

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD  
CENTRAL VALLEY REGION

ORDER NO. R5-2009-0054

WASTE DISCHARGE REQUIREMENTS  
FOR  
CITY OF TAFT  
TAFT FEDERAL PRISON WASTEWATER TREATMENT FACILITY  
KERN COUNTY

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

1. The City of Taft (hereafter Discharger) owns a wastewater treatment and disposal facility (WWTF) with a design capacity of 0.46 million gallons per day (mgd) that provides sewerage service for about 2400 inmates and employees at the Taft Federal Prison (hereafter Prison). The Discharger also owns the ¼-mile trunk line that transports the Prison wastewater from the Prison to the WWTF. SouthWest Water Company operates and maintains the WWTF under contract with the Discharger.
2. The City of Taft is about 4¼ miles to the northwest. Both the Prison and the WWTF are in Midway Valley on the north side of Cadet Road about 1½ miles east of Highway 33 in Section 27, T32S, R24E, MDB&M, in Kern County, as shown on Attachment A, a part of this Order.
3. Waste Discharge Requirements (WDRs) Order No. R5-2004-0011, a National Pollutant Discharge Elimination System (NPDES) permit (NPDES No. CA0083755) adopted by the Regional Water Board on 30 January 2004, regulated the WWTF's disinfected secondary treated discharge to Sandy Creek, an ephemeral stream. Order No. R5-2004-0011 recognized Sandy Creek as a water of the United States and prescribed effluent limitations for 5-day biochemical oxygen demand (BOD<sub>5</sub>), total suspended solids (TSS), settleable solids (SS), pH, electrical conductivity (EC), total coliform organisms, acute toxicity, and total chlorine residual.
4. The total chlorine residual limitation contained in Order No. R5-2004-0011 was established to protect the warm freshwater habitat (WARM) designated beneficial use of Sandy Creek. As the Discharger was unable to immediately comply with the total chlorine residual effluent limitation, Order No. R5-2004-0011 included a time schedule for the Discharger to install the dechlorination and monitoring equipment necessary to achieve compliance by 2 January 2006.
5. Following adoption of Order No. R5-2004-0011, the Discharger requested review of whether Sandy Creek is a water of the United States subject to NPDES permitting requirements and whether WARM is a probable beneficial use of Sandy Creek. Based on information provided by the Discharger and facts obtained by Regional Water Board staff, the Regional Water Board adopted Special Order No. R5-2005-0060 on 29 April 2005 to delay until 29 January 2009 the costly implementation of dechlorination and continuous chlorine monitoring. The delay provided the Discharger and the Regional Water Board additional time to gather evidence for formal decisions concerning whether Sandy Creek is

a water of the United States and to conduct a Use Attainability Analysis (UAA) to determine whether WARM is a beneficial use of Sandy Creek or one that can probably be dedesignated (see Finding 30).

6. The United States Environmental Protection Agency (USEPA) conducted an assessment, including a 28-29 February 2008 site visit, of the jurisdictional status of Sandy Creek for purposes of the federal Clean Water Act. Regional Water Board staff participated in the site visit on 29 February 2008. By a letter dated 10 April 2008, the USEPA transmitted the results of the assessment and the site visit findings to the Regional Water Board. USEPA indicated that evidence suggests Sandy Creek is hydrologically isolated and not a water of the United States.
7. Based on the USEPA's evaluation and the information gathered by Regional Water Board staff, Sandy Creek is not a water of the United States as defined under the federal Clean Water Act and associated regulations. Thus, discharges to Sandy Creek are not subject to regulation under the NPDES program, and it is appropriate to terminate NPDES Permit No. CA0083755 by rescinding Order No. R5-2004-0011.

### **Wastewater Treatment Facility**

8. The WWTF consists of headworks with a bar screen and a flow meter, activated sludge oxidation ditch, secondary clarifier, chlorine contact chamber, an unlined 10.4 million-gallon-capacity emergency effluent storage pond, and eight unlined sludge drying beds. The WWTF flow diagram is depicted in Attachment B, a part of this Order. The treated municipal wastewater is discharged to Sandy Creek at latitude 35° 07' 34" North and longitude 119° 22' 32" West.
9. Wasted sludge from the secondary clarifier is pumped to unlined sludge drying beds. Dried sludge is stockpiled in an on-site, unlined storage area for approximately two years before it is transported to SYNAGRO Technologies, Inc., South Kern Compost Manufacturing Facility east of Taft. Title 40 of the Code of Federal Regulations Part 503 (40 CFR 503), which contain current federal regulations on use and disposal of sewage sludge (biosolids) on land, regards reasonable storage on land as less than two years. The stored sludge is residual sludge within the meaning of Finding 53.
10. The Discharger's self-monitoring reports (SMRs) from January 2004 to September 2008 characterize the discharge as follows:

<u>Constituent / Parameter</u>	<u>Units</u>	<u>Average Influent</u>	<u>Average Effluent</u>
Monthly Average Daily Flow	mgd	--	0.26
Settleable Solids	mL/L	--	< 0.1
BOD <sub>5</sub> <sup>1</sup>	mg/L	250	2.8
TSS <sup>2</sup>	mg/L	192	2.6

<u>Constituent / Parameter</u>	<u>Units</u>	<u>Average Influent</u>	<u>Average Effluent</u>
EC <sup>3</sup>	µmhos/cm	702	622
Total ammonia (as N)	mg/L	--	0.02 <sup>4</sup>
Nitrate (as N)	mg/L	--	17
Total Residual Chlorine	mg/L	--	2.4

<sup>1</sup> 5-day, 20°C biochemical oxygen demand

<sup>2</sup> Total suspended solids

<sup>3</sup> Conductivity at 25°C

<sup>4</sup> Non-detect values were set equal to one-half of the detection limit

11. The Prison obtains its water supply from West Kern Water District, which primarily imports water from the California Aqueduct and recharges it on the western edge of the Kern River Alluvial Fan for subsequent extraction. The water is of high quality with electrical conductivity of 444 µmhos/cm, total dissolved solids (TDS) of 294 mg/L, sodium of 48 mg/L, chloride of 35 mg/L, and nitrate (as N) of 0.36 mg/L (West Kern Water District Consumer Confidence Report 2007).
12. Self-monitoring reports from January 2007 to September 2008 indicate that the WWTF discharge has an EC incremental increase of about 250 µmhos/cm, well below Order No. R5-2004-0011's limitation of an incremental increase of 500 µmhos/cm.
13. Self-monitoring reports show that winter flows from the WWTF are not greater than the summer flows, which indicates insignificant inflow and infiltration to the collection system during the winter months.
14. WDR Order No. 96-035, which preceded Order No. R5-2004-0011, required the Discharger to enter into an agreement with the California Department of Water Resources (DWR) to maintain the area around the California Aqueduct's siphon structure in Sandy Creek to prevent the creation of a wetland. The Discharger signed a maintenance agreement with DWR on 7 May 1996. The terms of the agreement are valid as long as the WWTF discharges into Sandy Creek.

### **Site-Specific Conditions**

15. The WWTF and discharge area are in an arid climate characterized by hot dry summers and mild winters. Average annual precipitation and pan evaporation in the discharge area are 5.8 inches and 95 inches, respectively.
16. Land uses in the WWTF vicinity include extractive industrial (oil fields), undeveloped areas with native vegetation, agricultural, and institutional use (i.e., the Prison immediately west of the WWTF) according to DWR land use data published in 1998.

17. Crops historically grown within one-half mile of Sandy Creek from the discharge point and its terminus include cotton and safflower.
18. Federal Emergency Management Agency maps indicate the WWTF is not within a 100-year floodplain.

### **Groundwater Conditions**

19. Midway Valley is underlain by Recent alluvial fan deposits consisting of interbedded sands, silts, and clays overlying the Pleistocene Tulare Formation. A Geomega, Inc., 2008 study *Phase II Groundwater Investigation Report, Valley Waste Disposal Company, Midway Valley – Southeast Taft Area* (Geomega 2008 Report) indicates that the base of the Recent alluvial fan deposits, which forms the top of the Tulare Formation, appears to create a barrier to percolating water, thus, creating a perched water table.
20. Depth to groundwater in the vicinity of the WWTF varies considerably. Data maintained by DWR for three wells (State well numbers 32S24E 24N001, 26A001, and 26N001) just east and northeast of the WWTF show groundwater was approximately 210 to 300 feet below ground surface (bgs) from 1961 to 1978. The Geomega 2008 Report indicates groundwater exists in the Recent alluvial fan deposits northwest of the WWTF at about 100 to 210 bgs and flows in a southeasterly direction from Midway Valley toward the San Joaquin Valley floor.
21. Kern County Water Agency, *Water Supply Report 2000*, indicates that groundwater near the WWTF and the Sandy Creek discharge point is of poor quality with TDS concentrations of approximately 5,000 mg/L.
22. The Geomega 2008 Report identifies a monitoring well (21H) as being representative of native groundwater. The well is proximate to Sandy Creek about a mile upgradient of the WWTF discharge point. In October 2007 and March 2008, the depth to groundwater in monitoring well 21H was about 140 feet bgs. Presented below are selected analytical results for samples collected from monitoring well 21H:

<u>Date</u>	<u>Calcium (mg/L)</u>	<u>Sodium (mg/L)</u>	<u>Chloride (mg/L)</u>	<u>Sulfate (mg/L)</u>	<u>Nitrate-N (mg/L)</u>	<u>Boron (mg/L)</u>	<u>EC (umhos/cm)</u>	<u>TDS (mg/L)</u>
10/9/2007	460	280	190	1500	4.9	2.6	3100	2700
3/18/2008	620	360	190	1800	14	11	3800	3600

23. Up until the 1930's, oil production disposal practices included discharging the crude oil/produced water mixture directly into natural surface water drainages, including Sandy Creek, and constructing dikes on the surface water drainages to skim off the oil. Today, produced water is disposed by evaporation or percolation in lined and unlined sumps.

24. Produced water from the Midway-Sunset Oil Field contains high concentrations of dissolved minerals (i.e., > 25,000 umhos/cm) and nitrogen (generally greater than 10 mg/L as N). Percolation of produced water from current and historical waste disposal practices appear to have contributed to the poor quality of groundwater in Midway Valley and the San Joaquin Valley floor by adding salts, including nitrates.
25. Due to the poor quality, groundwater in Midway Valley is not known to be used for any beneficial use. West Kern Water District imports surface water and supplies water in the area except for agricultural irrigation, which is imported and supplied by Wheeler Ridge – Maricopa Water Storage District. To be used for MUN, groundwater would have to be treated by a process to remove salts, which would also remove nitrate (e.g., reverse osmosis or distillation).

### **Basin Plan, Beneficial Uses, and Water Quality Objectives**

26. The *Water Quality Control Plan for the Tulare Lake Basin, Second Edition, revised January 2004* (hereafter Basin Plan) designates beneficial uses, establishes narrative and numerical 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 Resources Control Board (State Water Board). Pursuant to Section 13263(a) of the California Water Code (CWC), these requirements implement the Basin Plan.
27. The Basin Plan on page II-1 states, “Protection and enhancement of beneficial uses of water against quality degradation is a basic requirement of water quality planning under the Porter-Cologne Water Quality Control Act. In setting water quality objectives, the Regional Water Board must consider past, present, and probable future beneficial uses of water.” Also, with respect to disposal of wastewaters the Basin Plan states that “...use of waters for disposal of wastewaters is not included as a beneficial use.” The Basin Plan at page II-2 states, “The existing and probable beneficial uses which currently apply to surface waters are presented in Figure II-1 and Table II-1. The beneficial uses of any specifically identified water body generally apply to its tributary streams. In some cases a beneficial use may not apply to the entire body of water. In these cases the Regional Water Board’s judgment will be applied. It should be noted that it is impractical to list every surface water body in the Region. For unidentified water bodies, the beneficial uses will be evaluated on a case-by-case basis.”
28. The WWTF and discharge area lie in the Taft Hydrologic Area (HA 557.20) of the South Valley Floor Hydrologic Unit (HU 557), as shown in the interagency hydrologic map prepared by DWR in August 1986. The Basin Plan specifies that surface waters within HU 557 are Valley Floor Waters. The Basin Plan does not specifically identify beneficial uses for Sandy Creek but does designate beneficial uses for Valley Floor Waters.
29. The Basin Plan designates the beneficial uses of Valley Floor Waters, and thus Sandy Creek, as agricultural supply (AGR); industrial service supply (IND); industrial process

supply (PRO); water contact recreation (REC-1); noncontact water recreation (REC-2); WARM; wildlife habitat (WILD); rare, threatened or endangered species (RARE); and groundwater recharge (GWR).

30. In reviewing whether the existing and/or potential uses of Valley Floor Waters occur in Sandy Creek, the following were considered:

a. Agricultural Supply (AGR)

Sandy Creek, an ephemeral stream that is dry except during or immediately after storm events, is not a practical source of water for agricultural supply, especially given the consistent supply of imported surface water. The WWTF discharge is a relatively small induced flow, which quickly infiltrates into the streambed along the one-mile wetted reach it creates in Sandy Creek. It does not reach areas where irrigation withdrawals would occur in quantities that would serve as a practical irrigation supply.

b. Industrial Supplies (IND and PRO)

As Sandy Creek is dry except during or immediately after storm events, it is not a viable source of water for industrial supplies. Under normal conditions, the small WWTF discharge flows for only about a mile before it completely infiltrates into the streambed. For industries that require a constant and reliable water volume and consider water quality of secondary concern, unless the volume requirement is small and withdrawals are made near the WWTF discharge point, the small available volume and the withdrawal location restrictions make Sandy Creek an undesirable source of water. For industries where water quality is of significant concern, the WWTF discharge is a relatively poor source of water compared to the abundant imported potable water supply available. These characteristics of Sandy Creek make it an undesirable and unlikely source for industrial water supplies.

c. Water Contact and Noncontact Water Recreation (REC-1 and REC-2)

There is public access to Sandy Creek and exclusion of the public is unrealistic. However, the discharge point is about four miles downstream of the City of Taft and only a few residences are nearby (closest approx. 0.15 miles). Sandy Creek downstream of the discharge point is surrounded by oil fields and privately owned farms. There appears to be little potential for significant water-contact public use of Sandy Creek downstream of the WWTF discharge point because of: 1) the small WWTF discharge volume creates shallow water conditions (i.e., less than 12 inches deep), 2) the wetted section of Sandy Creek is small (approximately 1 mile), 3) dense vegetation in and along the creek hinders access, and 4) its distance from any facility that people frequent. The wetted section of Sandy Creek is too far from Taft for children to walk to, and people driving to that area are more likely to go to the California Aqueduct for water related recreation. In brief, the reach of Sandy Creek affected by

the discharge is remote and public contact in any manner (i.e., REC-1 and REC-2) is infrequent.

d. Preservation and Enhancement of Fish, Wildlife and Other Aquatic Resources (WARM, WILD and RARE)

The Basin Plan (Table II-1) designates Valley Floor Waters as WARM, WILD, and RARE. Typical desert vegetation grows in the streambed but wetland type vegetation grows where the discharge sustains flows. As described in Finding 5, the Discharger requested review of whether WARM is a probable beneficial use of Sandy Creek. At the request of Regional Water Board staff, California Department of Fish and Game (DFG) staff observed Sandy Creek on 12 May 2008 to evaluate whether WARM exists. DFG staff observed evidence of WARM, WILD, and RARE and recommends that these uses remain designated beneficial uses of Sandy Creek. By 21 October 2008 letter, Regional Water Board staff informed the Discharger that based on DFG's findings and requirements of the CWC to protect beneficial uses, Regional Water Board staff does not intend to act on the Discharger's UAA work plan or initiate the process to reconsider the WARM designated beneficial use of Sandy Creek.

e. Groundwater Recharge (GWR)

Water from Sandy Creek will percolate to groundwater. Since Sandy Creek is dry except during and immediately after storm events, the WWTF discharge is the only flow in the stream most of the time and, under normal conditions, completely infiltrates into the streambed. Because of the high salinity described in Findings 21 and 22, the groundwater is not used for municipal and domestic supply, industrial supplies, or agricultural supply. Groundwater is unlikely to be extracted for any use now or in the foreseeable future.

