Finding 10 shows influent BOD concentrations about twice as high as typical strength domestic influent. WWTF-1 and WWTF-2 were designed to treat influent BOD and TSS concentrations of 250 mg/L. The Discharger installed the DAF unit to reduce influent BOD and TSS concentrations, improving overall effluent quality, but its effects have not yet been fully demonstrated.
13. Wasted sludge from the treatment process is pumped to a sludge holding tank, where it is periodically pumped into a truck and hauled offsite for disposal at an authorized facility.

Sanitary Sewer Overflows

14. A “sanitary sewer overflow” is defined as a discharge to ground or surface water from the sanitary sewer system at any point upstream of the treatment facility. Temporary storage and conveyance facilities (such as wet wells, regulated impoundments, tanks, highlines, etc.) may be part of a sanitary sewer system and discharges to these facilities are not considered sanitary sewer overflows, provided that the waste is fully contained within these temporary storage/conveyance facilities.
15. On 2 May 2006, the State Water Board adopted Statewide General Waste Discharge Requirements For Sanitary Sewer Systems, Water Quality Order No. 2006-003-DWQ (General Order). The General Order requires all public agencies that own or operate sanitary sewer systems greater than one mile in length to comply with the order. The Discharger’s collection system is greater than one mile in length; therefore the General Order is applicable.

Site-Specific Conditions

16. The WWTF is in an arid climate characterized by hot dry summers and mild winters. The rainy season generally extends from November through March. Occasional rains occur during the spring and fall months, but summer months are dry. Average annual precipitation and evaporation in the discharge area are about 6 inches and 84 inches, respectively, according to information published by the California Department of Water Resources (DWR).
17. Soils within the area consist mainly of interbedded layers of silty sand, sandy gravel, and silty gravel with occasional layers of clayey sand. According to reports prepared by the Discharger’s engineers, soil permeability ranges from 1×10^{-3} to 1×10^{-6} cm/sec. Tejon’s water balance cites percolation rates of 0.025 feet/month for Pond 1, and 3.5 feet/month for Pond 2.

18. The WWTF is not within a 100-year floodplain according to Federal Emergency Management Agency maps.
19. Land use in the WWTF vicinity is primarily agricultural with several acres of native vegetation surrounding the WWTF. There are also oil fields west and south of the WWTF. DWR land use data published in 1998 describes crops grown in the area. The primary crops grown within five miles of the WWTF include cotton, wheat, alfalfa, almonds, grapes, onions and garlic, potatoes and melons. Crops grown to a lesser extent include carrots, safflower, sugar beats, and apples. Irrigation water is supplied by both groundwater and surface waters. Some salt sensitive crops (e.g., carrots, almonds) are grown in the area.

Storm Water

20. The Discharger has two storm water ponds. Each industrial parking area discharging to the storm water ponds is equipped with an oil/sand separator to remove pollutants collected from the storm water runoff from the surrounding parking lot areas. Federal Regulations for storm water discharges were promulgated by the United States Environmental Protection Agency (USEPA) on 16 November 1990 (Title 40 CFR Parts 122, 123, and 124). The regulations require specific categories of facilities that discharge storm water associated with industrial activity (storm water) to obtain National Pollutant Discharge Elimination System (NPDES) permits and to implement Best Available Technology Economically Achievable (BAT) and Best Conventional Pollutant Control Technology (BTC) to reduce or eliminate industrial storm water pollution. The uses within the Industrial Complex (with the exception of the WWTF) have a State Industrial Classification (SIC) code of 5541 and are in the exempt category listed in the State Water Resources Control Board General Order No. 92-08-DWQ. Therefore, at this time, the Discharger is not required to obtain a NPDES general industrial storm water permit.
21. The Discharger is not required to obtain coverage under a NPDES general industrial storm water permit for the WWTF because all storm water runoff from the WWTF is retained onsite and does not discharge to a water of the United States.

Groundwater Considerations

22. The WWTF is within the White Wolf groundwater basin, which consists of an aquifer that is vertically unconfined but horizontally confined by bedrock and the White Wolf Fault, according to the Wheeler Ridge-Maricopa Water Storage District. In the discharge vicinity groundwater ranges from about 500 to 900 feet bgs according to DWR. Generally, first encountered groundwater contains EC values varying from 500 to 2,550 $\mu\text{mhos/cm}$, and nitrate as N of less than 10 mg/L, according to groundwater data from U.S. Geological Survey (USGS) wells within two miles of the WWTF.
23. The Discharger obtains its source water from the Tejon-Castac Water District (District), operated by Cal Water. The California Department of Public Health (DPH) considers the District's water system as a non-transient non-community water system. The District operates a filtration plant that treats water from the California Aqueduct. The District also

has one well available as an emergency water supply. Discharger SMRs show the source water EC is about 340 to 550 $\mu\text{mhos/cm}$. Source water EC from the Discharger's backup well ranges from about 1000 to 1300 $\mu\text{mhos/cm}$, which is within the range of the USGS wells. The source water is of good quality, as indicated by the District's 2006 Water Quality Report. Excerpts of this report are presented below.

<u>Constituent/Parameter</u>	<u>Units</u>	<u>Value</u>
Arsenic	$\mu\text{g/L}$	2.5
Chloride	mg/L	48
EC	$\mu\text{mhos/cm}$	320
Nitrate (as N)	mg/L	2.2
TDS	mg/L	190

Basin Plan, Beneficial Uses, and Water Quality Objectives

24. The Water Quality Control Plan for the Tulare Lake Basin, 2nd Edition, (hereafter Basin Plan) designates beneficial uses, establishes numerical and narrative water quality objectives, contains implementation plans and policies for protecting all waters of the basin, and incorporates by reference plans and policies of the State Water Board. Pursuant to Section 13263(a) of the California Water Code (CWC), these waste discharge requirements implement the Basin Plan.
25. The WWTF is between Detailed Analysis Unit (DAU) Nos. 258 and 261 within the Kern County Basin hydrologic unit. The Basin Plan designates the beneficial uses of groundwater in both DAUs as municipal and domestic supply, agricultural supply, and industrial service supply. DAU No. 258 also includes the beneficial use of industrial process supply.
26. The Basin Plan includes a water quality objective for Chemical Constituents that, at a minimum, requires waters designated as domestic or municipal supply to meet the maximum contaminant levels (MCLs) specified in the following provisions of Title 22, California Code of Regulations: Table 64431-A (Inorganic Chemicals) of Section 64431, Table 64444-A (Organic Chemicals) of Section 64444, Table 64449-A (Secondary Maximum Contaminant Levels-Consumer Acceptance Limits) of Section 64449, and 64449-B (Secondary Maximum Contaminant Levels-Ranges) of Section 64449.
27. The Basin Plan establishes narrative water quality objectives for Chemical Constituents, Tastes and Odors, and Toxicity. The Toxicity objective, in summary, requires that groundwater be maintained free of toxic substances in concentrations that produce detrimental physiological responses in human, plant, animal, or aquatic life associated with designated beneficial uses. Quantifying a narrative water quality objective requires a site-specific evaluation of those constituents that have the potential to impact water quality and beneficial uses.

