California Regional Water Quality Control Board
Santa Ana Region
3737 Main Street, Suite 500
Riverside, CA 92501-3348

ITEM: 9

SUBJECT: Waste Discharge Requirements for Eastern Municipal Water District, Temescal Creek Discharge, Riverside County, Order No. R8-2004-0065, NPDES CA8000188

DISCUSSION:

See attached Fact Sheet

RECOMMENDATION:

Adopt Order No. R8-2004-0065, NPDES No. CA 8000188 as presented.

COMMENTS SOLICITED:

U.S. Environmental Protection Agency, Permits Issuance Section (WTR-5) - Doug Eberhardt
U.S. Army District, Los Angeles, Corps of Engineers - Regulatory Branch
U.S. Fish and Wildlife Service - Carlsbad
State Water Resources Control Board, Office of the Chief Counsel – Jorge Leon
State Water Resources Control Board, Division of Water Quality – Jim Maughan
State Department of Water Resources - Glendale
State Department of Fish and Game - Long Beach
California Department of Health Services, San Diego – Steve Williams
Riverside County Environmental Health Services – Sam Martinez
Riverside County Flood Control and Water Conservation District – Jason Uhley
Riverside County Board of Supervisors – Bob Buster
Santa Ana River Discharger's Association (SARDA)
City of Lake Elsinore- City Manager
City of Canyon Lake – City Manager
Elsinore Valley Municipal Water District – Ron Young/Phillip Miller
Lee Lake Water District – John Pastore
Law Office of Thomas E. Luebben - James K. Hansen
Montgomery Watson - Jeff Mohr
Orange County Coastkeeper – Garry Brown
South Coast Air Quality Management District – Barry R. Wallerstein
Lawyers for Clean Water C/c San Francisco Baykeeper
Natural Resources Defense Council- David Beckman
Best, Best & Krieger, LLP – Arthur L. Littleworth

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3737 Main Street, Suite 500
Riverside, CA 92501-3348

Fact Sheet

November 5, 2004

The attached pages contain information concerning an application for waste discharge requirements and a National Pollutant Discharge Elimination System (NPDES) permit.

I. FACILITY DESCRIPTION

The Eastern Municipal Water District operates the Hemet/San Jacinto Valley, Moreno Valley, Perris Valley, Sun City, and Temecula Valley Regional Water Reclamation Facilities (RWRFs). The discharge of treated municipal wastewater from these facilities is currently regulated under Orders adopted by the Santa Ana and San Diego Regional Water Quality Control Boards. Each of these facilities discharges wastewater into onsite percolation/evaporation ponds and each recycles wastewater depending on local demand. Recycled water is currently used at locations within the districts service boundaries for agricultural irrigation, municipal irrigation, golf course irrigation and maintenance of duck ponds. Excess wastewater from all of these facilities (except the Hemet/San Jacinto facility (renamed the San Jacinto Valley RWRF)) that cannot be percolated/evaporated and/or recycled is discharged into a regional water reclamation pipeline. This pipeline ultimately discharges into Temescal Creek, a tributary to Reach 3 of the Santa Ana River. This discharge into Temescal Creek was regulated under Order No. 99-5, NPDES No. CA8000188, which the Santa Ana Regional Board adopted on June 25, 1999 and which expired on June 1, 2004. Order No. 99-5 prescribed waste discharge requirements for the discharge of 26.0 million gallons per day (MGD) of tertiary treated wastewater. EMWD discharged wastewater under this Order only on an intermittent basis during severe storm events, when recycled water storage facilities were full. The maximum discharge has been approximately 26 MGD. EMWD will be upgrading the San Jacinto Valley RWRF from secondary to tertiary treatment capability; discharges from this facility are also included in this new Order.

On January 23, 2002, Order No. R8-2002-0009-A01 was adopted, amending Order No. 99-5 to authorize the discharge of approximately 1,500 acre-feet per year of tertiary treated recycled water from EMWD's RWRF system to Lake Elsinore in coordination with Elsinore Valley Municipal Water District's (EVMWD's) implementation of a two-year lake replenishment pilot project to address lake level stabilization problems and to test the effects of recycled water discharges. The amendment authorized the discharge of recycled water into the Lake until February 1, 2004.