31. The flow conditions and habitat of Sandy Creek, as depicted above, indicate that not all beneficial uses designated for Valley Floor Waters are probable for Sandy Creek. Probable and actual beneficial uses for Sandy Creek are likely limited to WARM, WILD, RARE, limited REC-1, and limited REC-2. However, designated beneficial uses must be protected from impacts of the discharge. Exceptions would necessitate documentation sufficient to support a formal Basin Plan amendment to dedesignate certain uses and establish beneficial uses specific to Sandy Creek.
32. Based on available information and the Discharger's SMRs, Sandy Creek is an ephemeral stream that is effluent dominated. The ephemeral nature means that no consistent receiving water dilution is available to buffer pollutants and help protect the designated beneficial uses. The discharge itself, consequently, cannot contain pollutants in concentrations that cause harm to aquatic life and other beneficial uses.
33. The WWTF is in Detailed Analysis Unit (DAU) No. 260 within the Kern County Basin hydrologic unit. The Basin Plan designates the beneficial uses of groundwater in this DAU

as municipal and domestic supply (MUN) and industrial service supply (IND). As indicated in Finding 25, surface water supplies are imported for MUN purposes because the groundwater quality in Midway Valley is poor and cannot be used for MUN without costly treatment.

34. Basin Plan water quality objectives to protect the beneficial uses of surface water and groundwater include numeric objectives and narrative objectives, including objectives for chemical constituents, toxicity, and taste and odor. The toxicity objective requires that waters be maintained free of toxic substances in concentrations that produce detrimental physiological responses in humans, plants, or animals. The chemical constituent objective states waters shall not contain chemical constituents in concentrations that adversely affect any beneficial use, and, at a minimum, waters designated MUN shall not exceed the maximum contaminant levels (MCLs) in Title 22 of the California Code of Regulations. The tastes and odors objective states that waters shall not contain taste- or odor-producing substances in concentrations that cause nuisance or adversely affect beneficial uses. The Basin Plan requires the application of the most stringent objective necessary to ensure that surface and groundwaters do not contain chemical constituents, toxic substances, radionuclides, or taste and odor producing substances in concentrations that adversely affect beneficial uses.
35. The Basin Plan, page IV-21, contains an implementation policy (“Application of Water Quality Objectives”) that specifies that the Regional Water Board “*will, on a case-by-case basis, adopt numerical limitations in orders which will implement the narrative objectives.*” This implementation policy provides a procedure for establishing numerical limitations that will implement Basin Plan narrative objectives. The Regional Water Board must consider, among other things, information submitted by a discharger and other interested parties and relevant numerical criteria and guidelines developed or published by other agencies and organizations on harmful concentrations of constituents. The latter include the State Water Board, California Department of Public Health, California Office of Environmental Health Hazard Assessment, California Department of Toxic Substances Control, University of California Cooperative Extension, DFG, USEPA, United States Food and Drug Administration, National Academy of Sciences, United States Fish and Wildlife Service, and Food and Agricultural Organization of the United Nations.
36. Water in the Tulare Lake Basin is in short supply, requiring importation of surface waters from other parts of the State. The Basin Plan establishes that discharges to surface water will not be an acceptable permanent disposal method where opportunity exists to replace an existing use or proposed use with recycled water.
37. Order No. 96-035 required the Discharger to evaluate reclamation opportunities. As found in Order No. R5-2004-0011, the Discharger made genuine efforts to recycle its effluent; however, the Discharger determined reclamation was not economically feasible, and the Regional Water Board agreed that reclamation was impractical at that time.



38. On 7 November 2008, a City of Taft representative informed staff that the Discharger had engaged in recent discussions with a local farmer about recycling the WWTF effluent. On 9 March 2009, the Taft City Council reportedly directed the City Manager to proceed with the purchase of 547 acres near the WWTF outfall. The Discharger intends to use this acreage to reclaim the WWTF effluent, thereby allowing the Discharger to cease its discharge to Sandy Creek.

### Effluent Limitations

39. The Basin Plan prohibits the discharge of toxic materials in toxic concentrations and includes a water quality objective that requires all surface waters be maintained free of toxic substances in toxic concentrations. WARM is a designated and existing beneficial use of Sandy Creek (see Finding 30), which must be protected. The Discharger uses chlorine to disinfect the WWTF effluent. Chlorine is toxic to aquatic organisms when discharged to surface waters. In addition, untreated domestic wastewater contains ammonia. Wastewater treatment plants commonly use nitrification, a biological process that converts ammonia to nitrate, to remove ammonia from the waste stream. Inadequate or incomplete nitrification may result in the discharge of ammonia to the receiving stream. Ammonia is known to cause toxicity to aquatic organisms in surface waters.
40. USEPA recommends, in its *Ambient Water Quality Criteria for the Protection of Fresh Water Aquatic Life*, a maximum chlorine concentration (1-hour average) of 0.019 mg/L and a continuous chlorine concentration (4-day average) of 0.011 mg/L. The use of chlorine as a disinfectant presents a reasonable potential that it could be discharged in toxic concentrations. The Discharger does not dechlorinate the effluent before discharging to Sandy Creek. The average effluent total residual chlorine concentration from January 2007 through September 2008 was 2.8 mg/L. This Order includes effluent limitations for chlorine to protect receiving water aquatic life beneficial uses. Dechlorination systems are capable of removing chlorine to the USEPA recommended criteria. As chlorine is an acutely toxic constituent that can and will be monitored continuously, an average one-hour limitation is considered more appropriate than an average daily limitation. Average one-hour and four-day limitations for chlorine, based on these criteria, are included in this Order. No dilution was considered (see Finding 32).
41. USEPA's 1999 *Update of Ambient Water Quality Criteria for Ammonia* (1999 Ammonia Update), for total ammonia, recommends acute (1-hour average; criteria maximum concentration) standards based on pH and chronic (30-day average, criteria continuous concentration) standards based on pH and temperature. The 1999 Ammonia Update indicates that ammonia is generally more acutely toxic to wild fish than to other aquatic species while invertebrates appear to be more sensitive to chronic toxicity. The 1999 Ammonia Update identifies two invertebrates, the amphipod *Hyalella* and fingernail clam *Musculium*, as having two of the four most sensitive genus mean chronic values used to quantify the chronic toxicity criterion.

42. Order No. R5-2004-0011 included a finding that stated that USEPA recommended ammonia criteria are based on invertebrates that may or may not exist in Sandy Creek and insufficient information is available to determine whether the discharge has reasonable potential to cause ammonia toxicity to aquatic life in Sandy Creek. Order No. R5-2004-0011 required the Discharger to study the impacts of ammonia on the wetted section of Sandy Creek and develop ammonia effluent limitations if the discharge has a reasonable potential to cause toxicity. SMRs between 1 January 2004 and 30 September 2008 show that there is no reasonable potential to exceed ammonia criteria calculated based on worst case temperature and pH conditions even if it were assumed that the most sensitive invertebrate upon which the USEPA criteria are based exists in Sandy Creek. Thus, ammonia effluent limitations are not included in this Order. However, this Order includes receiving water limitations for un-ionized ammonia based on Basin Plan water quality objectives and requires the Discharger to continue monitoring the effluent and receiving water for ammonia.
43. As described above, the Basin Plan requires that no discharge of toxic materials in toxic concentrations occur to Sandy Creek. The Discharger must ensure that specific aquatic species meet specified survival rates using USEPA test methods for estimating the toxicity of the effluent to freshwater organisms, as specified herein.
44. The 1988 Memorandum of Agreement (MOA) between California Department of Public Health (DPH) and the State Water Board on the use of recycled water establishes basic principles relative to the agencies and the regional water boards. In addition, the MOA allocates primary areas of responsibility and authority between these agencies, and provides for methods and mechanisms necessary to assure ongoing, continuous future coordination of activities relative to the use of recycled water in California.
45. The DPH's *Uniform Guidelines for Wastewater Disinfection* recommends that when discharge is to ephemeral streams with limited use and little or no natural flow during all or part of the year, the effluent have a median coliform bacteria most probable number (MPN) not exceeding 23/100 mL based on the last seven samples for which analyses have been completed and that the maximum coliform MPN not exceed 20 times that of the median. The guidelines also recommend that when a median coliform MPN of 23/100 mL is required, bacteriological samples should be collected at least twice per week. Order No. R5-2004-0011 required that the maximum MPN not exceed 240/100 mL.
46. The circumstances of Sandy Creek described in Finding 30 reflect the stream conditions for the DPH recommendations described in Finding 45. Although public contact with the discharge is unlikely, it is appropriate that the effluent meet the coliform limitations determined by DPH to ensure adequate public health protection. This Order carries over the total coliform limitations of the previous permit.
47. 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:

- a. The incremental increase in salts from use and treatment must be controlled to the extent possible. The maximum EC of a discharge shall not exceed the EC of the source water plus 500  $\mu\text{mhos/cm}$ .
- b. 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.

The WWTF discharge does not recharge good quality groundwater (see Findings 21 and 22), thus, the Basin Plan effluent limitations in subsection b. of this finding for EC, chloride, and boron do not apply, nor is a ceiling EC effluent limitation necessary to protect existing or foreseeable future beneficial uses of Sandy Creek or groundwater. This Order contains an EC effluent limitation that limits the incremental salt increase consistent with the Basin Plan.

### **Pretreatment**

48. In the past, the WWTF had been upset on occasion due to poor pretreatment. This Order requires, as did the previous two Orders, that the City implement pretreatment legal authorities, programs, and controls to ensure indirect discharges do not introduce pollutants to the WWTF that might pass through the treatment system or inhibit or disrupt treatment processes and cause a violation of the Order. This Order also requires, as did WDRs Order No. R5-2004-0011, that the City implement pretreatment legal authorities, programs, and controls to ensure incompatible wastes are not introduced into the treatment systems that could cause upsets, disruptions or interferences, which may result in violation of this Order.

### **Antidegradation Analysis**

49. State Water Board Resolution No. 68-16 (hereafter Resolution 68-16) requires the Regional Water Board in regulating discharges of waste to maintain 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 beneficial uses, and will not result in water quality less than described in the water quality policies (i.e., quality will not exceed water quality objectives). Resolution 68-16 requires any activity that produces a waste be regulated to meet best practicable treatment or control to assure that pollution or nuisance will not occur and the highest water quality consistent with the maximum benefit to the people of the State will be maintained.
50. The Regional Water Board conducted an antidegradation analysis and concluded that the discharge was consistent with Resolution 68-16 when it adopted Order No. R5-2004-0011.

51. This Order does not authorize an increase in permitted volume or mass of pollutants from what the Regional Water Board previously authorized in Order No. R5-2004-0011. As such, the activity authorized by this Order will not result in water quality lower than previously permitted by Order No. R5-2004-0011. In this circumstance, no further antidegradation analysis is required.

### **Other Regulatory Considerations**

52. 40 CFR 503, Standards for the Use or Disposal of Sewage Sludge, 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 USEPA.
53. The discharge authorized herein and the treatment and storage facilities associated with the discharge of treated municipal wastewater, except for discharges of residual sludge and solid waste, are exempt from the requirements of Title 27, California Code of Regulations (CCR), Section 20005 et seq. The exemption, pursuant to Title 27, CCR, Section 20090(a), is based on the following:
- a. The waste consists primarily of domestic sewage and treated effluent;
  - b. The waste discharge requirements are consistent with water quality objectives; and
  - c. The treatment and storage facilities described herein are associated with a municipal wastewater treatment plant.

### **CEQA**

54. The action to adopt this Order is exempt from the provisions of CEQA (Public Resources Code Sections 21100-21177) pursuant to Title 14, CCR, Section 15301, Class 1 exemption for minor alterations to existing facilities with no expansion of existing use.

### **General Findings**

55. 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.
56. The Regional Water Board will review this Order periodically and will revise requirements when necessary.
57. Section 13267 of the CWC states, in part, that:

In conducting an investigation specified in [Section 13267] 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.

58. The technical reports required by this Order and the attached Monitoring and Reporting Program No. R5-2009-0054 are necessary to assure compliance with these waste discharge requirements. The Discharger owns the WWTF that discharges the waste subject to this Order.
59. The Discharger is not required to obtain coverage under a NPDES general industrial storm water permit because storm water runoff from the WWTF property remains on site and does not discharge to a water of the United States.

### **Public Notice**

60. 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.
61. 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.
62. All comments pertaining to the discharge were heard and considered in a public meeting.

**IT IS HEREBY ORDERED** that Waste Discharge Requirements Order No. R5-2004-0011 and Special Order No. R5-2005-0060 are rescinded and that, pursuant to CWC Sections 13263 and 13267, the City of Taft and its 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 at the above described WWTF:

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

**A. Prohibitions**

1. Discharge of wastes at a location or in a manner different from that described in the Findings is prohibited.
2. Bypass or overflow of untreated or partially treated waste, except as allowed by Provision E.2 of *Standard Provisions and Reporting Requirements for Waste Discharge Requirements* (March 1991), is prohibited.
3. Discharge of waste classified as 'hazardous', as defined in Section 2521(a) of Title 23, CCR, Section 2510 et seq., is prohibited. Discharge of waste classified as 'designated,' as defined in CWC Section 13173, in a manner that causes violation of groundwater limitations, is prohibited.

**B. Effluent Limitations**

1. The monthly average daily discharge flow shall not exceed 0.46 mgd.
2. The discharge from the WWTF shall not exceed the following effluent limitations:

<u>Constituent</u>	<u>Units</u>	<u>Monthly Average</u> <sup>1, 5</sup>	<u>Weekly Average</u> <sup>5</sup>	<u>Daily Maximum</u>
Settleable Solids	ml/L	0.1	-	0.5
BOD <sub>5</sub> <sup>2</sup>	mg/L	30	45	90
	lbs/day	115 <sup>3</sup>	173 <sup>3</sup>	345 <sup>3</sup>
TSS <sup>4</sup>	mg/L	30	45	90
	lbs/day	115 <sup>3</sup>	173 <sup>3</sup>	345 <sup>3</sup>

<sup>1</sup> Average value for all samples collected within a calendar month.

<sup>2</sup> 5-day biochemical oxygen demand @20°C.

<sup>3</sup> Based on permitted discharge of 0.46 mgd.

<sup>4</sup> Total suspended solids.

<sup>5</sup> Compliance with monthly average or weekly average limits shall be determined based on the single sample results if additional results for the limit period under review are not available.

3. The arithmetic mean of BOD<sub>5</sub> and of TSS in effluent samples collected over a monthly period shall not exceed 15 percent of the arithmetic mean of the values for influent samples collected in the same manner at approximately the same times during the same period (85 percent removal) or the value specified in Effluent Limitation B.2, whichever is more restrictive.