28. The Basin Plan identifies the greatest long-term problem facing the entire Tulare Lake Basin as the increase in salinity in groundwater, which has accelerated due to the intensive use of soil and water resources by irrigated agriculture. The Basin Plan recognizes that degradation is unavoidable until there is a long-term solution to the salt imbalance. Until then, the Basin Plan establishes several salt management requirements, including:
- The incremental increase in salts from use and treatment must be controlled to the extent possible. The maximum EC shall not exceed the EC of the source water plus 500 $\mu\text{mhos/cm}$. When the source water is from more than one source, the EC shall be a weighted average of all sources.
 - Discharges to areas that may recharge good quality groundwaters shall not exceed an EC of 1,000 $\mu\text{mhos/cm}$, a chloride content of 175 mg/L, or boron content of 1.0 mg/L.
- These effluent limits are considered best practicable treatment or control (BPTC).
29. Maximum salinity limits for most wastewater discharges for most areas are those described in [Finding 28.b](#). One exception is the White Wolf subarea, where the subject discharge takes place, allows more or less restrictive limits. The limits for the White Wolf subarea are discussed in the Basin Plan's "Discharges to Land" subsection of the "Municipal and Domestic Wastewater" section. Relaxation of applicable effluent salinity limits in the White Wolf subarea are based on the class of irrigation water underlying the WWTF. The Basin Plan specifies that irrigation waters (underlying groundwater in this case) with an EC between 1000 – 3000 $\mu\text{mhos/cm}$, chlorides between 175 – 350 mg/L, sodium between 60-75 (percent based constituents), and boron between 0.5-2 mg/L be considered Class II irrigation water. Based on the quality from the Discharger's backup source water well, groundwater is considered Class II for EC. The discharge to land in areas overlying Class II or poorer groundwater shall not exceed an EC of 2,000 $\mu\text{mhos/cm}$.
30. The list of crops in [Finding 19](#) is not intended as a definitive inventory of crops that are or could be grown in the area affected by the discharge, but is representative. Crops sensitive to salt and boron are currently being grown in the area are primarily due to the importation of high quality surface water.
31. The Basin Plan requires domestic WWTFs that discharge to land to comply with treatment performance standards for BOD₅ and TSS. WWTFs that preclude public access and discharge less than 1 mgd must provide removal of 80 percent or reduction to 40 mg/L, whichever is more restrictive, of both BOD₅ and TSS.

Antidegradation Analysis

32. State Water Resources Control Board Resolution No. 68-16 ("Policy with Respect to Maintaining High Quality Waters of the State") (hereafter Resolution No. 68-16) prohibits degradation of groundwater unless it has been shown that:
- The degradation is consistent with the maximum benefit to the people of the State;

- b. The degradation will not unreasonably affect present and anticipated future beneficial uses;
 - c. The degradation does not result in water quality less than that prescribed in state and regional policies, including violation of one or more water quality objectives; and
 - d. The discharger employs BPTC to minimize degradation.
33. The economic prosperity of the County and communities surrounding the Complex is of maximum benefit to the people of California. At full build out the Complex is expected to employ more than 6,000 people. In addition, the Complex provides the necessary commercial, dining, and lodging services for travelers between the San Joaquin Valley and southern California.
34. Constituents of concern that have the potential to degrade groundwater include salts and nutrients.
- a. For salinity, the Basin Plan contains effluent limits specifically for the White Wolf Basin that considered Resolution 68-16 when adopted. The discharge meets these limits and therefore should not unreasonably degrade the beneficial uses of groundwater with respect to salinity.
 - b. For nitrogen that could affect the beneficial uses of a high quality water, practicable measures to protect the water are: 1) treating the effluent such that it is below objectives for drinking water, or 2) storing the effluent in a manner that protects the underlying groundwater from percolation from ponds until it can be beneficially used on crops. The Discharger may implement either or both to satisfy Resolution 68-16.

Treatment and Control Practices

35. The WWTF described in [Findings 6 through 8](#), provides treatment and control of the discharge that incorporates:
- a. low salinity source water;
 - b. secondary treatment;
 - c. appropriate biosolids disposal practices; and
 - d. an operation and maintenance (O&M) manual.
36. This Order establishes groundwater limitations for the WWTF that will not unreasonably threaten present and anticipated beneficial uses or result in groundwater quality that exceeds water quality objectives set forth in the Basin Plan.

Water Recycling Criteria

37. State Water Board Resolution No. 77-1, Policy with Respect to Water Recycling in California, encourages recycling projects that replace or supplement the use of fresh water,

and the Water Recycling Law (California Water Code Section 13500-13529.4) declares that utilization of recycled water is of primary interest to the people of the State in meeting future water needs.

38. The Basin Plan encourages recycling for irrigation wherever feasible and indicates that evaporation of recyclable wastewater is not an acceptable permanent disposal method where the opportunity exists to replace an existing use or proposed use of fresh water with recycled water.
39. The Discharger initially proposed to recycle treated effluent on landscaped areas, but was never able to consistently meet the appropriate effluent limits. The Discharger indicates that it plans to submit an RWD for expansion and upgrade of its WWTF, including effluent recycling on fiber or fodder crops and on landscaped areas surrounding the Industrial Complex.

Other Regulatory Considerations

40. The United States Environmental Protection Agency (EPA) has promulgated biosolids reuse regulations in Title 40, Code of Federal Regulations, Part 503, Standards 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. The Discharger may have separate and/or additional compliance, reporting, and permitting responsibilities to EPA. The RWD states that all biosolids will be hauled to a separate permitted facility.
41. As the discharge consists of treated domestic sewage and incidental discharges from treatment and storage facilities associated with a domestic wastewater treatment plant, and as these discharges are regulated by waste discharge requirements consistent with applicable water quality objectives, the WWTF and its discharge is exempt from containment pursuant to Title 27, Section 20090(a).

CEQA

42. The Kern County Planning Department, as the lead agency for purposes of the California Environmental Quality Act (CEQA) (Public Resources Code Section 21000, et, seq.) and the CEQA guidelines (Title 14, Division 6, California Code of Regulations, as amended), in 1998 adopted a mitigated negative declaration (MND) and in 2000 certified an Environmental Impact Report (EIR) that evaluates the potential environmental impacts from the discharge of tertiary treated effluent to ponds. The Regional Water Board is a responsible agency pursuant to CEQA. The Regional Water Board reviewed and considered the MND and EIR prepared by the County. This Order contains requirements that will mitigate or avoid environmental effects on water quality.

General Findings

43. All the above and the supplemental information and details in the attached Information Sheet, which is incorporated by reference herein, were considered in establishing the following conditions of discharge
44. Pursuant to CWC 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.
45. The Regional Water Board will review this Order periodically and will revise requirements when necessary.
46. California Water Code Section 13267(b) states 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."
47. The technical reports required by this Order and the attached Monitoring and Reporting Program No. R5-2008-0004 are necessary to assure compliance with these waste discharge requirements. The Discharger operates the WWTF that discharges the waste subject to this Order.

Public Notice

48. The Discharger and interested agencies and persons have been notified of the intent to prescribe waste discharge requirements for this discharge, and they have been provided an opportunity for a public hearing and an opportunity to submit their written views and recommendations.
49. All comments pertaining to the discharge were heard and considered in a public meeting.

IT IS HEREBY ORDERED that, Waste Discharge Requirements Order No. 99-076 is rescinded and that, pursuant to Sections 13263 and 13267 of the California Water Code, the Tejon-Castac Water District, Tejon Ranchcorp and their agents, successors, and assigns, in order to meet the provisions contained in Division 7 of the CWC and regulations adopted thereunder, shall comply with the following:

A. Prohibitions

1. Discharge of wastes to surface waters or surface water drainage courses is prohibited.
2. Bypass or overflow of untreated wastes, except as allowed by *Standard Provisions and Reporting Requirements for Waste Discharge Requirements*, dated 1 March 1991, E.2 is prohibited.
3. Discharge of waste classified as 'hazardous', as defined in Section 2521(a) of Title 23, California Code of Regulations, Section 2510 et seq., is prohibited. Discharge of waste classified as 'designated,' as defined in California Water Code Section 13173, in a manner that causes violation of groundwater limitations, is prohibited.

B. General Discharge Specifications

1. The monthly average discharge flow shall not exceed 0.1 mgd.
2. Wastewater treatment, storage, and disposal shall not cause pollution or a nuisance as defined by Section 13050 of the CWC.
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 a violation of the Groundwater Limitations.
4. Objectionable odors shall not be perceivable beyond the limits of the Facility property at an intensity that creates or threatens to create nuisance conditions.
5. Public contact with effluent shall be precluded through such means as fences, signs, or acceptable alternatives.
6. The Discharger shall operate all systems and equipment to maximize treatment of wastewater and optimize the quality of the discharge.
7. All conveyance, treatment, storage, and disposal units shall be designed, constructed, operated, and maintained to prevent inundation or washout due to floods with a 100-year return frequency.
8. On or about **1 October** of each year, available disposal pond storage capacity shall at least equal the volume necessary to comply with [General Discharge Specification B.7](#).
9. Ponds shall be managed to prevent breeding of mosquitoes. In particular,
 - a. An erosion control plan should assure that coves and irregularities are not created around the perimeter of the water surface.
 - b. Weeds shall be minimized through control of water depth, harvesting, and herbicides.