On July 1, 2003, Order No. R8-2003-0066 was adopted; amending Order No. 99-5 to extend authorization for the lake replenishment pilot project, including recycled water discharges by EMWD and EVMWD to Lake Elsinore, to December 1, 2004. Order No. R8-2003-0066 also revised the combined volume of discharge of recycled water from EMWD and EVMWD allowed to be discharged to the lake to 4,480 acre-feet per year. The amendment also added a 12-month average concentration limit for total dissolved solids (TDS) of 800 mg/L for discharges of recycled water into the Lake.

This Order does not authorize the discharge of recycled water into Lake Elsinore. However, this Order may be reopened to authorize such a discharge and to include effluent limits for Total Nitrogen and Total Phosphorous based on the Lake Elsinore Nutrient TMDL that is expected to be considered for adoption by the Regional Board in December 2004.

The discharge points are described as follows:

Outfall	Latitude	Longitude	Description
001	33°40'30"	117°20'0"	Primary discharge point where the Wasson Canyon flood control channel intersects Temescal Creek. Discharges will augment a wetlands enhancement project in Collier Marsh.

The discharger submitted an application for renewal of the NPDES permit (Order No. 99-5, NPDES No. CA8000188) on December 23, 2003. Due to anticipated growth in the service areas of the 5 RWRFs, EMWD has requested that the authorized discharge volume of wastewater to Temescal Creek be increased from 26 to 47.5 MGD.

Attachment "A" to this Fact Sheet shows the name of each regional water reclamation facility, the order number regulating the discharge from the facility, the facility address, the treatment plant design capacity and the treatment plant unit processes.

Attachment "B" to this Fact Sheet shows the location of the reclamation facilities.

II. REGULATORY BASIS FOR WASTE DISCHARGE REQUIREMENTS

This Order includes requirements that implement the Water Quality Control Plan (Basin Plan), which was adopted by the Regional Board on March 11, 1994. The Basin Plan was approved by the Office of Administrative Law and became effective on January 24, 1995. This Plan specifies water quality objectives and beneficial uses for the waters of the Santa Ana Region.

The Basin Plan includes wasteload allocations for total dissolved solids (TDS) and total inorganic nitrogen[1] (TIN) for the upper Santa Ana River dischargers, including EMWD. These allocations were established to assure compliance with the TDS and TIN objectives for the Santa Ana River. The wasteload allocations are implemented through effluent limitations specified in waste discharge requirements, including Order No. R8-2004-0065, NPDES No. CA8000188, for discharges from EMWD RWRFs into Temescal Creek.

EMWD discharges tertiary treated wastewater to Temescal Creek, which is tributary to the Santa Ana River, Reach 3, the beneficial uses of which include agricultural supply, industrial service

[1] Total Inorganic Nitrogen (TIN) is the sum of the nitrate-N, nitrite-N, and ammonia-N.

supply, groundwater recharge, water contact recreation, non-contact water recreation, warm freshwater habitat, wildlife habitat, and rare, threatened or endangered species.

Article 3, Section 60305 of Title 22, Division 4, Chapter 3, "Water Recycling Criteria" of the California Code of Regulations specifies that recycled water used as a source supply for non-restricted recreational impoundments shall be disinfected tertiary recycled water that has been subjected to conventional treatment. Section 60305 also provides that disinfected tertiary recycled water that has not received conventional treatment may be used for non-restricted recreational impoundments provided that the recycled water is monitored for the presence of pathogenic organisms in accordance with certain conditions. The degree of treatment specified represents an approximately 5-log reduction in the virus content of the water. The California Department of Health Services (CDHS) has determined that this degree of virus removal is necessary to protect the health of people using these impoundments for water contact recreation. The CDHS has developed wastewater disinfection guidelines ("Wastewater Disinfection for Health Protection", CDHS, Sanitary Engineering Branch, February 1987) for discharges of wastewater to surface waters where water contact recreation (REC-1) is a beneficial use. The disinfection guidelines recommend the same treatment requirements for wastewater discharges to REC-1 waters as those stipulated in Title 22 for supply of recycled water to non-restricted recreational impoundments, since the public health risks under both scenarios are analogous. The disinfection guidelines are based on sound science and are widely used as guidance to assure public health and beneficial use protection.