4. The median of the most probable number (MPN) of the last seven samples for effluent total coliform bacteria shall not exceed 23 per 100 mL. The maximum effluent MPN shall not exceed 240 per 100 mL.
5. The discharge from the WWTF shall not have a pH less than 6.5 or greater than 8.3.
6. If the Discharger submits the items listed in Provision H.13, Task b.(2) by **26 April 2010**, the effluent total residual chlorine limitations listed below will become effective **25 April 2011**, otherwise, they will become effective **26 April 2010**. The effluent total residual chlorine shall not exceed any of the following:
  - a. 0.01 mg/L, as a 4-day average.
  - b. 0.02 mg/L, as a 1-hour average.

If the Discharger can demonstrate, through data collected from a back-up monitoring system, that a chlorine spike recorded by the continuous monitor was not actually due to chlorine, then any excursion resulting from the recorded spike will not be considered an exceedance, but rather reported as a false positive.

7. The 12-month rolling average EC of the discharge shall not exceed the 12-month rolling average EC of the source water plus 500 µmhos/cm. Compliance with this effluent limitation shall be determined monthly.
8. Survival of aquatic organisms in 96-hour bioassays of undiluted effluent shall be no less than any of the following:
  - a. 70% for any one bioassay.
  - b. 90% for the median for any three consecutive bioassays.

### **C. Discharge Specifications**

1. The Discharger shall preclude public access to the WWTF through methods such as fences and signs, or other acceptable means.
2. Signs shall be placed and maintained at the WWTF outfall to Sandy Creek to alert the public that the discharge is treated wastewater and is not suitable for drinking.
3. Objectionable odors originating at the WWTF shall not be perceivable beyond the limits of the waste treatment areas at an intensity that creates or threatens to create nuisance conditions.
4. The emergency storage pond shall be managed to prevent breeding of mosquitoes.
5. The emergency storage pond, when used, shall have adequate freeboard to prevent overtopping, overflows, or levee failures.

6. The WWTF shall be designed, constructed, operated, and maintained to prevent inundation or washout due to floods with a 100-year frequency.
7. No waste constituent shall be released or discharged, or placed where it will be released or discharged, in a concentration or in a mass that causes violation of Groundwater Limitations.

#### **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 activities.

1. Sludge and solid waste shall be removed from screens, sumps, clarifiers, etc. as needed to ensure proper plant operation.
2. Treatment and storage of sludge generated by the WWTF shall be confined to the WWTF property and conducted in a manner that precludes infiltration of waste constituents into soils in a mass or concentration that will violate Groundwater Limitations.
3. Any storage of residual sludge, solid waste, and biosolids on property of the WWTF shall be temporary (not exceeding 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.
4. Residual sludge, biosolids, and solid waste shall be disposed of in a manner approved by the Executive Officer and consistent with Title 27, CCR. 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 the State Water Board or a regional water quality control board. In most cases, this means General Biosolids Order (State Water Board Water Quality Order No. 2004-0012-DWQ, General Waste Discharge Requirements for the Discharge of Biosolids to Land for Use as a Soil Amendment in Agricultural, Silvicultural, Horticultural, and Land Reclamation Activities). For a biosolids use



project to be covered by the General Biosolids Order, the Discharger must file a complete Notice of Intent and receive a Notice of Applicability for each project.

6. Use and disposal of biosolids should comply with the self-implementing federal regulations of 40 CFR 503, which are subject to enforcement by USEPA, not the Regional Water Board. If during the life of this Order the State accepts primacy for implementation of 40 CFR 503, the Regional Water Board may also initiate enforcement where appropriate.
7. 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 legal authorities, programs, and controls to ensure that the following incompatible wastes are not introduced to the treatment system, where incompatible wastes are:
  - a. Wastes that create a fire or explosion hazard in the treatment works;
  - b. Wastes that will cause corrosive structural damage to treatment works, but in no case wastes with a pH lower than 5.0, unless the works is specially designed to accommodate such wastes;
  - c. Solid or viscous wastes in amounts that cause obstruction to flow in sewers, or which cause other interference with proper operation or treatment works;
  - d. Any waste, including oxygen demanding pollutants (BOD<sub>5</sub>, etc.), released in such volume or strength as to cause inhibition or disruption in the treatment works, and subsequent treatment process upset and loss of treatment efficiency;
  - e. Heat in amounts that inhibit or disrupt biological activity in the treatment works, or that raise influent temperatures above 40°C (104°F), unless the treatment works is designed to accommodate such heat;
  - f. Petroleum oil, nonbiodegradable cutting oil, or products of mineral oil origin in amounts that will cause interference or pass through;
  - g. Pollutants that result in the presence of toxic gases, vapors, or fumes within the treatment works in a quantity that may cause acute worker health and safety problems; and
  - h. Any trucked or hauled pollutants, except at points predesignated by the Discharger.

2. The Discharger shall implement the legal authorities, programs, and controls necessary to ensure that indirect discharges do not introduce pollutants into the sewerage system that, either alone or in conjunction with a discharge or discharges from other sources:
  - 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. Receiving Water Limitations

Receiving Water Limitations are based upon water quality objectives contained in the Basin Plan and are a required part of this Order. The discharge, in combination with other sources, shall not cause the following in Sandy Creek:

1. **Ammonia.** Un-ionized ammonia to be present in amounts that adversely affect beneficial uses nor to be present in excess of 0.025 mg/L (as N).
2. **Bacteria.** The fecal coliform concentration in any 30-day period to exceed a geometric mean of 200 MPN/100 mL, nor more than 10 percent of the total number of fecal coliform samples taken during any 30-day period to exceed 400 MPN/100 mL.
3. **Biostimulatory Substances.** Biostimulatory substances that promote aquatic growths in concentrations that create nuisance or adversely affect beneficial uses.
4. **Chlorine.** Chlorine to be detected in concentrations equal to or greater than 0.01 mg/L.
5. **Color.** Discoloration that creates nuisance or adversely affects beneficial uses.
6. **Dissolved Oxygen.** Concentrations of dissolved oxygen to fall below 5.0 mg/L.
7. **Floating Material.** Floating material in amounts that cause nuisance or adversely affect beneficial uses.
8. **Oil and Grease.** Oils, greases, waxes, or other materials that create nuisance, result in a visible film or coating on the surface of the water or on objects in the water, or otherwise adversely affect beneficial uses.
9. **Pesticides.** Pesticides to be present, individually or in combination, in concentrations that adversely affect beneficial uses; and pesticide increases in bottom sediments or aquatic life in concentrations that adversely affect beneficial uses.

10. **Radioactivity.** Radionuclides to be present in concentrations that exceed maximum contaminant levels specified in Title 22, CCR; that harm human, plant, animal or aquatic life; or that result in the accumulation of radionuclides in the food web to an extent that presents a hazard to human, plant, animal, or aquatic life.
11. **Settleable Material.** Deposition of material that causes nuisance or adversely affects beneficial uses.
12. **Suspended Material.** Suspended material to be present in concentrations that cause nuisance or adversely affect beneficial uses.
13. **Taste and Odors.** Taste- or odor-producing substances to in concentrations that cause nuisance or otherwise adversely affect beneficial uses.
14. **Toxicity.** Toxic substances to be present in the water column, sediments, or biota in concentrations that produce detrimental physiological responses in human, plant, animal, or aquatic life, whether caused by a single substance or interactive effect of multiple substances.

#### **G. Groundwater Limitations**

Waste constituents from storage, treatment, or disposal components associated with the WWTF shall not cause groundwater within influence of the WWTF and discharge area(s) to contain waste constituents in concentrations greater than the ambient quality.

#### **H. Provisions**

1. The Discharger shall comply with *Standard Provisions and Reporting Requirements for Waste Discharge Requirements*, dated 1 March 1991, which are attached hereto and by reference a 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. R5-2009-0054, which is part of this Order, and any revisions thereto as adopted by the Regional Water Board or ordered by the Executive Officer.
3. The Discharger shall keep a copy of this Order, including its MRP, Information Sheet, attachments and Standard Provisions, at the WWTF 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 WWTF collection, treatment, and disposal systems in amounts that significantly diminish the system's capability to comply with this Order. Pollutant-free wastewater means stormwater (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 when the operation is necessary to achieve compliance with the conditions of this 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 Title 16, CCR, Sections 415 and 3065, 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 actions, including Regional Water Board or court orders requiring corrective actions 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 the Order at one of its regularly scheduled meetings.

10. Prior to making any change in the discharge point, place of use, or purpose of use of the wastewater, the Discharger shall obtain approval of, or clearance from, the State Water Board (Division of Water Rights).
11. The Discharger must continue the agreement it made with the Department of Water Resources dated 7 May 1996 to maintain the area around the California Aqueduct siphon structure.
12. **Chronic Whole Effluent Toxicity.** For compliance with the Basin Plan's narrative toxicity objective, this Order requires the Discharger to conduct chronic whole effluent toxicity testing, as specified in the MRP No. R5-2009-0054. Furthermore, this Provision requires the Discharger to investigate the causes of, and identify corrective actions to reduce or eliminate effluent toxicity. If the discharge exceeds the toxicity numeric monitoring trigger established in this Provision, the Discharger is required to initiate a Toxicity Reduction Evaluation (TRE), in accordance with an approved TRE Work Plan, and take actions to mitigate the impact of the discharge and prevent reoccurrence of toxicity. A TRE is a site-specific study conducted in a stepwise process to identify the source(s) of toxicity and the effective control measures for effluent toxicity. TREs are designed to identify the causative agents and sources of whole effluent toxicity, evaluate the effectiveness of the toxicity control options, and confirm the reduction in effluent toxicity. This Provision includes requirements for the Discharger to develop and submit a TRE Work Plan and includes procedures for accelerated chronic toxicity monitoring and TRE initiation.
  - a. **Initial Investigative Toxicity Reduction Evaluation (TRE) Work Plan.** **By 23 July 2009**, the Discharger shall submit to the Regional Water Board an Initial Investigative TRE Work Plan for approval by the Executive Officer. This should be a one to two page document including, at a minimum:
    - i. A description of the investigation and evaluation techniques that will be used to identify potential causes and sources of effluent toxicity, effluent variability, and treatment system efficiency;
    - ii. A description of the Discharger's methods of maximizing in-house treatment efficiency and good housekeeping practices, and a list of all chemicals used in operation of the WWTF; and

- iii. A discussion of who will conduct the Toxicity Identification Evaluation, if necessary (i.e., an in-house expert or outside contractor).
- b. **Accelerated Monitoring and TRE Initiation.** When the numeric toxicity monitoring trigger is exceeded during regular chronic toxicity monitoring, and the testing meets all test acceptability criteria, the Discharger shall initiate accelerated monitoring as required in the Accelerated Monitoring Specifications. Whole Effluent Toxicity (WET) testing results exceeding the monitoring trigger during accelerated monitoring demonstrates a pattern of toxicity and requires the Discharger to initiate a TRE to address the effluent toxicity.
- c. **Numeric Monitoring Trigger.** The numeric toxicity monitoring trigger is  $> 1 \text{ TUc}$  (where  $\text{TUc} = 100/\text{NOEC}$ ). The monitoring trigger is not an effluent limitation; it is the toxicity threshold at which the Discharger is required to begin accelerated monitoring and initiate a TRE.
- d. **Accelerated Monitoring Specifications.** If the monitoring trigger is exceeded during regular chronic toxicity testing, within 14-days of notification by the laboratory of the test results, the Discharger shall initiate accelerated monitoring. Accelerated monitoring shall consist of four (4) chronic toxicity tests in a six-week period (i.e., one test every two weeks) using the species that exhibited toxicity. The following protocol shall be used for accelerated monitoring and TRE initiation:
  - i. If the results of four (4) consecutive accelerated monitoring tests do not exceed the monitoring trigger, the Discharger may cease accelerated monitoring and resume regular chronic toxicity monitoring. However, notwithstanding the accelerated monitoring results, if there is adequate evidence of a pattern of effluent toxicity, the Executive Officer may require that the Discharger initiate a TRE.
  - ii. If the source(s) of the toxicity is easily identified (i.e., temporary plant upset), the Discharger shall make necessary corrections to the facility and shall continue accelerated monitoring until four (4) consecutive accelerated tests do not exceed the monitoring trigger. Upon confirmation that the effluent toxicity has been removed, the Discharger may cease accelerated monitoring and resume regular chronic toxicity monitoring.
  - iii. If the result of any accelerated toxicity test exceeds the monitoring trigger, the Discharger shall cease accelerated monitoring and initiate a TRE to investigate the cause(s) of, and identify corrective actions to reduce or eliminate effluent toxicity. **Within thirty (30) days** of notification by the laboratory of the test results exceeding the monitoring trigger during

accelerated monitoring, the Discharger shall submit a TRE Action Plan to the Regional Water Board including, at minimum:

- a) Specific actions the Discharger will take to investigate and identify the cause(s) of toxicity, including TRE WET monitoring schedule;
- b) Specific actions the Discharger will take to mitigate the impact of the discharge and prevent the recurrence of toxicity; and
- c) A schedule for these actions.

**Within sixty (60) days** of notification by the laboratory of the test results exceeding the monitoring trigger during accelerated monitoring, the Discharger shall submit to the Regional Water Board a TRE Work Plan for approval by the Executive Officer. The TRE Work Plan shall outline the procedures for identifying the source(s) of, and reducing or eliminating effluent toxicity. The TRE Work Plan must be developed in accordance with EPA guidance (see the Information Sheet for a list of USEPA guidance documents that must be considered in development of the TRE Work Plan).

13. **Dechlorination and Continuous Residual Chlorine Monitoring.** In order to achieve consistent compliance with Effluent Limitation B.6.a. and B.6.b., the Discharger shall complete the following tasks no later than the dates in the following compliance schedule:

<b><u>Task</u></b>	<b><u>Task Description</u></b>	<b><u>Due Date</u></b>
a.	Submit a facilities plan that identifies the treatment and disposal option the Discharger intends to pursue to comply with Tasks b. and d. The plan shall describe the steps the Discharger will take to implement Task b., option (1) or (2) below.	<b>25 January 2010</b>
b.	(1) Begin interim dechlorination of WWTF effluent and achieve compliance with Effluent Limitation B.6.a. and B.6.b.  <b>or</b> (2) Submit a Report of Waste Discharge, an environmental assessment (e.g., draft/final EIR, negative declaration, etc.), and a Title 22 Engineering Report (as required by (California Code of Regulations, Section 60323) for land disposal/reclamation.	<b>26 April 2010</b>
c.	Submit progress reports <sup>1</sup> .	<b>24 August 2010 and 24 December 2010</b>
d.	Begin continuous monitoring of total residual chlorine in dechlorinated effluent <sup>2</sup> or cease discharging to Sandy Creek by implementing land disposal/reclamation.	<b>25 April 2011</b>
e.	Submit a technical report <sup>3</sup> certifying that the Discharger has achieved compliance with Task d.	<b>24 June 2011</b>

<sup>1</sup> The progress reports shall detail what steps have been implemented towards achieving compliance with Task d.

<sup>2</sup> The total residual chlorine continuous monitoring system shall be sensitive to and accurate at 0.01 mg/L.

<sup>3</sup> The technical report is subject to the requirements of Provision H.6.



14. If the Regional Water Board determines that waste constituents in the discharge have reasonable potential to cause or contribute to an exceedance of an objective for the receiving waters, this Order may be reopened for consideration of addition or revision of appropriate numerical effluent or groundwater limitations for the problem constituents.

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 24 April 2009.