- c. Dead algae, vegetation, and other debris shall not accumulate on the water surface.
- d. Vegetation management operations in areas in which nesting birds have been observed shall be carried out either before or after, but not during, the 1 April to 30 June bird nesting season.

C. Effluent Limitations

1. The effluent shall not exceed the following limitations:

<u>Constituent</u>	<u>Units</u>	<u>Monthly Average</u>	<u>Daily Maximum</u>
BOD ₅ ¹	mg/L	40	80
TSS ²	mg/L	40	80

¹ Five day biochemical oxygen demand (BOD₅)

² Total suspended solids (TSS)

2. The arithmetic mean of BOD₅ and TSS in effluent samples collected over a monthly period shall not exceed 20 percent of the arithmetic mean of the values for influent samples collected at appropriate the same times during the same period (80 percent removal).
3. The annual flow-weighted average EC of the discharge shall not exceed 2,000 µmhos/cm calculated on a 12-month average monthly basis.

D. Sludge Specifications

Sludge 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 screening material generated during preliminary treatment. Residual sludge means sludge that will not be subject to further treatment at the WWTF. Biosolids refers to sludge that has undergone sufficient treatment and testing to qualify for reuse pursuant to federal and state regulations as a soil amendment for agriculture, silviculture, horticulture, and land reclamation.

1. Sludge and solid waste shall be removed from screens, sumps, aeration basins, ponds, clarifiers, etc. as needed to ensure optimal plant operation.
2. Treatment and storage of sludge generated by the WWTF shall be confined to the WWTF property.
3. Any handling and storage of residual sludge, solid waste, and biosolids on property of the WWTF shall be temporary (i.e., no longer than two years) and controlled and contained in a manner that minimizes leachate formation and precludes infiltration of waste constituents into soils in a mass or concentration that will violate 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 sites (i.e., landfill, 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 or State Water Board or a local (e.g., county) program authorized by a regional water quality control board. In most cases, this means the General Biosolids Order (State Water Board Water Quality Order No. 2004-12-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 authorized by the General Biosolids Order, the Discharger must file a complete Notice of Intent and receive a Notice of Applicability for each project.
6. Any proposed change in sludge use or disposal practice shall be reported in writing to the Executive Officer at least 90 days in advance of the change.

E. Pretreatment Requirements

1. The Discharger shall implement the necessary controls to ensure incompatible wastes are not introduced to the treatment system. These include, at a minimum: (a) wastes that create a fire or explosion hazard, or corrosive structural damage to the treatment works; (b) solid or viscous wastes in amounts that cause obstruction to flow in sewers, or which cause other interference with proper operation or treatment works; (c) petroleum oil, nonbiodegradable cutting oil, or products of mineral oil origin in amounts that will cause interference or pass through; (d) pollutants that result in the presence of toxic gases, vapors, or fumes within the treatment works; and (e) any trucked or hauled pollutants, except at points predesignated by the Discharger.
2. The Discharger shall implement the controls (e.g., contracts, agreements, etc.) necessary to ensure that the following incompatible wastes are not introduced to the treatment system, where incompatible wastes are:
 - a. Flow through the system to the receiving water in quantities or concentrations that cause a violation of this Order, or
 - b. Inhibit or disrupt treatment processes, treatment system operations, or sludge processes, use, or disposal and either cause a violation of this Order or prevent sludge use or disposal in accordance with this Order.

F. Groundwater Limitations

1. Release of waste constituents from any treatment or storage component associated with the WWTF shall not cause or contribute to groundwater:
 - a. Containing constituent concentrations in excess of the concentrations specified below or natural background quality whichever is greater:
 - (i) Nitrate as nitrogen of 10 mg/L.
 - (ii) Total coliform organisms of 2.2 MPN/100 mL.
 - (iii) For constituents identified in Title 22, the MCLs quantified therein.
 - b. Containing taste or odor-producing constituents, or toxic substances, or any other constituents, in concentrations that cause nuisance or adversely affect beneficial uses.

G. Provisions

1. The Discharger shall comply with the *Standard Provisions and Reporting Requirements for Waste Discharge Requirements*, dated 1 March 1991, which are part of this Order. This attachment and its individual paragraphs are referred to as Standard Provision(s).
2. The Discharger shall comply with Monitoring and Reporting Program (MRP) No. R5-2008-0004, which is part of this Order, and any revisions thereto as adopted by the Regional Water Board or approved by the Executive Officer. The submittal date shall be no later than the submittal date specified in the Monitoring and Reporting Program for Discharger self-monitoring reports.
3. The Discharger shall keep at the WWTF a copy of this Order, including its MRP, Information Sheet, attachments, and Standard Provisions, for reference by operating personnel. Key operating personnel shall be familiar with its contents.
4. The Discharger shall not allow pollutant-free wastewater to be discharged into the Facility collection, treatment, and disposal systems in amounts that significantly diminish the system's capability to comply with this Order. Pollutant-free wastewater means storm water (i.e., inflow), groundwater (i.e., infiltration), cooling waters, and condensates that are essentially free of pollutants.
5. The Discharger must 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 conditions of this Order. Proper operation and maintenance also include adequate laboratory controls and appropriate quality assurance procedures. This Provision requires the operation of back-up or auxiliary facilities or similar systems that are installed by the Discharger only when the operation is necessary to achieve compliance with the conditions of the Order.

6. 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.
7. The Discharger must comply with all conditions of this Order, including timely submittal of technical and monitoring reports as directed by the Executive Officer. Accordingly, the Discharger shall submit to the Regional Water Board on or before each report due date the specified document or, if an action is specified, a written report detailing evidence of compliance with the date and task. If noncompliance is being reported, the reasons for such noncompliance shall be stated, plus an estimate of the date when the Discharger will be in compliance. The Discharger shall notify the Regional Water Board by letter when it returns to compliance with the time schedule. Violations may result in enforcement action, including Regional Water Board or court orders requiring corrective action or imposing civil monetary liability, or in revision or rescission of this Order.
8. In the event of any change in control or ownership of land or waste treatment and storage facilities presently owned or controlled by the Discharger, 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 the appropriate Regional Water Board office.
9. To assume operation under this Order, the succeeding owner or operator must apply in writing to the Executive Officer requesting transfer of the Order. The request must contain the requesting entity's full legal name, the state of incorporation if a corporation, the address and telephone number of the persons responsible for contact with the Regional Water Board and a statement. The statement shall comply with the signatory paragraph of Standard Provision B.3 and state that the new owner or operator assumes full responsibility for compliance with this Order. Failure to submit the request shall be considered a discharge without requirements, a violation of the California Water Code. If approved by the Executive Officer, the transfer request will be submitted to the Regional Water Board for its consideration of transferring the ownership of this Order at one of its regularly scheduled meetings.
10. As a means of discerning compliance with [General Discharge Specification B.5](#), the dissolved oxygen content in the upper zone (1 foot) of effluent in disposal ponds shall not be less than 1.0 mg/L for three consecutive sampling events. Should the DO be below 1.0 mg/L for three consecutive sampling events, the Discharger shall report the findings to the Regional Water Board and propose a remedial approach to resolve the low DO results **within 30 days**.

11. The Discharger shall maintain and operate all ponds sufficient to protect the integrity of containment levees and prevent overtopping or overflows. Unless a California civil engineer certifies (based on design, construction, and conditions of operation and maintenance) that less freeboard is adequate, the operating freeboard in any pond shall never be less than two feet (measured vertically). As a means of management and to discern compliance with this Provision, the Discharger shall install and maintain in each pond permanent markers with calibration that indicates the water level at design capacity and enables determination of available operational freeboard.

12. **Salinity Source Control Study.** By 1 January 2009, the Discharger shall conduct a salinity evaluation and submit a salinity minimization plan to identify and implement measures to reduce the salinity in the discharge to the extent feasible. The salinity minimization plan shall include a time schedule to implement the identified measures.

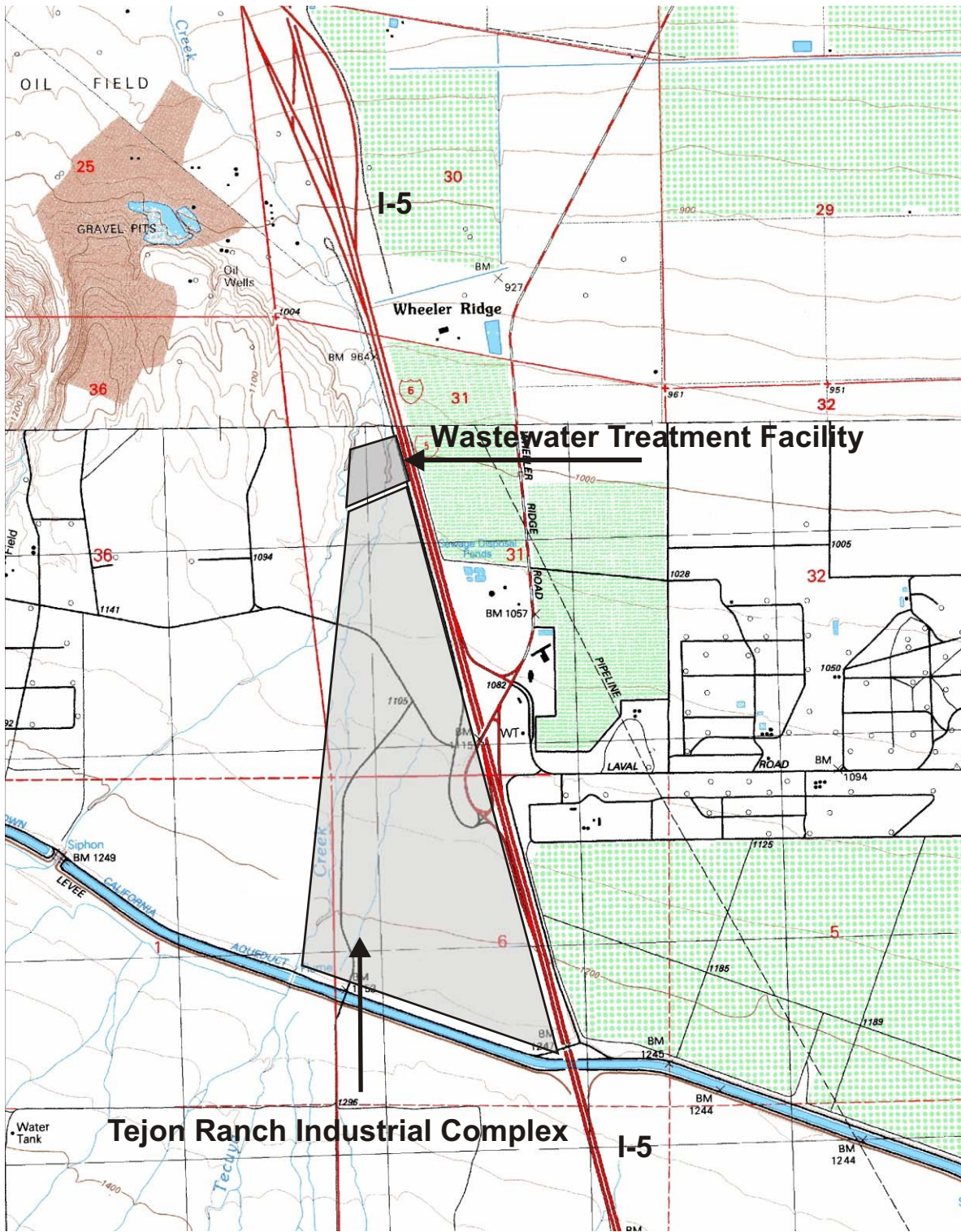
I, PAMELA C. CREEDON, Executive Officer, do hereby certify the foregoing is a full, true, and correct copy of an Order adopted by the California Regional Water Quality Control Board, Central Valley Region, on 25 January 2008.

PAMELA C. CREEDON, Executive Officer

Order Attachments:

- A Site Location Map
 - B. Plan View Map
- Monitoring and Reporting Program No. R5-2008-0004
Information Sheet
Standard Provisions (1 March 1991) (separate attachment to Discharger only)

ARP/DKP: 01/25/08



Map Source:
 Mettler and Grapevine 7.5 Minute USGS Quadrangle
 Section 31, T10S, R19W, MDB&M