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Pamela C. Creedon, Executive Officer

Order Attachments:

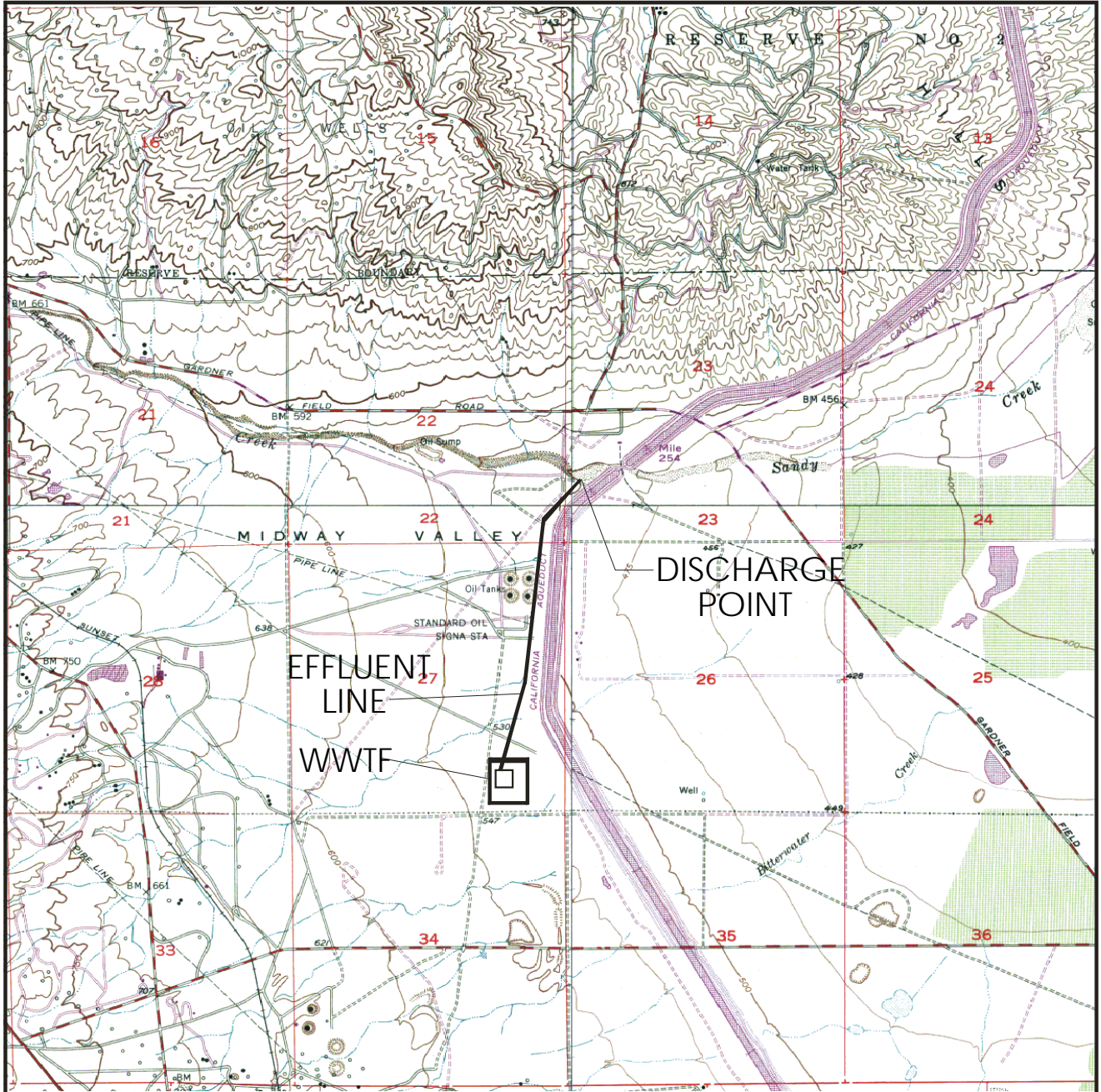
Monitoring and Reporting Program No. R5-2009-0054  
Information Sheet

A. Vicinity Map

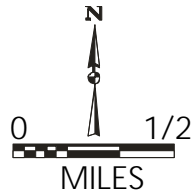
B. Flow Diagram

Standard Provisions (1 March 1991 version) (separate attachment to Discharger only)

MSS:WDH:mss: 05/07/09



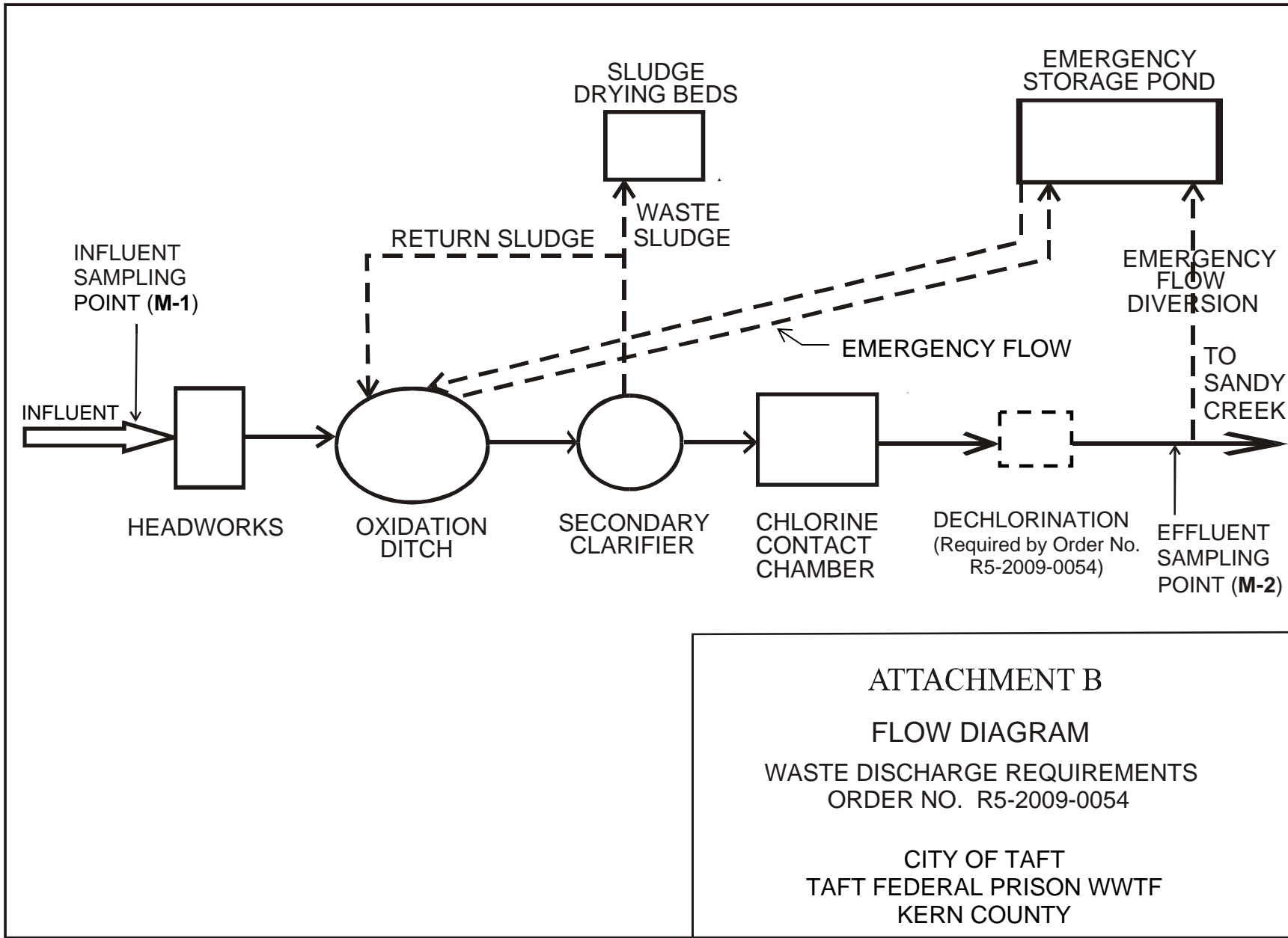
**LEGEND**



**ATTACHMENT A  
VICINITY MAP  
WASTE DISCHARGE REQUIREMENTS  
ORDER NO. R5-2009-0054**

**CITY OF TAFT  
TAFT FEDERAL PRISON WWTf  
KERN COUNTY**

**SECTION 27, T32S, R24E, MDB&M  
TAFT 7.5' USGS QUADRANGLE**



**ATTACHMENT B**  
**FLOW DIAGRAM**  
**WASTE DISCHARGE REQUIREMENTS**  
**ORDER NO. R5-2009-0054**  
  
**CITY OF TAFT**  
**TAFT FEDERAL PRISON WWTf**  
**KERN COUNTY**

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD  
CENTRAL VALLEY REGION

MONITORING AND REPORTING PROGRAM NO. R5-2009-0054  
FOR  
CITY OF TAFT  
TAFT FEDERAL PRISON WASTEWATER TREATMENT FACILITY  
KERN COUNTY

This Monitoring and Reporting Program (MRP) is required pursuant to California Water Code Section 13267 to monitor compliance with the requirements of this Order.

The Discharger shall not implement any changes to this MRP unless and until the Regional Water Board's Executive Officer issues a revised MRP. Changes to sampling locations 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 shall 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 for Waste Discharge Requirements* (1 March 1991)(Standard Provisions) or Title 40 of the Code of Federal Regulations Part 136 (40 CFR 136), unless otherwise noted in this MRP or approved by the Executive Officer.

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 (field calibration);
3. Instruments are serviced and/or calibrated at the recommended frequency by the manufacturer or in accordance with manufacturer instructions; and
4. Field calibrations are reported in monitoring reports as described in the "Reporting" section of this MRP.

### INFLUENT MONITORING

The Discharger shall collect influent samples at M-1. M-1 is at the headworks of the treatment facility as depicted in Attachment B prior to any treatment of waste. Time of each grab sample shall be recorded. Influent monitoring at M-1 shall include at least the following:

<u>Constituent</u>	<u>Units</u>	<u>Type of Sample</u>	<u>Sampling Frequency</u>
Flow	mgd	Meter	Daily
Monthly Average Daily Flow	mgd	Computed	Monthly
pH	pH units	Grab	Weekly
BOD <sub>5</sub> <sup>1</sup>	mg/L	24-hr Composite	Weekly
Monthly Average BOD <sub>5</sub>	mg/L	Calculated	Monthly

<u>Constituent</u>	<u>Units</u>	<u>Type of Sample</u>	<u>Sampling Frequency</u>
TSS <sup>2</sup>	mg/L	24-hr Composite	Weekly
Monthly Average TSS	mg/L	Calculated	Monthly
Oil and Grease	mg/L	Grab	Monthly

<sup>1</sup> Five-day, 20°C biochemical oxygen demand.

<sup>2</sup> Total suspended solids.

### EFFLUENT MONITORING

The Discharger shall collect effluent samples at M-2. M-2 is a monitoring point following treatment as depicted in Attachment B and before discharge to Sandy Creek. Effluent samples shall be representative of the volume and nature of the discharge. Time of collection of each grab sample shall be recorded. Effluent monitoring at M-2 shall include at least the following:

<u>Constituent</u>	<u>Units</u>	<u>Type of Sample</u>	<u>Sampling Frequency</u> <sup>1</sup>
Flow	mgd	Meter	Daily
Monthly Average Daily Flow	mgd	Computed	Monthly
Settleable Solids	ml/L	Grab	Weekly
pH	pH Units	Grab	Weekly
Chlorine, Total Residual	mg/L	Meter <sup>2</sup>	Continuously <sup>2</sup>
EC <sup>3</sup>			
Measurement	µmhos/cm	Grab	Weekly
12-month rolling average	µmhos/cm	Calculated	Monthly
Temperature	°F	Grab	Weekly <sup>4</sup>
Ammonia, Total (as N)	mg/L	24-hr Composite	Monthly <sup>5</sup>
BOD <sub>5</sub> <sup>6</sup>			
Concentration	mg/L	24-hr Composite	Weekly
Mass	lbs/day	Calculated	Weekly
Weekly Average	mg/L	Calculated	Weekly
Monthly Average	mg/L	Calculated	Monthly
Monthly Average Mass	lbs/day	Calculated	Monthly
Percent Removal	%	Calculated	Monthly
TSS <sup>7</sup>			
Concentration	mg/L	24-hr Composite	Weekly
Mass	lbs/day	Calculated	Weekly

<u>Constituent</u>	<u>Units</u>	<u>Type of Sample</u>	<u>Sampling Frequency</u> <sup>1</sup>
Weekly Average	mg/L	Calculated	Weekly
Monthly Average	mg/L	Calculated	Monthly
Monthly Average Mass	lbs/day	Calculated	Monthly
Percent Removal	%	Calculated	Monthly
<b>Total Coliform Organisms</b>			
Concentration	MPN/100 ml	Grab	2/Week <sup>8</sup>
7-sample median	MPN/100 ml	Calculated	2/Week
Oil and Grease	mg/L	Grab	Monthly
General Minerals <sup>9</sup>	mg/L	Grab	Annually <sup>10</sup>
Metals <sup>11,12</sup> (Total Recoverable)	ug/L	Grab	Annually <sup>13</sup>
Polychlorinated Biphenyls <sup>14,15</sup> (PCBs)	ug/L	Grab	Twice <sup>16</sup>
Pesticides <sup>14,15</sup>	ug/L	Grab	Twice <sup>16</sup>

<sup>1</sup> If results of monitoring a pollutant appear to violate discharge specifications, but monitoring frequency is not sufficient to validate violation (e.g., the monthly mean for BOD<sub>5</sub>), or indicate a violation and potential upset of the treatment process, the frequency of sampling shall be increased to confirm the magnitude and duration of violation, if any, and aid in identification and resolution of the problem.

<sup>2</sup> Effective on **25 April 2011**. In the interim, the Discharger shall collect weekly grab samples. All total chlorine residual monitoring (i.e., continuous and grab) shall be performed using a method sensitive to and accurate at the permitted level of 0.01 mg/L.

<sup>3</sup> Electrical conductivity at 25°C.

<sup>4</sup> Concurrent with pH and ammonia monitoring.

<sup>5</sup> Concurrent with pH and temperature monitoring.

<sup>6</sup> Five-day, 20°C biochemical oxygen demand.

<sup>7</sup> Total suspended solids.

<sup>8</sup> On non-consecutive days.

<sup>9</sup> General minerals shall include the constituents in the General Minerals Analyte List presented below and shall be accompanied by a cation/anion balance.

<sup>10</sup> October.

<sup>11</sup> Metals shall include the constituents in the Metals Analyte List presented below.

<sup>12</sup> Metals shall be analyzed by USEPA Method No. 200.8 or another method approved by Regional Water Board staff with detection limits equal to or less than those of USEPA Method No. 200.8. All estimated values (i.e., less than the practical quantitation limit, but greater than method detection limit) shall be reported.

<sup>13</sup> For the first three years of this Order (i.e., 2009, 2010, 2011)

<sup>14</sup> Pesticides and PCBs shall include the constituents in the Pesticides and PCBs Analyte List presented below.

<sup>15</sup> Pesticides and PCBs shall be analyzed by USEPA Method Nos. 608, 8081A, or another method approved by the Executive Officer.

<sup>16</sup> Once in the first year of this Order (i.e., 2009) and once in the third year of this Order (i.e., 2011)

**General Minerals Analyte List**

Alkalinity (as CaCO <sub>3</sub> )	Chloride	Nitrate
Bicarbonate (as CaCO <sub>3</sub> )	Hardness (as CaCO <sub>3</sub> )	Phosphorus
Boron	Iron	Potassium
Calcium	Magnesium	Sodium
Carbonate (as CaCO <sub>3</sub> )	Manganese	Sulfate

**Metals Analyte List**

Aluminum	Chromium (VI)	Nickel
Antimony	Copper	Selenium
Arsenic	Lead	Silver
Cadmium	Mercury	Thallium
Chromium (III)	Molybdenum	Zinc

**Pesticides and PCBs Analyte List**

Aldrin	Dieldrin	PCB 1221
Alpha-BHC	Alpha-Endosulfan	PCB 1232
Beta-BHC	Beta-Endosulfan	PCB 1242
Gamma-BHC	Endosulfan Sulfate	PCB 1248
Delta-BHC	Endrin	PCB 1254
Chlorfane	Endrin Aldehyde	PCB 1260
4,4'-DDD	Heptachlor	Toxaphene
4,4'-DDE	Heptachlor Epoxide	
4,4'-DDT	PCB 1016	

**RECEIVING WATER MONITORING**

The Discharger shall monitor at R-1 and R-2 when there is sufficient stream flow to mix with the effluent. When there is no stream flow at R-1, sampling at R-2 is required.

<u>Station</u>	<u>Description</u>
R-1	On Sandy Creek, approximately 100 feet upstream from the point of discharge
R-2	On Sandy Creek, approximately 100 feet downstream from the point of discharge

All receiving water samples shall be grab samples. Receiving water monitoring shall include at least the following:

<u>Constituent</u>	<u>Units</u>	<u>Station</u>	<u>Sampling Frequency</u>
Dissolved Oxygen	mg/L	R-1, R-2	Monthly
pH	pH Units	R-1, R-2	Weekly
Temperature	°F	R-1, R-2	Weekly <sup>1</sup>
Chlorine, Total Residual <sup>2</sup>	mg/L	R-1, R-2	Weekly
Fecal Coliform	MPN/100 mL	R-1, R-2	Monthly
Ammonia, Total (as N)	mg/L	R-1, R-2	Monthly <sup>3</sup>
Ammonia, Unionized (as N)	mg/L	R-1, R-2	Monthly <sup>3</sup>
Hardness (as CaCO <sub>3</sub> )	mg/L	R-1, R-2	Quarterly

<sup>1</sup> Concurrent with pH and ammonia monitoring.

<sup>2</sup> Chlorine residual monitoring shall be performed using a method sensitive to and accurate at the permitted level of 0.01 mg/L.

<sup>3</sup> Concurrent with pH and temperature monitoring.

The Discharger shall keep a bound log of the receiving water conditions at R-1, at the discharge point, and at R-2. The bound log shall include weekly entries noting the presence or absence of:

- a. Flow at R-1
- b. Floating or suspended matter
- c. Discoloration
- d. Bottom deposits
- e. Aquatic life
- f. Visible films, sheens or coatings
- g. Fungi, slimes, or objectionable growths
- h. Potential nuisance conditions

Notes on receiving water conditions shall be summarized in the monthly monitoring reports.



### WATER SUPPLY MONITORING

The supply water for the Taft Federal Prison shall be monitored as follows:

<u>Constituent</u>	<u>Units</u>	<u>Type of Sample</u>	<u>Constituent</u>
EC <sup>1</sup>			
Measurement	µmhos/cm	Grab <sup>2</sup>	Monthly
12-month rolling average	µmhos/cm	Calculated	Monthly
General Minerals <sup>3</sup>	mg/L	Grab <sup>2</sup>	Once Every 3 Years <sup>4</sup>

<sup>1</sup> Electrical conductivity at 25°C.

<sup>2</sup> With Regional Water Board staff concurrence, samples shall be collected at a location(s) representative of the supply water for the Taft Federal Prison. Sample locations shall be described in the monitoring reports.

<sup>3</sup> General minerals shall include the constituents in the General Minerals Analyte List presented in the Effluent Monitoring section above. A cation-anion balance shall accompany the results.

<sup>4</sup> Concurrent with the California Department of Public Health reporting requirement.

### WHOLE EFFLUENT TOXICITY (WET) TESTING REQUIREMENTS

A. **Acute Toxicity Testing.** The Discharger shall conduct acute toxicity testing to determine whether the effluent is contributing acute toxicity to the receiving water. The Discharger shall meet the following acute toxicity testing requirements:

1. Monitoring Frequency – The Discharger shall perform **semiannually** (April and October) acute toxicity testing, concurrent with effluent ammonia sampling.
2. Sample Types and Location – For static non-renewal and static renewal testing, the samples shall be 24-hour composites and shall be representative of the volume and quality of the discharge. The effluent samples shall be taken at effluent monitoring location M-2.
3. Test Species – Test species shall be fathead minnows (*Pimephales promelas*).
4. Methods – The acute toxicity testing samples shall be analyzed using EPA-821-R-02-012, Fifth Edition or updates thereto. Temperature, total residual chlorine, and pH shall be recorded at the time of sample collection. No pH adjustment may be made unless approved by the Executive Officer.
5. Test Failure – If an acute toxicity test does not meet all test acceptability criteria, as specified in the test method, the Discharger must re-sample and re-test as soon as possible, not to exceed 7 days following notification of test failure.

- B. Chronic Toxicity Testing.** The Discharger shall conduct three species chronic toxicity testing to determine whether the effluent is contributing chronic toxicity to the receiving water. The Discharger shall meet the following chronic toxicity testing requirements:
1. Monitoring Frequency – the Discharger shall perform **annually** (April) three species chronic toxicity testing.
  2. Sample Types and Location – Chronic toxicity samples shall be 24-hour composites taken at effluent monitoring location M-2. Time of sample collection shall be recorded.
  3. Test Species – Chronic toxicity testing measures sublethal (e.g. reduced growth, reproduction) and/or lethal effects to test organisms exposed to an effluent compared to that of the control organisms. The Discharger shall conduct chronic toxicity tests with:
    - The cladoceran, water flea, *Ceriodaphnia dubia* (survival and reproduction test);
    - The fathead minnow, *Pimephales promelas* (larval survival and growth test); and
    - The green alga, *Selenastrum capricornutum* (growth test).
  4. Methods – The presence of chronic toxicity shall be estimated as specified in *Short-term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to Freshwater Organisms, Fourth Edition, EPA/821-R-02-013, October 2002* and its subsequent amendments or revisions.
  5. Reference Toxicant – All chronic toxicity tests shall be conducted with concurrent testing with a reference toxicant and shall be reported with the chronic toxicity test results.
  6. Dilutions – The chronic toxicity testing shall be performed using 100% effluent and a laboratory control. If toxicity is found in any of the 100 percent effluent tests, the Discharger must retest using the full sampling protocol of the five dilutions listed in the table below. Laboratory control water shall be used as the diluent.
  7. Test Failure – The Discharger must re-sample and re-test as soon as possible, but no later than fourteen (14) days from the time the Discharger becomes aware of the test failure. A chronic toxicity test fails if:
    - a. The reference toxicant test or the effluent test does not meet all test acceptability criteria as specified in the *Short-term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to Freshwater Organisms, Fourth Edition, EPA/821-R-02-013, October 2002 (Method Manual)*, and its subsequent amendments or revisions; or

- b. The percent minimum significant difference (PMSD) measured for the test exceeds the upper PMSD bound variability criterion in Table 6 on page 52 of the Method Manual. (A retest is only required in this case if the test results do not exceed the monitoring trigger specified in Provision H.12.c.).

**Chronic Toxicity Testing Dilution Series**

Sample	Dilutions (%)					Controls	
	100	75	50	25	12.5	Receiving Water	Laboratory Water <sup>1</sup>
% Effluent	100	75	50	25	12.5	0	0
% Laboratory Water <sup>1</sup>	0	25	50	75	87.5	0	100

<sup>1</sup> Laboratory water shall meet USEPA protocol requirements.

- C. **WET Testing Notification Requirements.** The Discharger shall notify the Regional Water Board within 24-hrs from the time the Discharger becomes aware of the test results exceeding the monitoring trigger during regular or accelerated monitoring or an exceedance of the acute toxicity effluent limitations.

- D. **WET Testing Reporting Requirements.** All toxicity test reports shall include the contracting laboratory's complete report provided to the Discharger and shall be in accordance with the appropriate "Report Preparation and Test Review" sections of the method manuals. At a minimum, whole effluent toxicity monitoring shall be reported as follows:

1. **Chronic WET Reporting.** Chronic toxicity monitoring results shall be reported to the Regional Water Board **within 30 days** following completion of the test, and shall contain, at minimum:
  - a. The results expressed in TUC, measured as 100/NOEC, and also measured as 100/LC<sub>50</sub>, 100/EC<sub>25</sub>, 100/IC<sub>25</sub>, and 100/IC<sub>50</sub>, as appropriate.
  - b. The statistical methods used to calculate endpoints;
  - c. The statistical output page, which includes the calculation of the PMSD;
  - d. The dates of sample collection and initiation of each toxicity test; and
  - e. The results compared to the numeric toxicity monitoring trigger.

Additionally, the monthly self-monitoring reports shall contain an updated chronology of chronic toxicity test results expressed in TUC, and organized by test species and type of test (survival, growth or reproduction).

2. **Acute WET Reporting.** Acute toxicity test results shall be submitted to the Regional Water Board **within 30 days** following completion of the test and reported as percent survival.

3. **TRE Reporting.** Reports for Toxicity Reduction Evaluations shall be submitted in accordance with the schedule contained in the Discharger's approved TRE Work Plan.
4. **Quality Assurance (QA).** The Discharger must provide the following information for QA purposes:
  - a. Results of the applicable reference toxicant data with the statistical output page giving the species, NOEC, LOEC, type of toxicant, dilution water used, concentrations used, PMSD, and dates tested.
  - b. The reference toxicant control charts for each endpoint, which include summaries of reference toxicant tests performed by the contracting laboratory.
  - c. Any information on deviations or problems encountered and how they were dealt with.

### SLUDGE MONITORING

To ensure that discharges to the wastewater treatment facility (WWTF) are not interfering with the treatment process, the Discharger shall collect a composite sample of sludge at least **annually**, as set forth by Title 40 of the Code of Federal Regulations Part 503.16. Any Notice of Necessary Information (NANI) form prepared for submittal to the USEPA shall be forwarded to the Regional Water Board.

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

Arsenic	Lead	Selenium
Cadmium	Mercury	Zinc
Chromium	Molybdenum	
Copper	Nickel	

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, the log should be complete enough to serve as a basis for part of the annual report. Prior to any disposal or land application of sewage sludge, or removal of sewage sludge from the WWTF, the Discharger shall meet the monitoring and record keeping requirements of Title 40 of the Code of Federal Regulations Part 503.

## REPORTING

The Discharger shall report monitoring data and information as required in this MRP and as required in the Standard Provisions.

A transmittal letter shall accompany each self-monitoring report (SMR) and Annual Operations 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.

All reports submitted in response to this MRP shall comply with the signatory requirements in Standard Provisions, General Reporting Requirements B.3. 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.

The following information is to be included on all monitoring and annual reports, as well as any report transmittal letters, submitted to the Regional Water Board:

**The agency name, facility name, WDRs Order number, WDID number, and contact information (telephone number and email address, if available).**

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 waste constituent or parameter 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 and used in determining compliance.

Each laboratory report shall clearly identify the following:

- analytical method
- measured value
- units
- what constituent a value is reported as (e.g., as nitrogen, as CaCO<sub>3</sub>, etc.)
- method detection limit (MDL)
- reporting limit (RL) (i.e., a practical quantitation limit or PQL)
- documentation of cation/anion balance for general minerals analyses of supply water and effluent samples

All laboratory results shall be reported down to the MDL, as defined in 40 CFR 136. Nondetected 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.

At any time during the term of this permit, the State or Regional Water Board may notify the Discharger to electronically submit SMRs using the State Water Board's California Integrated Water Quality System (CIWQS) Program Web site ([http://www.waterboards.ca.gov/water\\_issues/programs/ciwqs/](http://www.waterboards.ca.gov/water_issues/programs/ciwqs/)).

**A. Monthly Reports**

Continuous, daily, twice weekly, weekly, and monthly monitoring data shall be reported in monthly monitoring reports. Monthly monitoring reports shall be submitted to the Regional Water 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 monitoring;
2. Calculated data (e.g., weekly average, monthly average, percent removal, etc.);
3. A comparison of monitoring data to the effluent limitations and an explanation of any violation of those requirements. Data shall be presented in tabular format;
4. Copies of laboratory analytical reports; and
5. A calibration log verifying calibration of all hand-held monitoring instruments and devices used to comply with the prescribed monitoring program.

**B. Quarterly and Annual Monitoring Data**

Quarterly and annual monitoring data shall be reported to the Regional Water Board **by the 1st day of the second month following the respective monitoring period** and shall be included with the monthly report as shown in the following table:

<b>Sampling Frequency</b>	<b>Monitoring Period</b>	<b>Monitoring Data Due Date</b>
Quarterly	1 <sup>st</sup> Qtr. - January 1 through March 31	<b>May 1</b> (include with Jan., Feb., or Mar. monthly rpt.)
	2 <sup>nd</sup> Qtr. - April 1 through June 30	<b>August 1</b> (include with Apr., May, or June monthly rpt.)
	3 <sup>rd</sup> Qtr. - July 1 through September 30	<b>November 1</b> (include with Jul., Aug., or Sept. monthly rpt.)
	4 <sup>th</sup> Qtr. - October 1 through December 31	<b>February 1</b> (include with Oct., Nov., or Dec. monthly rpt.)
Annually	January 1 through December 31	<b>February 1</b> (include with any monthly rpt. in calendar year)

### C. Annual Operations Report

**By 1 February of each year**, an Annual Operations Report detailing activities of the previous calendar year shall be submitted to the Regional Water Board. The Annual Operations 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;
4. A statement whether the current operation and maintenance manual, and contingency plan, reflect the WWTF as currently constructed and operated. Also include 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. The most recent annual West Kern Water District Consumer Confidence Report;
7. A summary of sludge monitoring, including:
  - a. Annual sludge production in dry tons and percent solids;
  - b. Analytical test results for metals;
  - 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).

8. 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.

The Discharger may also be requested to submit an annual report to the Regional Water Board with tabular and graphical summaries of the monitoring data obtained during the previous year. Any such request shall be made in writing.

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

\_\_\_\_\_  
24 April 2009

MSS:WDH:mss: 05/07/09



## INFORMATION SHEET

ORDER NO. R5-2009-0054  
CITY OF TAFT  
TAFT FEDERAL PRISON WWTF  
KERN COUNTY

### **Background**

The City of Taft (hereafter Discharger or City) owns a wastewater collection and treatment facility (WWTF) that provides sewerage service for about 2400 inmates and employees at the Taft Federal Prison (hereafter Prison). The Discharger contracts with SouthWest Water Company to operate and maintain the WWTF. The WWTF is designed to treat 0.46 million gallons per day (mgd) and consists of headworks with a bar screen and a flow meter, an activated sludge oxidation ditch, a chlorination system, an unlined 10.4-million-gallon capacity emergency storage pond, and eight unlined sludge drying beds. Secondary treated effluent is discharged from the WWTF to Sandy Creek, an ephemeral stream, about 1¼ miles north of the WWTF.