SCALE
 1 INCH = 2,000 FEET

*WWTF and street locations approximate

SITE LOCATION MAP

ORDER NO. R5 -2008-0004

WASTE DISCHARGE REQUIREMENTS

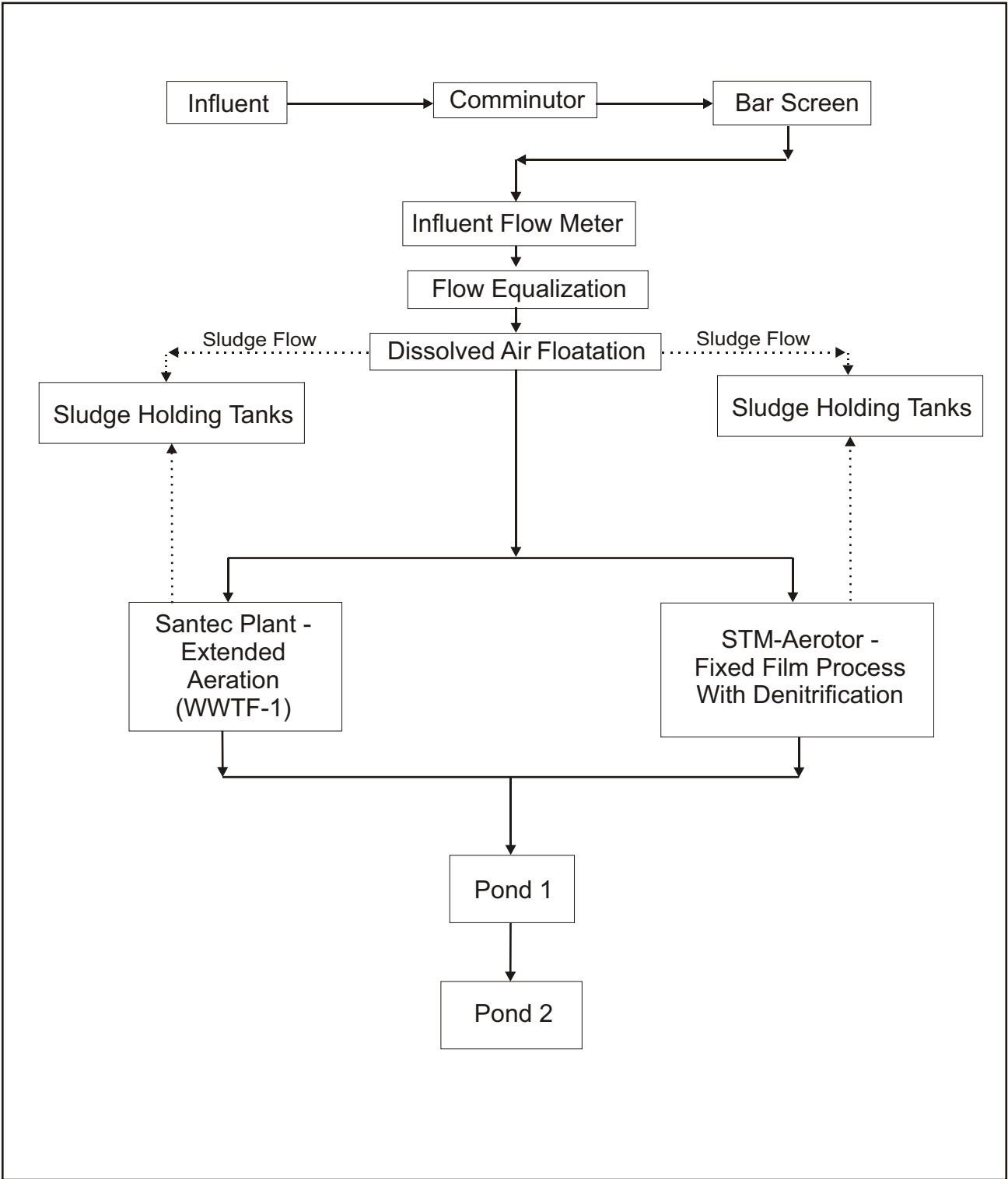
FOR

TEJON-CASTAC WATER DISTRICT

TEJON INDUSTRIAL COMPLEX WASTEWATER TREATMENT FACILITY

KERN COUNTY

ATTACHMENT A



PROCESS FLOW DIAGRAM

ORDER NO. R5 -2008-0004

WASTE DISCHARGE REQUIREMENTS

FOR

TEJON-CASTAC WATER DISTRICT

TEJON RANCH INDUSTRIAL COMPLEX WASTEWATER TREATMENT FACILITY

KERN COUNTY

ATTACHMENT B



NONPOTABLE WATER INTERNATIONAL SYMBOL

ORDER NO. R5 -2008-0004

WASTE DISCHARGE REQUIREMENTS

FOR

TEJON-CASTAC WATER DISTRICT

TEJON INDUSTRIAL COMPLEX WWTF

KERN COUNTY

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
CENTRAL VALLEY REGION

MONITORING AND REPORTING PROGRAM NO. R5-2008-0004
FOR
TEJON-CASTAC WATER DISTRICT
TEJON INDUSTRIAL COMPLEX WASTEWATER TREATMENT FACILITY
KERN COUNTY

This Monitoring and Reporting Program (MRP) is required pursuant to California Water Code Section 13267. The Discharger shall not implement any changes to this MRP unless and until the Regional Board adopts or the Executive Officer issues a revised MRP. Changes to sample location shall be established with concurrence of Regional Water Board staff, and a description of the revised stations shall be submitted for approval by the Executive Officer. All samples should be representative of the volume and nature of the discharge or matrix of material sampled. The time, date, and location of each sample shall be recorded on the sample chain of custody form. All analyses shall be performed in accordance with Standard Provisions and Reporting Requirements, dated 1 March 1991. The results of analyses performed in accordance with specified test procedures, taken more frequently than required at the locations specified in this MRP, shall be reported to the Regional Water Board and used in determining compliance.

Field test instruments (such as pH) may be used provided that:

1. The operator is trained in the proper use of the instrument;
2. The instruments are calibrated prior to each use;
3. Instruments are serviced and/or calibrated at the recommended frequency by the manufacturer or in accordance with manufacturer instructions; and
4. Field calibration reports are submitted as described in the "Reporting" section of this MRP.

In addition to details specified in Standard Provision C.3 records of monitoring information shall also include the following:

1. Method detection limit (MDL);
2. Reporting limit (RL) (i.e., a practical quantitation limit or PQL); and
3. Documentation of cation/anion balance for general minerals analysis of supply water, and groundwater samples.

All laboratory results shall be reported down to the MDL. Non-detected results shall be reported as less than the MDL (<MDL). Results above the MDL, but below the concentration of the lowest calibration standard for multipoint calibration methods or below the reporting limit for other methods shall be flagged as estimated.

All analyses shall be performed in accordance with the latest edition of *Guidelines Establishing Test Procedures for Analysis of Pollutants*, promulgated by EPA (40 CFR 136) or other procedures approved by the Executive Officer, provided the methods have method detection limits equal to or lower than the analytical methods specified in this MRP. In reporting data, the Discharger shall indicate whether any analysis was performed using a method not in conformance with EPA's Guidelines. Analyses may also comply with the methods and holding times specified in: *Methods for Chemical Analysis of Water and Wastes* (EPA-600/4-79-020,

1983); *Methods for Determination of Inorganic Substance in Environmental Samples* (EPA/600/R-93/100, 1993); *Standard Methods for the Examination of Water and Wastewater*, 20th Edition (WEF, APHA, AWWA); and *Soil, Plant and Water Reference Methods for the Western Region*, 2003, 2nd Edition, 2003.

If monitoring consistently shows no significant variation in magnitude of a constituent concentration after at least 12 months of monitoring, the Discharger may request the MRP be revised to reduce monitoring frequency. The proposal must include adequate technical justification for reduction in monitoring frequency.

INFLUENT MONITORING

The Discharger shall collect influent samples at the headworks of the treatment facility prior to any treatment of waste. Time of a grab sample shall be recorded. Influent monitoring shall include at least the following:

<u>Constituent/Parameter</u>	<u>Units</u>	<u>Type of Sample</u>	<u>Sampling Frequency</u>
Flow	mgd	Continuous	1/Day ¹
Monthly Average Daily Flow	mgd	Calculated	1/Month
BOD ₅ ²	mg/L	Grab	1/Month
TSS ³	mg/L	Grab	1/Month

¹ Sample frequencies referenced hereafter in this program as daily shall not include weekends or holidays.

² Five-day, 20°C biochemical oxygen demand (BOD₅)

³ Total suspended solids (TSS)

POND EFFLUENT MONITORING

The Discharger shall collect effluent samples at a point in the system following treatment (either right before discharge to lined Pond 1, or after, but before discharge to unlined Pond 2). Time and location of collection of a grab sample shall be recorded. Effluent monitoring shall include the following:

<u>Constituent/Parameter</u>	<u>Units</u>	<u>Type of Sample</u>	<u>Sampling Frequency</u> ¹
pH	s.u. ²	Grab	1/Week
EC ³	µmhos/cm	Grab	1/Week
BOD ₅	mg/L	Grab	1/Week
TSS	mg/L	Grab	1/Week

MONITORING AND REPORTING PROGRAM NO. R5-2008-0004
 TEJON-CASTAC WATER DISTRICT – TEJON INDUSTRIAL COMPLEX WWTF
 KERN COUNTY

<u>Constituent/Parameter</u>	<u>Units</u>	<u>Type of Sample</u>	<u>Sampling Frequency</u> ¹
Nitrogen Forms			
Nitrate (as N)	mg/L	Grab	1/Quarter ^{4,5}
TKN ⁶	mg/L	Grab	1/Quarter ^{4,5}
Total Nitrogen	mg/L	Calculated	1/Quarter ^{4,5}
General Minerals ⁷	mg/L	Grab	1/Year ⁸
Metals ⁹	Varies	Grab	1/Year ⁸

¹ If results of monitoring a pollutant appear to indicate either the failure to achieve the design treatment goals of the wastewater treatment facility or potential upset of the treatment process, but monitoring frequency is not sufficient to validate the results, the frequency of sampling shall be increased to confirm the magnitude and duration of such treatment failures, if any, and aid in identification and resolution of the problem.

² pH standard units (s.u.)

³ Electrical conductivity at 25°C.

⁴ January, April, July, and October

⁵ Monitoring may be discontinued after two years and/or eight sample points are determined.

⁶ Total Kjeldahl Nitrogen (TKN)

⁷ General Minerals as referred to in this program shall include the constituents in the General Minerals Analyte List presented below.

⁸ In October

⁹ Metals as referred to in this program shall include the constituents in the Metals Analyte List presented below.

General Minerals Analyte List¹

Alkalinity (as CaCO ₃)	Carbonate (as CaCO ₃)	pH
Arsenic	Chloride	Potassium
Bicarbonate (as CaCO ₃)	EC	Sodium
Boron	Hardness (as CaCO ₃)	Sulfate
Calcium	Magnesium	TDS

¹ General Minerals analyte lists may vary depending on the laboratory, but shall include at least the above analytes and properties. An anion cation balance shall accompany results.