The WWTF is in Midway Valley on the north side of Cadet Road about 1½ miles east of Highway 33 and about 4¼ miles southeast of the City of Taft, Kern County. The City completed the WWTF in 1996 to solely serve the Taft Federal Prison, which is owned by the U.S. Department of Justice, Federal Bureau of Prisons. The WWTF is just east of the Prison and started treating wastewater in October 1997 when the Prison began operating. The City owns the dedicated sewer trunk line that connects to the Prison-owned and -maintained sewer system. Waste Discharge Requirements (WDRs) Order No. R5-2004-0011 prescribed requirements for discharges from the WWTF to Sandy Creek.

Sludge from the secondary clarifier is pumped to the unlined drying beds. Once dried, sludge is stockpiled in an unlined storage area. WDRs Order No. R5-2004-0011 required the City to properly dispose of the dried sludge that had been accumulated and stockpiled on site since the WWTF began operating in 1997. On 5 January 2004, the Discharger provided written certification, including supporting documentation, that the accumulated dried sludge was disposed of at an appropriately permitted facility (San Joaquin Composting, Inc., Kern County). The Discharger currently stockpiles dried sludge for approximately two years before transferring it to SYNAGRO Technologies, Incorporated's, South Kern Compost Manufacturing Facility east of Taft.

The Prison's water supply is from the West Kern Water District and is of high quality, based on the Water District's 2007 Consumer Confidence Report, with an electrical conductivity (EC) of 444 µmhos/cm. Self-monitoring reports from January 2007 to September 2008 indicate that the average source water EC, as measured at the Prison, was 382 umhos/cm and the maximum 12-month average was 439 umhos/cm. The maximum incremental increase between January 2004 and September 2008, based on a monthly average effluent EC and a 12-month rolling source water average, was 319 umhos/cm.

The Discharger's self-monitoring reports from January 2004 to September 2008 characterize the discharge as follows:

<u>Constituent / Parameter</u>	<u>Units</u>	<u>Average Influent</u>	<u>Average Effluent</u>
Monthly Average Daily Flow	mgd	--	0.26
Settleable Solids	mL/L	--	< 0.1
BOD <sub>5</sub> <sup>1</sup>	mg/L	250	2.8
TSS <sup>2</sup>	mg/L	192	2.6
EC <sup>3</sup>	µmhos/cm	702	622
Total ammonia (as N)	mg/L	--	0.02 <sup>4</sup>
Nitrate (as N)	mg/L	--	17 <sup>5</sup>
Total Residual Chlorine	mg/L	--	2.4

<sup>1</sup> 5-day, 20°C biochemical oxygen demand

<sup>2</sup> Total suspended solids

<sup>3</sup> Electrical conductivity at 25°C

<sup>4</sup> Non-detect values were set equal to one-half of the detection limit

<sup>5</sup> Based on four samples.

The WWTF and discharge area are in an arid climate characterized by hot dry summers and mild winters. Average annual precipitation and pan evaporation in the discharge area are 5.8 inches and 95 inches, respectively, according to information published by the Western Regional Climate Center and the California Department of Water Resources (DWR).

Land uses in the WWTF vicinity include extractive industrial (oil fields), undeveloped areas with native vegetation, agricultural, and institutional use (i.e., the Prison immediately west of the WWTF) according to DWR land use data published in 1998. Crops historically grown within one-half mile on either side of Sandy Creek from the discharge point to its terminus include cotton and safflower, although creek water is not known to be used for irrigation.

Sandy Creek originates in the Temblor Range to the west, flows southeasterly through lower Midway Valley then northeasterly, and effectively terminates about three miles before reaching dry Buena Vista Lake, which is about 4½ miles downstream of the discharge point. The bed and bank features of Sandy Creek end approximately 1½ miles downstream of the WWTF discharge point. Beyond the bed and bank features of Sandy Creek is the flat landscape of the San Joaquin valley floor. Sandy Creek is normally dry and flows only during and immediately after storm events. The WWTF discharge creates an induced flow that typically fully infiltrates the streambed completely in approximately one mile, as observed during a staff inspections on 6 June 2002 and 7 November 2008. Typical desert vegetation grows in the Sandy Creek streambed, but wetland vegetation grows where the discharge flows. Sandy Creek has an average slope of about 1.3 percent from the discharge point to its terminus. The California Aqueduct siphons under Sandy Creek about 0.2 miles downstream from the WWTF discharge point and does not obstruct stream flow. Constructed berms also exist between the end of bed and bank features of Sandy Creek and the Buena Vista lakebed. It is very unlikely that Sandy Creek flows would ever reach the dry lake bed.

After the adoption of WDRs Order No. 2004-0011, the Discharger requested a review of whether Sandy Creek is a water of the United States subject to the regulation under the Clean Water Act (CWA) and whether warm freshwater habitat (WARM) is a probable beneficial use of Sandy Creek. Given the evidence that Sandy Creek may be an isolated water body, recent United States Supreme Court decisions concerning CWA jurisdiction over isolated water bodies, and evidence that WARM may not exist, the Regional Water Board adopted Special Order No. R5-2005-0060 on 29 April 2005. Order No. R5-2005-0060 delayed the implementation of dechlorination and continuous total residual chlorine monitoring while the Discharger and the Regional Water Board gathered evidence for formal decisions concerning whether Sandy Creek is a water of the United States and to conduct a Use Attainability Analysis (UAA) to determine whether WARM is a beneficial use of Sandy Creek or one that can probably be dederesignedated.

In August 2007, the Discharger requested the United States Army Corps of Engineers (Corps) to complete a jurisdictional determination for Sandy Creek. In a 25 February 2008 letter to the Discharger, the Corps stated that it would not be completing a jurisdictional determination as the Discharger's request was not associated with a permit action under Section 404 of the CWA. The Corps further stated that jurisdictional questions concerning permit actions under Section 401 or 402 of the CWA should be directed to the United States Environmental Protection Agency (USEPA), Region 9.

USEPA, Region 9, conducted an evaluation of the jurisdictional status of Sandy Creek for purposes of the federal CWA. The evaluation included a field investigation of Sandy Creek on 28-29 February 2008 by USEPA staff. Regional Water Board staff participated in the field investigation on 29 February. By a letter dated 10 April 2008, the USEPA transmitted the results of the evaluation and the field investigation findings to the Regional Water Board. In the letter, USEPA stated, "*Available evidence suggests that Sandy Creek, from the Highway 33 crossing to its downstream terminus, is hydrologically isolated from other water, and, therefore, since no other basis for CWA jurisdiction appears to be present, further suggests that Sandy Creek is not a [water of the United States] as defined under the federal CWA and associated regulations.*" Based on information gathered by Regional Water Board staff and USEPA's evaluation, Sandy Creek is not a water of the United States and discharges thereto are not subject to NPDES permitting requirements. Thus, it is appropriate to terminate NPDES Permit No. CA0083755 by rescinding Order No. R5-2004-0011. Sandy Creek is a water of the State as defined in California Water Code (CWC) Section 13050, and thus subject to waste discharge requirements issued pursuant to CWC Section 13263.

## **Groundwater Conditions**

According to the California Department of Conservation, Division of Mines and Geology *Geologic Map of California Bakersfield Sheet (1964)* and U.S. Geological Survey *Taft, Maricopa, and Mouth of the Kern, California* topographic maps, the Midway Valley is underlain by Recent alluvial fan deposits consisting of interbedded sands, silts, and clays overlying the Pleistocene Tulare Formation. The base of the Recent alluvial fan deposits/top of the Tulare

Formation appears to form a barrier to percolating water; thus, percolating water perches at the base of the Recent alluvial fan deposits or on native groundwater according to a 2008 report prepared by Geomega, Inc. entitled *Phase II Groundwater Investigation Report, Valley Waste Disposal Company, Midway Valley – Southeast Taft Area* (Geomega 2008 Report).

DWR maintains depth to groundwater records for three wells near the WWTF (State well numbers 32S24E 24N001, 26A001, and 26N001). Hydrographs for these wells indicate depth to groundwater varied between about 210 and 300 feet below ground surface (bgs) during the monitoring period of 1961 to 1978. The Geomega 2008 Report indicates groundwater exists in the Recent alluvial fan deposits near Sandy Creek northwest of the WWTF at about 100 to 210 feet bgs. The Geomega 2008 Report identifies a monitoring well (21H) that is proximate to Sandy Creek about a mile upgradient of the WWTF discharge point. In October 2007 and March 2008, the depth to groundwater in monitoring well 21H was about 140 feet bgs.

Kern County Water Agency, *Water Supply Report 2000*, indicates groundwater quality in the area of the WWTF and the discharge point is poor quality with total dissolved solids (TDS) of approximately 5,000 mg/L. The Geomega 2008 Report identified monitoring well 21H as being representative of native alluvial groundwater. Presented below are selected analytical results for samples collected from monitoring well 21H:

<u>Date</u>	<u>Calcium (mg/L)</u>	<u>Sodium (mg/L)</u>	<u>Chloride (mg/L)</u>	<u>Sulfate (mg/L)</u>	<u>Nitrate-N (mg/L)</u>	<u>Boron (mg/L)</u>	<u>EC (umhos/cm)</u>	<u>TDS (mg/L)</u>
10/9/2007	460	280	190	1500	4.9	2.6	3100	2700
3/18/2008	620	360	190	1800	14	11	3800	3600

Midway Valley lies in the Midway-Sunset Oil Field, which is one of the older oil producing areas in and around the San Joaquin Valley. In 1955, the California Department of Public Works, Division of Water Resources (now known as the Department of Water Resources) prepared a report *Oil Field Waste Water Disposal, Midway-Sunset Oil Field, Kern County* (DWR 1955 Report) that states oil was first discovered in the Midway-Sunset Oil Field in 1901 and full scale operations existed by 1910. The purpose of the DWR 1955 Report was to determine if disposal of oil production wastes had polluted or may pollute underlying groundwater with mineral constituents. The concern was (and still is) that produced water, which contains high concentrations of dissolved minerals (i.e., EC > 25,000 umhos/cm) and nitrogen (sum of nitrate, nitrite, and ammonia is generally greater than 10 mg/L as N), may impact better quality groundwater (of Sierra Nevada origin) on the San Joaquin Valley floor.

Up until the 1930's, oil field operators discharged the crude oil/produced water mixture directly into natural surface water drainages, including Sandy Creek. Operators constructed dikes on the surface water drainages and skimmed off the oil. In 1932, operators banded together to form Valley Waste Disposal Company for the purpose of managing produced water disposal operations. Disposal sumps were used to skim off the majority of the oil and the remaining

water (containing residual oil) was discharged into natural surface water drainages and eventually reached terminal sumps on the San Joaquin Valley floor.

The DWR 1955 Report and a memorandum prepared by Valley Waste Disposal Company in 1955 include groundwater data for wells within an approximate 2 mile radius of the WWTF outfall to Sandy Creek. These water supply wells were on the east side of the future location of the California Aqueduct, and the groundwater samples were collected between 1953 and 1955. The groundwater data show that the EC ranged from 3,303 to 6,770 umhos/cm and nitrate (as N) concentrations ranged from 0.0 to 59 mg/L. Four of the nine wells for which there were data had at least one nitrate (as N) sample result exceeding 10 mg/L. The DWR 1955 Report concluded that produced water percolating beneath disposal sumps had degraded groundwater supplies the San Joaquin Valley with salts, including nitrates.

Currently, produced water is disposed of in lined and unlined sumps in the Midway Valley area. The produced water evaporates and/or percolates. No produced water discharges to Sandy Creek are known to exist today. Valley Waste Disposal Company operates two produced water disposal pond systems southeast of the City of Taft (SE Taft Ponds) near the banks of Sandy Creek. The ponds are about three miles upgradient of the WWTF outfall to Sandy Creek and are unlined. The smaller of the two systems has been operating since 1958, while operation of the larger system began in 1981. The Geomega 2008 Report indicates that approximately 630,000 gallons per day of produced water are disposed of in the SE Taft Ponds, and historical disposal volumes have approached 1,050,000 gallons per day.

The Geomega 2008 Report contains data for samples collected from groundwater monitoring wells near the SE Taft Ponds. Monitoring well MW-4 is approximately one mile upgradient of the SE Taft Ponds and monitoring wells MW-1 and MW-3 are about one-half and one mile downgradient of the SE Taft Ponds, respectively. The Geomega 2008 Report states that the data indicates percolated produced water from the SE Taft Ponds has impacted groundwater at MW-1, MW-3, and MW-4. Presented below are selected analytical results for samples collected from monitoring wells MW-1, MW-3, and MW-4:

<u>Well No.</u>	<u>Calcium (mg/L)</u>	<u>Sodium (mg/L)</u>	<u>Chloride (mg/L)</u>	<u>Sulfate (mg/L)</u>	<u>Nitrate-N (mg/L)</u>	<u>Boron (mg/L)</u>	<u>EC (umhos/cm)</u>	<u>TDS (mg/L)</u>
MW-1 <sup>1</sup>	920	1090	2534	2090	123	16	10183	8185
MW-3 <sup>1</sup>	790	604	1535	1775	125	4.5	7035	5988
MW-4 <sup>2</sup>	2400	1533	3700	1233	1155	7	18333	17000

<sup>1</sup> Results are averages based on four samples collected on 8/11/97, 7/15/05, 11/14/05, and 3/19/08.

<sup>2</sup> Results are averages based on three samples collected on 7/22/05, 11/15/05, and 3/20/08.

Given the poor quality of native groundwater, the historical groundwater impacts described above, the depth to groundwater, the relatively low WWTF effluent flows, and the fact that WWTF discharge is spread out over a large area, it is unlikely the WWTF discharge has caused or will cause perceptible degradation of groundwater.

Because of its poor quality as documented herein, groundwater in Midway Valley is not known to be used for any beneficial use. West Kern Water District imports and supplies water for essentially all uses, except for irrigation. The Wheeler Ridge-Maricopa Water Storage District imports and supplies irrigation water for the farmlands on the east side of the California Aqueduct. To be used for MUN, groundwater would have to be treated by a process to remove salts, which would also remove nitrate (e.g., reverse osmosis or distillation).

### **Basin Plan, Beneficial Uses, and Regulatory Considerations**

The Water Quality Control Plan for the Tulare Lake Basin, Second Edition, revised January 2004 (Basin Plan), designates beneficial uses, establishes water quality objectives, and contains implementation plans and policies for all waters of the Basin.

The WWTF and discharge point are in the Taft Hydrologic Area (HA 557.20) of the South Valley Hydrologic Unit (HU 557) of the Tulare Lake Basin. The Basin Plan specifies that surface waters within HU 557 are valley floor waters with the following designated beneficial uses: agricultural supply (AGR); industrial service supply (IND); industrial process supply (PRO); water contact recreation (REC-1); noncontact water recreation (REC-2); WARM; wildlife habitat (WILD); rare, threatened, or endangered species (RARE); and groundwater recharge (GWR).

Not all of the designated beneficial uses are realized. Sandy Creek downstream of the discharge point is surrounded by oil fields and privately owned farms, and is not near any facility or place that people frequent. Storm water runoff only flows in Sandy Creek during and shortly after significant rainfall events. The WWTF discharge flows for less than a mile before disappearing completely in the streambed. As Sandy Creek flows are low, ephemeral, and unpredictable, they are not used for irrigation and are not a viable industrial water supply. The reach of Sandy Creek affected by the WWTF discharge is not surrounded by any significant human habitation and is unattractive for water related recreation as the flows are small (i.e., less than 12 inches deep and 5 feet wide) and dense vegetation makes access difficult. People are far more likely to go to the California Aqueduct for water related recreation.