Metals Analyte List

Aluminum	Iron	Selenium
Barium	Lead	Silver
Copper	Manganese	Zinc
Cadmium	Mercury	Nickel
Chromium	Molybdenum	

POND MONITORING

Ponds shall be sampled systematically for the parameters specified below. Pond monitoring shall include at least the following:

<u>Constituent/Parameter</u>	<u>Units</u>	<u>Type of Sample</u>	<u>Sampling Frequency</u>
DO ^{1,2}	mg/L	Grab ³	1/Week
Freeboard	Feet ⁴	Observation	1/Week

¹ Dissolved oxygen (DO)

² To address potential for the creation of objectionable odors, the DO content in the upper zone (one foot) of either effluent storage reservoir should not be less than 1.0 mg/L for three consecutive sampling events. If results of monitoring indicate DO concentrations less than 1.0 mg/L, but monitoring frequency is not sufficient to validate the results, the frequency of sampling shall be increased to confirm the magnitude and duration of such low concentrations of DO, if any, and aid in identification and resolution of the problem.

³ Samples shall be collected at a depth of one foot from the storage reservoirs, opposite the inlet, and analyzed for DO. Samples shall be collected between 0700 and 0900 hours.

⁴ Freeboard shall be monitored to the nearest tenth of a foot.

In addition, the Discharger shall inspect the condition of the ponds once per week and write visual observations in a bound logbook. Notations shall include observations of whether weeds are developing in the water or along the bank, and their location; whether dead algae, vegetation, scum, or debris are accumulating on the disposal pond surface and their location; whether burrowing animals or insects are present; and the color of the reservoirs (e.g., dark sparkling green, dull green, yellow, gray, tan, brown, etc.). A **summary** of the entries made in the log during each month shall be submitted along with the monitoring report the following month.

SOURCE WATER MONITORING

The Discharger's municipal source water supply shall be monitored as follows:

<u>Constituent/Parameter</u>	<u>Units</u>	<u>Measurement</u>	<u>Frequency</u>
EC ^{1,2}	µmhos/cm	Grab	1/Year ²

¹ Report as a flow-weighted average from all water supplies and include copies of supporting calculations with monitoring reports. Surface water EC may be characterized using data obtained by the Department of Water Resources, if a representative sampling station is available.

² In October

SLUDGE MONITORING

To ensure that industrial and other discharges to the wastewater treatment facility are not interfering with treatment process, the Discharger shall collect a composite sample of sludge annually, as set forth by Title 40 Code of Federal Regulations (CFR) Part 503.16. Any Notice

of Necessary Information (NANI) form prepared for submittal to the United States Environmental Protection Agency shall be forwarded to the Regional Water Board.

Composite samples shall be collected in accordance with the Environmental Protection Agency's *POTW Sludge Sampling And Analysis Guidance Document* (EPA/ 833B89100, August 1989) and test for metals:

Arsenic	Copper	Nickel
Cadmium	Lead	Selenium
Molybdenum	Mercury	Zinc

The control of pathogens and the reduction of vector attraction shall be achieved in accordance with the Environmental Protection Agency's *Control of Pathogens and Vectors In sewage Sludge* (EPA/625-R-92/013, July 2003).

Sampling records shall be retained for a minimum of five years. A log shall be kept of sludge quantities generated and of handling, application, and disposal activities. The frequency of entries is discretionary; however, a log should be complete enough to serve as a basis for part of the annual report.

REPORTING

The Discharger shall report monitoring data and information as required in this MRP and as required in the Standard Provisions. Daily, weekly, monthly, and quarterly data shall be reported in monthly monitoring reports.

Monitoring data and/or discussions submitted concerning WWTF performance must also be signed and certified by the chief plant operator. When reports contain laboratory analyses performed by the Discharger and the chief plant operator is not in the direct line of supervision of the laboratory, reports must also be signed and certified by the chief of the laboratory.

In reporting 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 that illustrates clearly, whether the Discharger complies with waste discharge requirements. If the Discharger monitors any pollutant at the locations designated herein more frequently than is required by this Order, the results of such monitoring shall be included in the discharge monitoring report.

A. Monthly Reports

Daily, weekly, and monthly monitoring data shall be reported in monthly monitoring reports. Monthly monitoring reports shall be submitted to the Regional Board **by the 1st day of the second month following sampling** (i.e., the January Report is due by 1 March). At a minimum, the reports shall include:

1. Results of influent, effluent, and disposal pond monitoring;
2. Calculated monthly average daily flow, BOD, and TSS;
3. Calculated percent removal for BOD and TSS;
4. A comparison of monitoring data to the discharge specifications and an explanation of any violation of those requirements. Data shall be presented in tabular format;
5. Copies of laboratory analytical reports; and
6. A calibration log verifying calibration of all hand-held monitoring instruments and devices used to comply with the prescribed monitoring program.

B. Quarterly Reports

Daily, weekly, monthly, and quarterly monitoring data shall be reported in quarterly monitoring reports. Quarterly monitoring reports shall be submitted to the Regional Water Board **by the 1st day of the second month after the calendar quarter** (i.e., the 1st Quarter Report is due by 1 May, 2nd Quarter Report is due by 1 August, and the 3rd Quarter Report is due 1 November). Quarterly monitoring reports shall include all monitoring data required in the monthly monitoring schedule, and the data from quarterly monitoring events.

C. Annual Reports

An Annual Report shall be prepared as a fourth quarter monitoring report. The Annual Report will include all monitoring data required in the quarterly schedule plus the results of any annually sampled constituents (general minerals, selected metals, etc). The Annual Report shall be submitted to the Regional Water Board **by 1 February of the year following the year the samples were collected**. In addition to the data normally presented, the Annual Report shall include the following:

1. The names, certificate grades, and general responsibilities of all persons in charge of wastewater treatment and disposal;
2. The names and telephone numbers of persons to contact regarding the WWTF for emergency and routine situations;
3. A statement certifying when the flow meter and other monitoring instruments and devices were last calibrated, including identification of who performed the calibrations (Standard Provision C.4);
4. A statement whether the current operation and maintenance manual, and contingency plan, reflect the WWTF as currently constructed and operated, and the dates when these documents were last reviewed for adequacy;
5. The results of an annual evaluation conducted pursuant to Standard Provisions E.4 and a figure depicting monthly average discharge flow for the previous five calendar years;

6. A summary of sludge monitoring, including:
 - a. Annual sludge production in dry tons and percent solids;
 - b. A schematic diagram showing sludge handling facilities and solids flow diagram; and
 - c. A description of disposal methods, including the following information related to the disposal methods used at the WWTF. If more than one method is used, include the percentage of sludge production disposed of by each method.
 - i. For **landfill disposal**, include (a) the Order numbers that regulate the landfill(s) used, (b) the present classifications of the landfill(s) used, and (c) the names and locations of the facilities receiving the sludge.
 - ii. For **land application**, include: (a) the locations of the site(s), and (b) the Order number of any WDRs that regulates the site(s).
 - iii. For **incineration**, include: (a) the names and location of the site(s) where sludge incineration occurs, (b) the Order numbers of WDRs that regulate the site(s), (c) the disposal method of ash, and (d) the names and locations of facilities receiving ash (if applicable); and
 - iv. For **composting**, include: (a) the location of the site(s), and (b) the order numbers of any WDRs that regulate the site(s).
7. A summary and discussion of the compliance record for the reporting period. If violations have occurred, the report shall also discuss the corrective actions taken and planned to bring the discharge into full compliance with this Order.

All technical reports required herein must be overseen and certified by a California registered civil engineer, certified engineering geologist, or certified hydrogeologist in accordance with California Business and Professions Code, sections 6735, 7835, and 7835.1.

All reports submitted in response to this Order shall comply with the signatory requirements in Standard Provision B.3.

A transmittal letter shall accompany each self-monitoring report. The letter shall discuss any violations during the reporting period and all actions taken or planned for correcting 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.

The Discharger shall implement the above monitoring program on the first day of the month following adoption of this Order.

Ordered by:

PAMELA C. CREEDON, Executive Officer

25 January 2008

(Date)

INFORMATION SHEET

ORDER NO. R5-2008-0004

TEJON-CASTAC WATER DISTRICT – TEJON INDUSTRIAL COMPLEX WWTF
KERN COUNTY

Background

The Tejon-Castac Water District (hereafter District) owns and operates a wastewater collection, treatment, and disposal facility (WWTF) that provides sewerage services at the Tejon Industrial Complex (Complex). The land on which the WWTF and Complex resides is owned by Tejon Ranchcorp and includes a hotel, gas stations, restaurants, shower and restrooms areas, convenience stores and industrial warehouses at the junction of Interstate Five at Laval Road. The District and Tejon Ranchcorp are hereafter referred to as Discharger. The WWTF has an average daily flow of 0.06 million gallons per day (mgd). On 30 November 2004, the Discharger submitted a report of waste discharge (RWD) in support of a modification and expansion of the WWTF from 0.05 to 0.1 mgd.

Waste Discharge Requirements (WDRs) Order No. 99-076 adopted by the Regional Water Board on 11 June 1999, was originally issued to Tejon Ranchcorp before the formation of the District. Order No. 99-076 limits the discharge to 0.05 mgd. The Discharger initially proposed to exclusively recycle disinfected tertiary effluent on landscaped areas (Landscaped Use Area) surrounding the Industrial Complex. Therefore, the WDRs establish effluent limits on a monthly basis for 5-day biochemical oxygen demand (BOD₅), total suspended solids (TSS), settleable solids (SS), total coliform organisms (TCO), turbidity, and electrical conductivity (EC).

The WWTF consists of the wastewater collection system, influent pump station, headworks with a comminutor, bar screen and flow meter, a dissolved air floatation (DAF) unit (installed in September 2007) followed by an aerated flow equalization basin. Wastewater from the equalization basin is discharged to two plants, the Santec WWTF (WWTF-1), and the STM Aerotor WWTF (WWTF 2). WWTF-1 is designed to treat 0.05 mgd, and is an extended aeration package plant. WWTF-2 is also designed to treat 0.05 mgd and is a fixed film process. The WWTF was originally designed to filter and disinfect prior to discharge to ponds (Ponds 1 and 2) and then recycled on 14-acres of landscaped areas (Landscaped Use Area). Pond 1 is equipped with a compacted clay liner and Pond 2 is unlined.

The WWTF is situated on approximately 5-acres, and originally designed to treat 0.05 mgd, which corresponds to the first phase of development. The Discharger's long-term plan is to construct a new WWTF that will serve its discharge, the discharge from the Tejon Industrial Complex to the east of I-5, and eventually the discharge from TravelCenters of America (TA) also east of I-5. The TA currently has separate WDRs (Order No. 5-01-002) that authorize the discharge of up to 0.07 mgd of undisinfected secondary effluent to ponds. The Discharger has indicated that the WWTF will have a ultimate treatment capacity of 0.6 mgd at full build-out.

Solids and Biosolids Disposal

Screenings are ground at the headworks. Wasted sludge from the clarifiers and reactors is pumped into a truck and hauled offsite for disposal at an authorized facility.

Groundwater Conditions

The facility is within the White Wolf groundwater basin. According to the Wheeler Ridge-Maricopa Water Storage District, the aquifer is vertically unconfined but horizontally confined by bedrock, and the White Wolf Fault. In the discharge vicinity, groundwater is about 500 – 900 feet below ground surface (bgs). Source water wells within the area are typically around 900 to 1000 feet deep. Generally, first encountered groundwater contains EC values ranging from 500 to 2,550 µmhos/cm, and nitrate as N of less than 10 mg/L, according to information from U.S. Geological Survey wells within two miles of the WWTF. The back up supply well and the water supply from groundwater wells at TA show an EC ranging from 1000 to 1300 µmhos/cm.

The Discharger is currently not required to monitor groundwater, so water quality data within the immediate vicinity of the WWTF is limited.

Compliance History

The Discharger consistently exceeds the tertiary effluent limits specified in WDRs Order No. 99-076. Table 1 summarizes the effluent BOD, TSS and EC concentrations from June 2006 through November 2007.

TABLE 1 – SUMMARY OF BOD, TSS AND EC

<u>Date</u>	<u>BOD</u> <u>mg/L</u>	<u>TSS</u> <u>mg/L</u>	<u>EC</u> <u>µmhos/cm</u>	<u>Date</u>	<u>BOD</u> <u>mg/L</u>	<u>TSS</u> <u>mg/L</u>	<u>EC</u> <u>µmhos/cm</u>
Jun-06	335	210	979	Mar-07	19	73	1184
Jul-06	34	84	1048	Apr-07	45	74	1057
Aug-06	34	142	992	May-07	130	90	1009
Sep-06	72	65	917	Jun-07	19	36	1189
Oct-06	36	86	895	Jul-07	16	39	1201
Nov-06	NA ¹	NA	NA	Aug-07	34	59	1283
Dec-06	28	53	910	Sep-07	19	32	1359
Jan-07	41	77	1131	Oct-07	16	17	1361
Feb-07	32	68	1172	Nov-07	15	84	1347

¹ Not available.

Originally, and as reflected in WDRs Order No. 99-076, the WWTF consisted only of WWTF-1. As flows increased, the Discharger submitted a RWD for the installation of WWTF-2. Due to deficiencies in treatment from WWTF-1 and WWTF-2, the filtration and disinfection facilities were not adequate. The Discharger has never consistently met the effluent limits specified in WDRs Order No. 99-076, and therefore, unable to recycle effluent on the Landscaped Use Area. Violations may be caused, in part, by the unusually high influent BOD, which generally averages about 530 mg/L, but can be as high as 1,000 mg/L. The WWTFs were designed to treat a BOD of typical domestic strength (250 – 300 mg/L). Because the WWTFs have never

met the WDRs limits for effluent recycling for unrestricted use, Tejon bypasses its tertiary filters, disinfects the effluent with a minimal dose of chlorine and discharges it to lined Pond 1, which overflows into the unlined Pond 2.

Both WWTFs are labor intensive and are not capable of meeting typical secondary effluent limits. In the interim, Tejon constructed a DAF unit to reduce the organic loading prior to discharge to the WWTF-1 and WWTF-2.

In 2004, Tejon submitted a RWD in support of a flow increase to 0.1 mgd. The flows at the WWTFs can vary up to 0.05 mgd on a month-to-month basis depending on seasons and peak travel weekends. The 2004 RWD included a water balance based on the following assumptions:

1. Influent flows vary based on recorded values, which range from 0.05 mgd to 0.1 mgd.
2. WWTF-1 and WWTF-2 consistently treat to tertiary standards.
3. Approximately 25 percent of the effluent is used for unrestricted irrigation.
4. 100-year rainfall return period.

The water balance calculated that at 0.1 mgd of flow, at least 5.2 million gallons of storage were needed to prevent overloading the use area. However, based on historical flows and water levels in the existing ponds, the above assumptions are not reflective of actual conditions. The Discharger submitted a revised water balance demonstrating that it can dispose of at least 0.1 mgd with current storage and without effluent recycling.

Basin Plan, Beneficial Uses, and Regulatory Considerations

The Basin Plan indicates that the greatest long-term problem facing the entire Tulare Lake Basin is increasing salinity in groundwater, a process accelerated by man's activities and particularly affected by intensive irrigated agriculture. The Basin Plan recognizes that degradation is unavoidable until there is a long-term solution to the salt imbalance. The Regional Water Board encourages proactive management of waste streams by dischargers to control addition of salt through use, and has established an incremental EC limitation of 500 $\mu\text{mhos/cm}$ or a maximum of 1,000 $\mu\text{mhos/cm}$, as the measure of the maximum permissible addition of salt constituents through use.

Discharges to areas that may recharge good quality groundwaters shall not exceed an EC of 1,000 $\mu\text{mhos/cm}$, a chloride content of 175 mg/L, or boron content of 1.0 mg/L.

Maximum salinity limits for most wastewater discharges for most areas are 1,000 $\mu\text{mhos/cm}$ EC, 175 mg/L chlorides, and 1 mg/L boron. One exception is the White Wolf subarea where more or less restrictive limits apply. The proposed discharge is in the White Wolf subarea. The limits for the White Wolf subarea are discussed in the Basin Plan's "Discharges to Land" subsection of the "Municipal and Domestic Wastewater" section.