As previously described, the Discharger questioned that WARM is a probable beneficial use of Sandy Creek. Special Order No. R5-2005-0060 gave the Discharger additional time to implement dechlorination and continuous chlorine monitoring, which were required by Order No. R5-2004-0011 to protect WARM, while Regional Water Board staff and the Discharger gathered information concerning the existence of and potential for WARM in Sandy Creek.

On 9 November 2005, Regional Water Board staff sent the Discharger a letter requesting that the Discharger submit a work plan and implementation schedule for completing a technical report that includes information necessary to support a UAA. The letter indicated, consistent with State Water Resources Control Board precedent (see State Water Board Order WQO

2002-0015), that the Discharger bears the responsibility for providing the information to support a UAA.

On 9 January 2006, the Discharger submitted a UAA work plan for assessing the existence of and potential for WARM in Sandy Creek. The UAA work plan stated that McCormick Biological would conduct a biological assessment of the presence of and potential for WARM during the calendar year 2006. The UAA work plan also stated that BSK Associates would conduct a hydrogeologic assessment of the Sandy Creek drainage.

On 12 May 2008, the California Department of Fish and Game (DFG), at the request of Regional Water Board staff, conducted reconnaissance of Sandy Creek to evaluate whether the WARM is an appropriate designated beneficial use of Sandy Creek. DFG staff observed Sandy Creek from near its headwaters west of the City to its terminus approximately 1.5 miles downstream of the WWTF discharge point. The RARE beneficial use of Sandy Creek was observed during the inspection and is known to exist in reaches upstream of the WWTF discharge. DFG observed WILD throughout the entire inspected reach of Sandy Creek. Downstream of the WWTF discharge cliff swallows were observed foraging over Sandy Creek and California quail, killdeer, and numerous unidentified passerine birds were observed using the riparian vegetation. Consistent with WARM, two breeding western toads were observed in Sandy Creek in the City of Taft, and riparian vegetation and wetland plants were observed downstream of the WWTF discharge. In a 15 September 2008 memorandum from DFG staff to Regional Water Board staff, DFG staff states, "*It is likely that other WARM beneficial uses are present within portions of Sandy Creek absent the current influence of the [WWTF] and stormwater discharges; for example, in years with average or above average rainfall, aquatic insects and breeding western spadefoot toad (Spea hammondi) would likely be present within Sandy Creek. These additional WARM beneficial use indicators were not observed during our site visit, since our site visit was not conducted at the appropriate time of year and both 2007 and 2008 were years with below normal precipitation.*" A 15 September 2008 memorandum from DFG to the Executive Officer recommended that WARM, WILD, and RARE remain designated beneficial uses of Sandy Creek.

By 21 October 2008 letter, Regional Water Board staff informed the Discharger that based on DFG's findings and requirements of the California Water Code to protect beneficial uses, Regional Water Board staff does not intend to act on the Discharger's UAA work plan or initiate the process to reconsider the WARM designated beneficial use of Sandy Creek. The letter further stated Regional Water Board staff would proceed with drafting tentative WDRs that includes chlorine effluent limitation to protect WARM and requires installation of chlorine residual monitoring equipment.

The only realized beneficial uses of Sandy Creek known to staff are WARM, WILD, and RARE. Limited REC-1 and REC-2 are possible beneficial uses.

Basin Plan water quality objectives (objectives) define the least stringent criteria that could apply as water quality limitations for surface water and groundwater, except where natural background quality already exceeds the objective. The objectives in the Basin Plan occur in

numeric and narrative form. In issuing waste discharge requirements, the Regional Water Board must implement the Basin Plan, including all its objectives, for the protection of applicable beneficial uses. Water quality objectives include, but are not limited to, objectives for chemical constituents, toxicity, and taste and odor. The toxicity objective requires that waters be maintained free of toxic substances in concentrations that produce detrimental physiological responses in humans, plants, or animals. The chemical constituent objective states waters shall not contain chemical constituents in concentrations that adversely affect any beneficial use, and, at a minimum, waters designated MUN shall not exceed the maximum contaminant levels (MCLs) in Title 22 of the California Code of Regulations. The tastes and odors objective states that waters shall not contain taste- or odor-producing substances in concentrations that cause nuisance or adversely affect beneficial uses. The Basin Plan requires the application of the most stringent objective necessary to ensure that surface and groundwaters do not contain chemical constituents, toxic substances, radionuclides, or taste and odor producing substances in concentrations that adversely affect beneficial uses.

Where a Basin Plan narrative objective exists, the Regional Water Board can quantify it by adopting a numeric effluent or receiving water limitation in WDRs that implements the narrative objective in accordance with the translation processes set forth in the Basin Plan. The translation procedure to follow in establishing numerical limitations in waste discharge requirements that will implement Basin Plan narrative objectives is described in pages IV-21 through IV-23 of the Basin Plan. The Regional Water Board must consider, among other things, information submitted by a discharger and other interested parties and relevant numerical criteria and guidelines developed or published by other agencies and organizations on harmful concentrations of constituents.

The Basin Plan encourages recycling and does not consider disposal by evaporation and percolation or discharge to surface waters a permanent disposal solution when the potential exists for recycling. Order No. 96-035 required the City to evaluate reclamation opportunities and report to the Regional Water Board by 3 September 1996 with either an implementation schedule or justification as to why it is not practical to recycle. Regional Water Board files record the City's attempts to effect recycling. The City attempted to provide the effluent to local farmers for irrigation by soliciting proposals for recycling. It received a single proposal that would have required the City to construct a transmission pipeline to the farmer's property and a storage pond, and pay the farmer \$26.00 per acre-foot of effluent. The City determined that it was too costly and by letter dated 3 May 1996 informed the Regional Water Board. The Regional Water Board agreed with the Discharger and found in WDRs Order No. R5-2004-0011 that reclamation was impractical at that time.

Per the Basin Plan policies, plans for wastewater reclamation or reasons why reclamation is not possible are required for new or expanded wastewater facilities. While the WWTF is not new, nor is the City expanding the WWTF, the reclamation policies in the Basin Plan are clear that surface water disposal shall not be a permanent solution when reclamation opportunities exist. A City of Taft representative informed Regional Water Board staff during a 7 November 2008 pre-requirement inspection that the City has engaged in recent discussions with a local farmer about recycling the WWTF effluent. On 9 March 2009, the Taft City Council directed



the City Manager to proceed with the acquisition of 547 acres near the WWTF outfall. The City intends to cease discharges to Sandy Creek by applying WWTF effluent to this acreage. The City indicated it would contract with Harrington Farms to apply WWTF effluent to feed and fodder crops. There is no existing cropland on the 547 acres. The acreage is generally in a native state and would require significant modifications (i.e., grubbing, grading, pipeline installation, etc.) to be farmable.

## Effluent Limitations

This Order prescribes effluent limitations based on the following:

- This Order carries over from WDRs Order No. R5-2004-0011 the flow limitation of 0.46 mgd (design flow) with one exception. The flow limitation in this Order is a monthly average daily flow whereas the flow limitation in WDRs Order No. R5-2004-0011 was expressed as a monthly average daily dry weather flow. This minor change is based on a review of self monitoring reports from 1 January 2004 through 30 September 2008 which shows winter WWTF flows are not greater than the summer flows. Thus, it does not appear inflow and infiltration to the collection system are an issue.
- For BOD<sub>5</sub> and total suspended solids (TSS), a monthly average of 30 mg/L, a weekly average of 45 mg/L, a daily maximum of 90 mg/L, and a removal efficiency of 85 percent were included in WDRs Order No. R5-2004-001 based on the technology-based effluent limits required by Title 40 of the Code of Federal Regulations Part 133 (40 CFR 133). While the WWTF is no longer subject to the requirements of 40 CFR 133, the BOD and TSS effluent limitations contained in WDRs Order No. R5-2004-0011 are considered best practicable treatment or control for wastewater treatment plants with secondary treatment and, thus, are included in this Order.
- The pH effluent limitation is based on the numeric objective in the Basin Plan. For settleable solids, a monthly average of 0.1 ml/L and daily maximum of 0.5 ml/L are adequately protective of the aquatic life in Sandy Creek, which provides no dilution most of the time.
- Order No. R5-2004-0011 limits the effluent EC to 500 umhos/cm over source water or 1,000 umhos/cm, whichever is less. This limitation is consistent with the Basin Plan requirement for discharges to navigable waters. The Basin Plan EC effluent limitation for domestic wastewater facility discharges to land is 500 umhos/cm over source water and 1,000 umhos/cm for discharges that may recharge good quality groundwater. As Sandy Creek is not a navigable water, the WWTF discharge recharges poor quality groundwater, and discharge is not used for agricultural supply, there is no Basin Plan requirement to include the 1,000 umhos/cm cap on the discharge. Nonetheless, 500 umhos/cm over source water effectively limits the discharge to <1,000 umhos/cm (i.e., 439 umhos/cm +

500 umhos/cm), which is protective of all but the most salt-sensitive crops should the City pursue reclamation in the future.

- Chlorine, even in low concentrations, can cause toxicity to aquatic organisms. The City uses chlorine for disinfection of the effluent and does not dechlorinate the effluent before discharging to Sandy Creek. The average effluent total residual chlorine concentration from January 2007 through September 2008 was 2.8 mg/L. USEPA recommends, in its *Ambient Water Quality Criteria for the Protection of Fresh Water Aquatic Life*, a maximum chlorine concentration (1-hour average) of 0.019 mg/L and a continuous chlorine concentration (4-day average) of 0.011 mg/L. These criteria are based on tests conducted using several different species. *Daphnia magna*, a warm water species, and one that occurs in valley floor waters, is cited as the most sensitive freshwater species for the acute criteria. Freshwater chronic tests included two invertebrates (*Daphnia magna* and *Gammarus pseudolimnaeus*) and one fish species (fathead minnow) – all three of which are commonly found in warm water habitat. Thus, the Discharger's use of chlorine as a disinfectant presents a reasonable potential that it could be discharged in toxic concentrations.

The USEPA Technical Support Document for Water Quality-Based Toxics Control, EPA/505/2-90-001, March 1991 (TSD) contains statistical methods for converting chronic (four-day) and acute (one-hour) aquatic life criteria to average monthly and maximum daily effluent limitations based on the variability of the existing data and the expected frequency of monitoring. However, because chlorine is an acutely toxic constituent that can and will be monitored continuously, an average one-hour limitation is considered more appropriate than an average daily limitation. Average one-hour and four-day limitations for chlorine, based on these criteria, are included in this Order to protect the WARM beneficial use of Sandy Creek. No dilution was considered since, absent the discharge, Sandy Creek normally does not flow except during and immediately after storm events. Because the Discharger will not be able to comply with this effluent limitation immediately, this Order provides a time schedule for the Discharger to install the dechlorination equipment necessary to achieve compliance. The time schedule also provides time to install the equipment necessary to continuously monitor the total residual chlorine concentration in the WWTF effluent.

- Untreated domestic wastewater contains ammonia. Nitrification is a biological process that converts ammonia to nitrite and nitrite to nitrate. Inadequate or incomplete nitrification may result in the discharge of ammonia to the receiving stream. Ammonia is known to cause toxicity to aquatic organisms in surface waters. Discharges of ammonia at concentrations toxic to aquatic organisms would violate the Basin Plan narrative toxicity objective. USEPA in its *1999 Update of Ambient Water Quality Criteria for Ammonia* (1999 Ammonia Update) recommends acute (1-hour average; criteria maximum concentration) standards based on pH and chronic (30-day average, criteria continuous concentration) standards based on pH and temperature. While the 1999 Ammonia Update indicates that ammonia is generally more acutely toxic to wild fish than to other aquatic species, this does not appear to be true for chronic toxicity. The 1999 Ammonia

Update, in developing the chronic toxicity criterion, identified two genera invertebrates - the amphipod *Hyaella* and fingernail clam *Musculium* - as having the lowest genus mean chronic toxicity sensitivity. These two non-fish aquatic life are more susceptible to ammonia chronic toxicity than wild fish. WDRs Order No. R5-2004-0011 stated that it is unknown whether the amphipod *Hyaella* and fingernail clam *Musculium* exists or could exist in Sandy Creek and that information is insufficient to conclude that the WWTF discharge has reasonable potential for ammonia toxicity in Sandy Creek. WDRs Order No. R5-2004-0011 required the Discharger to study the impacts of ammonia on the wetted section of Sandy Creek to determine if reasonable potential exists and, if so, to develop and recommend ammonia effluent limitations that are adequately protective of Sandy Creek's warm freshwater habitat.

Self-monitoring reports between 1 January 2004 and 30 September 2008 show that the maximum ammonia concentration was 0.21 mg/L and the average concentration was 0.02 mg/L (non-detect values were set equal to one-half the detection limit). The highest reported effluent pH and temperature values between 1 January 2004 and 30 September 2008 were 8.2 standard units and 28.6 °C, respectively (it should be noted that maximum reported pH and temperature values were not measured on the same day). Under these worst-case pH and temperature conditions and an assumption that the amphipod *Hyaella* and fingernail clam *Musculium* exist in Sandy Creek, the resulting acute and chronic ammonia criteria are 5.73 mg/L and 0.72 mg/L, respectively. In this worst-case scenario, the most stringent ammonia criterion is approximately 3.4 times higher than the maximum recorded effluent ammonia concentration. Therefore, there is no reasonable potential to exceed ammonia criteria and, as such, ammonia effluent limitations are not included in this Order. However, this Order includes an un-ionized ammonia receiving water limitation of 0.025 mg/L based on the Basin Plan objective and requires the Discharger to continue monitoring the effluent and receiving water for ammonia.

- To adequately protect public health, the discharge must be disinfected. The California Department of Public Health's (DPH) *Uniform Guidelines for Wastewater Disinfection* recommends that when discharge is to ephemeral streams with limited use and little or no natural flow during all or part of the year, the effluent have a median coliform bacteria number (MPN) not exceeding 23/100 mL based on the last seven samples for which analyses have been completed. The guidelines also recommend that when a median coliform MPN of 23/100 mL is required, bacteriological samples should be collected at least twice per week. The guidelines recommend a daily maximum total coliform limitation of 20 times the median MPN, or 460/ 100 mL, but WDRs Order No. R5-2004-0011 requires that the daily maximum MPN not exceed 240/100 mL.

The median coliform effluent limitation in this Order is consistent with the DPH guidelines described above, and the daily maximum coliform effluent limitation is carried over from WDRs Order No. R5-2004-0011.