The relaxation of applicable effluent salinity limits in the White Wolf subarea is based on the class of irrigation water underlying the WWTF. To determine the class of irrigation water, it is necessary to understand underlying groundwater quality. Based on USGS wells within the area, the EC of the groundwater can vary greatly (500 to 2,550 $\mu\text{mhos/cm}$); however, the EC of the Tejon and TA source water wells range from 1000 to 1300 $\mu\text{mhos/cm}$, which is likely more representative of local groundwater conditions.

The Basin Plan specifies that irrigation waters (underlying groundwater in this case) with an EC between 1000 – 3000 $\mu\text{mhos/cm}$ considered Class II irrigation water with respect to EC. Therefore, based on the information available, the applicable Basin Plan limit for EC is 2000 $\mu\text{mhos/cm}$. The Basin Plan also states that “in areas where groundwater would be Class I except for the concentrations of a specific constituent, only that constituent will be allowed to exceed the specified limits for Class I water.” This Order only addresses quality with respect to EC, and requires effluent monitoring for the remainder.

Antidegradation

The antidegradation directives of State Water Board Resolution No. 68-16 (Resolution No. 68-16), “Statement of Policy With Respect to Maintaining High Quality Waters in California,” or “Antidegradation Policy” require that waters of the State that are better in quality than established water quality objectives be maintained “consistent with the maximum benefit to the people of the State.” Waters can be of high quality for some constituents or beneficial uses and not others. Policy and procedures for complying with this directive are set forth in the basin plan.

Constituents typically elevated in domestic wastewater threaten the beneficial uses of groundwater if not adequately controlled by a treatment process or attenuated in the soil profile prior to discharge to first encountered groundwater. Discharges that rely on percolation for disposal may result in the percolation of excess organic carbon, and the mobilization of other constituents (e.g., iron, manganese, arsenic, etc.).

The discharge from the WWTF will likely not degrade the beneficial uses of groundwater because:

- a. For salinity, the Basin Plan contains effluent limits for the White Wolf Basin that considered Resolution 68-16. The discharge meets these limits and is, therefore, consistent with Resolution 68-16.
- b. For nutrients, Tejon will either maximize water recycling and minimize percolation of effluent, or reduce the amount of nutrients percolating into groundwater, or a combination of both. If effluent recycling is maximized, (preferred method in the Basin Plan), any incidental percolation during the winter months or between irrigation cycles will have a minimal environmental impact due to depth to groundwater and quantity percolated. If the Discharger does not proceed with recycling effluent, an antidegradation analysis for nitrogen would likely be necessary, and this Order re-opened, as appropriate.

The WWTF provides treatment and control by incorporating low salinity source water, effluent recycling, tertiary or secondary treatment of the wastewater, appropriate biosolids storage and disposal practices, and an Operation and Maintenance (O&M) manual.

The water quality degradation authorized by the proposed Order is of maximum benefit to the people of the State. Economic prosperity of local communities is of maximum benefit to the people of California, and therefore sufficient reason exists to accommodate growth and groundwater degradation around the Complex. It is a major employer in the local area and contributes to the local, regional, and State economy. The Complex also provides commercial, dining, and lodging to travelers along the major Interstate 5 and Highway 99 corridor, which is the gateway between central and southern California. The degradation of groundwater quality to what is authorized herein, considering the best efforts of the Discharger and magnitude of degradation, is of maximum benefit to the people of the State.

Title 27

Title 27, California Code of Regulations (CCR), Section 20005 et seq. (Title 27) contains regulations to address certain discharges to land. Title 27 establishes a waste classification system, specifies siting and construction standards for full containment of classified waste, requires extensive monitoring of groundwater and the unsaturated zone for any indication of failure of containment, and specifies closure and post-closure maintenance requirements. Generally, no degradation of groundwater quality by any waste constituent in a classified waste is acceptable under Title 27 regulations.

Discharges of domestic sewage and treated effluent can be treated and controlled to a degree that will not result in unreasonable degradation of groundwater. For this reason, they have been conditionally exempted from Title 27. Treatment and storage facilities for sludge that are part of the WWTF are considered exempt from Title 27 under section 20090(a), provided that the facilities not result in a violation of any water quality objective. However, residual sludge (for the purposes of the proposed Order, sludge that will not be subjected to further treatment by the WWTF) is not exempt from Title 27. Solid waste (e.g., grit and screenings) that results from treatment of domestic sewage and industrial waste also is not exempt from Title 27. This residual sludge and solid waste are subject to the provisions of Title 27.

Accordingly, the municipal discharge of effluent and the operation of treatment or storage facilities associated with a municipal wastewater treatment plant can be allowed without requiring compliance with Title 27, but only if resulting degradation of groundwater is in accordance with the Basin Plan.

CEQA

The Kern County Planning Department, as the lead agency for purposes of the California Environmental Quality Act (CEQA) (Public Resources Code Section 21000, et, seq.) and the CEQA guidelines (Title 14, Division 6, California Code of Regulations, as amended), in 1998

adopted a mitigated negative declaration (MND) and in 2000 certified a Environmental Impact Report (EIR) that evaluates the potential environmental impacts from the discharge of disinfected tertiary effluent to land. The Regional Water Board is a responsible agency pursuant to CEQA. The Regional Water Board reviewed and considered the MND and EIR prepared by the County. This Order contains requirements that will mitigate or avoid environmental effects on water quality.

Proposed Order Terms and Conditions

Discharge Prohibitions, Effluent Limitations, Discharge Specifications, and Provisions

The proposed Order prohibits discharge to surface waters and water drainage courses.

The proposed Order limits the discharge to 0.1 mgd and prescribes monthly average and daily maximum effluent limits for BOD₅ and TSS of 40 mg/L, and 80 mg/L, respectively, as well as the 80 percent removal of both BOD₅ and TSS, whichever is more restrictive. These limitations are based on Basin Plan minimum performance standards for domestic facilities. Currently, discharge is primarily to Pond 1. The Discharge then overflows into unlined Pond 2 where it is disposed of through percolation and evaporation. Pond 1 is generally full and has a constant freeboard level and detention time. Pond 1 likely provides additional settling and, if organic loading is not excessive, additional treatment. The proposed Order allows compliance be determined at the outlet of Pond 1, but also allows the option to determine compliance prior to discharge to Pond 1 if limits are more easily achievable there (e.g., due to algae growth).

The proposed Order establishes an effluent limitation for EC that reflects the Basin Plan limits for the White Wolf Basin. The proposed Order also requires a provision requiring the Discharger to submit a salinity control plan to ensure that the salts are controlled to the maximum extent feasible.

The discharge requirements regarding dissolved oxygen and freeboard are consistent with Regional Water Board policy for the prevention of nuisance conditions, and are applied to all such facilities.

The proposed WDRs prescribe groundwater limitations that implement water quality objectives for groundwater from the Basin Plan. The limitations require that the discharge not cause or contribute to exceedances of these objectives or natural background water quality, whichever is greater.

Monitoring Requirements

Section 13267 of the CWC authorizes the Regional Water Board to require monitoring and technical reports as necessary to investigate the impact of a waste discharge on waters of the State. In recent years, there has been an increased emphasis on obtaining all necessary information, assuring the information is timely as well as representative and accurate, and thereby improving accountability of any discharger for meeting the conditions of discharge.

Section 13268 of the CWC authorizes assessment of civil administrative liability where appropriate.

The proposed Order includes monitoring of the influent, effluent, ponds, sludge, use area and water supply. The monitoring is necessary to evaluate water quality and the potential extent of the degradation from the discharge.

Reopener

The conditions of discharge in the proposed Order were developed based on currently available technical information and applicable water quality laws, regulations, policies, and plans, and are intended to assure conformance with them. The proposed Order sets limitations based on the information provided thus far. If applicable laws and regulations change, or once new information is obtained that will change the overall discharge and its potential to impact groundwater, it may be appropriate to reopen the Order.

ARP/DKP: 01/25/08