- In addition to that previously described, the Basin Plan's narrative toxicity objective states, "*The survival of aquatic life in surface waters subjected to a waste discharge or other*

*controllable water quality factors shall not be less than that for the same water body in areas unaffected by the waste discharge, or, when necessary, for other control water that is consistent with the requirements for "dilution water" as described in Standard Methods for the Examination of Water and Wastewater, 18<sup>th</sup> Edition. As a minimum, compliance shall be evaluated with a 96-hour bioassay. In addition, effluent limits based upon acute biotoxicity tests of effluents will be prescribed where appropriate...* It is appropriate to prescribe acute toxicity effluent limitations in this case as the effluent almost always comprises the entire flow in Sandy Creek. USEPA, Region 9 provided guidance for the development of acute toxicity effluent limitations in the absence of numeric water quality objectives for toxicity in its document titled "Guidance for NPDES Permit Issuance", dated February 1994. In section B.2. "Toxicity Requirements" (pgs. 14-15) it states that, "*In the absence of specific numeric water quality objectives for acute and chronic toxicity, the narrative criterion 'no toxics in toxic amounts' applies. Achievement of the narrative criterion, as applied herein, means that ambient waters shall not demonstrate for acute toxicity: 1) less than 90% survival, 50% of the time, based on the monthly median, or 2) less than 70% survival, 10% of the time, based on any monthly median. For chronic toxicity, ambient waters shall not demonstrate a test result of greater than 1 TUc.*" Accordingly, effluent limitations for acute toxicity have been included in this Order as follows:

Survival of aquatic organisms in 96-hour bioassays of undiluted effluent shall be no less than any of the following:

- a. 70% for any one bioassay
- b. 90% for the median for any three consecutive bioassays

## **Sludge Specifications**

This Order requires that discharge of sludge and solid wastes from the treatment of wastewater comply with the requirements of Title 27, CCR, Section 20005 et. seq. It requires that storage, use and disposal of sludge and biosolids comply with the self-implementing Federal regulations of 40 CFR 503, which are subject to enforcement by the USEPA, not the Regional Water Board. It also requires that, if the sludge is discharged on land for soil amendment for agriculture, silviculture, horticulture, or land reclamation, it be treated and tested to meet the requirements of 40 CFR 503 and be covered under State Board Order No. 2004-0012-DWQ.

## **Pretreatment Requirements**

In the past, the WWTF had been upset on occasion due to poor pretreatment. The City indicated that it experienced nine upsets totaling at least 263 days in 1998, 1999, and the first three months in 2000 caused by grease and cleaning disinfectants.

This Order requires, as did the previous two Orders, that the City implement pretreatment legal authorities, programs, and controls to ensure indirect discharges do not introduce pollutants to the WWTF that might pass through the treatment system or inhibit or disrupt treatment processes and cause a violation of the Order. This Order also requires, as did WDRs Order No. R5-2004-0011, that the City implement pretreatment legal authorities, programs, and controls to ensure incompatible wastes are not introduced into the treatment systems that could cause upsets, disruptions or interferences, which may result in violation of this Order. Incompatible wastes may include wastes that create a fire or explosion hazard, corrosives that cause structural damage, solids or viscous materials that may cause obstruction in the sewers, petroleum oil or oil products that may cause interference or pass-through, and pollutants that may cause toxic gases, vapors, or fumes, which may result in acute worker health and safety problems.

### **Receiving Water Limitations**

Receiving water limitations in this Order are based on the Basin Plan, carried over from WDRs Order No. R5-2004-0011, and prescribe requirements that the discharge not cause un-ionized ammonia to be present in excess of 0.025 mg/L, the dissolved oxygen concentration to fall below 5.0 mg/L, the ambient temperature to increase by more than 5°F, or chlorine to be detected in concentrations equal to or greater than 0.01 mg/L. It requires that the discharge not cause the receiving water to contain oils, greases, waxes, pesticides, biostimulatory materials, toxic pollutants, floating materials, taste- or odor producing substances, or other materials that create nuisance or otherwise adversely affect beneficial uses. It assures public health protection by requiring that radionuclides and toxic pollutants are not present in the receiving water in concentrations that may be hazardous to human, plant, animal, or aquatic life. It requires that the discharge not cause the receiving water to contain fecal coliform in any 30-day period exceeding a geometric mean of 200 MPN/100 mL or cause more than 10 percent of total samples to exceed 400 MPN/100 mL.

### **Groundwater Limitations**

This Order prescribes groundwater limitations that prohibit WWTF discharges from causing the groundwater concentrations to exceed baseline concentrations. The WWTF when operated as prescribed herein is not expected to degrade the groundwater quality due to: 1) attenuation of the waste constituents as the discharge percolates through the soil to groundwater at 120 – 160 feet depth, and 2) the poor quality of the groundwater because of extremely high salinity. As the areal groundwater EC is much higher than that of the discharge, the discharge will have no adverse impact on the groundwater.

## Whole Effluent Toxicity Testing (Chronic)

The Basin Plan contains a narrative toxicity objective that states, “*All waters shall be maintained free of toxic substances in concentrations that produce detrimental physiological responses in human, plant, animal, or aquatic life.*” (Basin Plan at III-6) Adequate chronic whole effluent toxicity (WET) data is not available to determine if the discharge has reasonable potential to cause or contribute to an in-stream excursion above of the Basin Plan’s narrative toxicity objective. Order No. R5-2004-0011 required the Discharger to conduct annual three-species chronic toxicity testing. The Discharger only conducted the testing once. This Order requires annual chronic WET monitoring for demonstration of compliance with the narrative toxicity objective.

In addition to WET monitoring, this Order requires the Discharger to submit to the Regional Water Board an Initial Investigative Toxicity Reduction Evaluation (TRE) Work Plan for approval by the Executive Officer to ensure the Discharger has a plan to immediately move forward with the initial tiers of a TRE in the event effluent toxicity is encountered in the future. This Order also includes a numeric toxicity monitoring trigger and requirements for accelerated monitoring, as well as, requirements for TRE initiation if a pattern of toxicity is demonstrated.

**Monitoring Trigger.** A numeric toxicity monitoring trigger of  $> 1$  TUc (where TUc = 100/NOEC) is applied in the provision because this Order does not allow any dilution for the chronic condition. Therefore, a TRE is triggered when the effluent exhibits a pattern of toxicity at 100% effluent.

**Accelerated Monitoring.** The provision requires accelerated WET testing when a regular WET test result exceeds the monitoring trigger. The purpose of accelerated monitoring is to determine, in an expedient manner, whether there is a pattern of toxicity before requiring the implementation of a TRE. Due to possible seasonality of the toxicity, the accelerated monitoring should be performed in a timely manner, preferably taking no more than 2 to 3 months to complete. The provision requires accelerated monitoring consisting of four chronic toxicity tests every two weeks using the species that exhibited toxicity. Guidance regarding accelerated monitoring and TRE initiation is provided in the TSD. The TSD at page 118 states, “*EPA recommends if toxicity is repeatedly or periodically present at levels above effluent limits more than 20 percent of the time, a TRE should be required.*” Therefore, four accelerated monitoring tests are required in this provision. If no toxicity is demonstrated in the four accelerated tests, then it demonstrates that toxicity is not present at levels above the monitoring trigger more than 20 percent of the time (only 1 of 5 tests are toxic, including the initial test). However, notwithstanding the accelerated monitoring results, if there is adequate evidence of a pattern of effluent toxicity (i.e., toxicity present exceeding the monitoring trigger more than 20 percent of the time), the Executive Officer may require that the Discharger initiate a TRE.

**TRE Guidance.** This Order, under specific circumstances, requires the Discharger to prepare a TRE Work Plan in accordance with USEPA guidance. Numerous guidance documents are available, as identified below:

- *Toxicity Reduction Evaluation Guidance for Municipal Wastewater Treatment Plants*, (EPA/833B-99/002), August 1999.
- *Generalized Methodology for Conducting Industrial TREs*, (EPA/600/2-88/070), April 1989.
- *Methods for Aquatic Toxicity Identification Evaluations: Phase I Toxicity Characterization Procedures*, Second Edition, EPA 600/6-91/005F, February 1991.
- *Toxicity Identification Evaluation: Characterization of Chronically Toxic Effluents, Phase I*, EPA 600/6-91/005F, May 1992.
- *Methods for Aquatic Toxicity Identification Evaluations: Phase II Toxicity Identification Procedures for Samples Exhibiting acute and Chronic Toxicity*, Second Edition, EPA 600/R-92/080, September 1993.
- *Methods for Aquatic Toxicity Identification Evaluations: Phase III Toxicity Confirmation Procedures for Samples Exhibiting Acute and Chronic Toxicity*, Second Edition, EPA 600/R-92/081, September 1993.
- *Methods for Measuring the Acute Toxicity of Effluents and Receiving Waters to Freshwater and Marine Organisms*, Fifth Edition, EPA-821-R-02-012, October 2002.
- *Short-term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to Freshwater Organisms*, Fourth Edition, EPA-821-R-02-013, October 2002.
- *Technical Support Document for Water Quality-based Toxics Control*, EPA/505/2-90-001, March 1991

## **Antidegradation**

The antidegradation directives of State Water Board Resolution No. 68-16, "Statement of Policy With Respect to Maintaining High Quality of 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. Policies and procedures for complying with this directive are set forth in the Basin Plan.

The Regional Water Board conducted an antidegradation analysis and concluded that the discharge was consistent with the Antidegradation Policy when it adopted WDRs Order No. R5-2004-0011. No further antidegradation analysis is required as this Order does not authorize, nor has the City requested, an increase in permitted volume or mass of pollutants discharged from what the Regional Water Board previously approved.

## Monitoring

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 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. Monitoring is required pursuant to CWC Section 13267 and is necessary to ensure compliance with this Order and to monitor for impacts on the receiving water.

The monitoring and reporting requirements of this Order are generally the same as WDRs Order No. R5-2004-0011. The only significant difference is explained below.

The Regional Water Board, by letter dated 27 February 2001 pursuant to CWC Section 13267, required the Discharger to monitor the discharge and receiving stream for priority pollutants. It required the Discharger to submit test results for priority pollutants from two rounds of sampling. The Discharger conducted the first sampling event in July and August 2002. Six priority pollutants (arsenic, selenium, bromodichloromethane, chloroform, chloromethane, dibromochloromethane) were detected above their respective practical quantitation levels (PQLs), but at concentrations lower than applicable water quality criteria. The City did not submit the test results for the second round of priority pollutant sampling. WDRs Order No. R5-2004-0011 stated that additional priority pollutant monitoring is necessary to complete the reasonable potential analysis; thus, WDRs Order No. R5-2004-0011, Provision H.7, required the Discharger to complete the required monitoring and submit the data by 3 May 2004.

On 15 March 2004, the Discharger submitted priority pollutant data in response to WDRs Order No. R5-2004-0011, Provision H.7, for effluent and receiving water samples collected on 29 December 2003. The data was incomplete as the Discharger failed to submit metals, pesticide, PCB, and volatile organic compounds (VOC) data for the effluent. The semi-VOC results were non-detect with the exception of bis(2-Ethylhexyl) phthalate (9.3 ug/L). WDRs Order No. R5-2004-0011 also required the Discharger to conduct one round of priority pollutant sampling in the fourth year of the Order. In an attempt to satisfy this requirement, the Discharger submitted effluent priority pollutant data for a sample collected on 15 April 2008. The results were incomplete as metals and VOC data were missing. The semi-VOC, PCB, and pesticide analytical results were non-detect.

Bis (2-ethylhexyl) phthalate was detected in one of two samples since adoption of WDRs Order No. R5-2004-0011. Bis (2-ethylhexyl) phthalate is used primarily as one of several plasticizers in polyvinyl chloride (PVC) resins for fabricating flexible vinyl products. According to the Consumer Product Safety Commission, USEPA, and the Food and Drug Administration, these PVC resins are used to manufacture many products, including soft squeeze toys, balls, raincoats, adhesives, polymeric coatings, components of paper and paperboard, defoaming agents (MBAS), animal glue, surface lubricants, and other products that must stay flexible and noninjurious for the lifetime of their use. The Discharger performed composite sampling of bis(2-ethylhexyl)phthalate, and the plastic tubing used in composite sampling may have



contaminated the samples. Due to the sampling method used to collect the data, the data for bis(2-ethylhexyl)phthalate may be unreliable. In addition, the criteria for bis(2-ethylhexyl)phthalate are based on MUN and the presence of fish and shellfish. For the reasons explained below, the bis(2-ethylhexyl)phthalate criteria do not apply to Sandy Creek.

On 23 December 2008, the Discharger submitted metals and VOC data for an effluent sample collected on 13 November 2008. Bromodichloromethane, chloroform, and dibromochloromethane were detected at concentrations of 7.3 ug/L, 21 ug/L, and 1.5 ug/L, respectively, which do not exceed applicable criteria (MUN-based criteria and California Toxics Rule organisms only criteria are not appropriate for Sandy Creek; see next paragraph). The following priority pollutant metals were detected: hexavalent chromium (0.082 ug/L, estimated), antimony (0.50 ug/L, estimated), arsenic (4.6 ug/L), cadmium (0.30 ug/L, estimated), copper (4.9 ug/L, estimated), lead (0.24 ug/L, estimated), mercury (0.020 ug/L, estimated), nickel (1.9 ug/L, estimated), and zinc (25 ug/L, estimated). The detected metal concentrations were below the applicable criteria for Sandy Creek. Hardness-dependent metals criteria were calculated using the lowest observed effluent hardness of 76 mg/L as CaCO<sub>3</sub>.

While priority pollutant sampling and compliance with California Toxics Rule criteria are typically required only of NPDES permitted facilities, it is appropriate to require the Discharger to collect priority pollutant data for those constituents which have aquatic life criteria. This Order requires the Discharger to sample for those priority pollutants that the Discharger did not sample for as required by WDRs Order No. R5-2004-0011 and that have aquatic life criteria (i.e., metals, pesticides, and PCBs). Most priority pollutants (i.e., VOCs and semi-VOCs) only have California Toxics Rule human health based criteria that are applicable to waters designated MUN or where consumption of fish and shellfish occurs. Sandy Creek is not designated MUN and fish and shellfish are not known to exist or likely to exist in Sandy Creek. Once the additional priority pollutant data required by this Order is submitted, Regional Water Board staff will be able to expand the reasonable potential analysis.

Since the Discharger has identified oil and grease as wastes causing occasional upsets of the treatment process in the past, this Order continues to require the City to monitor oil and grease monthly.

This Order carries over the current requirement to monitor the sludge at least annually, in accordance with USEPA's *POTW SLUDGE SAMPLING AND ANALYSIS GUIDANCE DOCUMENT, AUGUST 1989*, and test for arsenic, cadmium, chromium, molybdenum, copper, lead, mercury, nickel, selenium, and zinc and submit an annual summary of sludge discharge operations.

## **CEQA**

On 7 September 1993, the City certified an EIR/EIS for construction and operation of the prison, construction of the WWTF, and the extension of a water supply pipeline. The Discharger adopted the EIR in accordance with the Public Resources Code, and WDRs Order

No. 96-035 stated the Regional Water Board “*has reviewed the EIR and concurs there are no significant impacts to water quality.*”

There has been no expansion of WWTF use beyond what was considered in the EIR/EIS mentioned above. To comply with this Order, the Discharger will only need to add dechlorination and monitoring equipment to the existing facility. These minor changes to the WWTF will not result in significant environmental impacts. To the contrary, the changes will reduce impacts to the environment. Thus, the action to adopt this Order is exempt from the provisions of CEQA (Public Resources Code Sections 21100-21177), pursuant to Title 14 California Code of Regulations Section 15301, Class 1 exemption for minor alterations to existing facilities with no expansion of existing use.

### **Reopener**

The conditions of discharge in this Order were developed based on currently available technical information, currently available discharge and surface water quality information, applicable water quality laws, regulations, policies, and plans, and are intended to assure conformance with them. However, information is presently insufficient to adequately assess the potential for the WWTF discharge to exceed water quality objectives. Additional information must be developed and documented by the Discharger as required by schedules set forth in this Order. As this additional information is obtained, decisions will be made concerning the best means of assuring the highest water quality possible and that could involve substantial cost. It may be appropriate to reopen the Order if applicable laws and regulations change, or if new information necessitates the implementation of effluent limitations that adequately protect water quality.

MSS:WDH:LMW:mss