The Santa Ana River is not a "non-restricted recreational impoundment," nor is "disinfected tertiary recycled water" (as defined in the Water Recycling Criteria) being used as a supply source for the River. However, except during major storms, most of the flow in the River is composed of treated municipal wastewater discharges. The River is used for water contact recreation and, accordingly, is designated REC-1 (water contact beneficial use). People recreating in the River face an exposure similar to those coming in contact with recycled water in an impoundment. Therefore, to protect the water contact recreation beneficial use and to prevent nuisance and health risk, it is necessary and appropriate to require the same degree of treatment for wastewater discharges to the River as would be required for the use of recycled water in a non-restricted recreational impoundment. Thus, this Order specifies requirements based on tertiary or equivalent treatment.

The proposed Order specifies numeric and narrative limits for the control of toxic substances. These limits are based on the following:

1. 1995 Basin Plan;
2. Policy for Implementation of Toxics Standards for Inland Surface Waters, Enclosed Bays, and Estuaries of California adopted on March 2, 2000 by the State Water Resources Control Board (hereinafter, "SIP");
3. Code of Federal Regulations (40 CFR Parts 122-124, 129, 131, 136, 141-142 and 503);
4. Technical Support Document for Water Quality-based Toxics Control (EPA/505/2-90-001, March 1991);
5. Water Quality Standards; Establishment of Numeric Criteria for Priority Toxic Pollutants for the State of California, promulgated in May 18, 2000 by the U.S. EPA, (hereinafter, "CTR");

6. Santa Ana River Use-Attainability Analysis, Volume 10, Calculation of Total-to-Dissolved Metal Ratios to Translate Site-Specific Water Quality Objectives into NPDES Effluent Limits", Risk Sciences (May, 1994);
7. Water Quality Criterion for the Protection of Human Health: Methylmercury – EPA-823-R-01-001, January 2001.

The State Water Resources Control Board adopted the Policy for Implementation of Toxics Standards for Inland Surface Waters, Enclosed Bays, and Estuaries of California (Policy) on March 2, 2000. This Policy establishes implementation provisions for priority pollutant criteria promulgated by the U.S. Environmental Protection Agency (U.S. EPA) through the National Toxics Rule (NTR), which was promulgated on December 22, 1992 and amended on May 4, 1995, and through the California Toxics Rule (CTR), which was promulgated on May 18, 2000.

This Order implements federal regulations specified in 40 CFR 122, 123, 124, 125, and 129 which pertain to all publicly-owned treatment works (POTW) with average design flows exceeding 1 mgd.

III. PROPOSED EFFLUENT LIMITATIONS

The limitations in this Order are intended to control pollutants in the waste discharge, maintain water quality, and protect the beneficial uses of the affected receiving waters. Revisions to water quality objectives or to beneficial uses designated in the Basin Plan may occur in the course of periodic review and update of the Plan. These waste discharge requirements will be re-evaluated and may be revised to accommodate any of these changes.

Biochemical Oxygen Demand (BOD) and Suspended Solids

The proposed Biochemical Oxygen Demand$_5$ (BOD_5) and suspended solids limits are based on values that are achievable with tertiary treatment. These limits are intended to ensure that only adequately oxidized wastewater is discharged.

Total Dissolved Solids (TDS)/Inorganic Minerals

The proposed TDS limit for the discharge to Temescal Creek is based on the Basin Plan wasteload allocation for TDS discharges to the Santa Ana River system. To implement the Basin Plan, the proposed Order specifies a TDS limit of 650 mg/l.

The discharger may have difficulty achieving the 650 mg/l TDS limit. The discharger proposes to offset any discharges in excess of 650 mg/L on a pound-for-pound basis, calculated on a 12-month running average.

Trace Constituent Limitations

The U.S. EPA has identified 126 priority pollutants, including metals and organic chemicals, and has promulgated water quality objectives for many of these substances in the California Toxics Rule and National Toxics Rule. The State Board's Policy for Implementation of Toxics

Standards for Inland Surface Waters, Enclosed Bays and Estuaries of California (Policy) specifies the procedures that are to be used in implementing these objectives in waste discharge requirements. Numeric effluent limitations must be specified for those priority pollutants that are determined to have the reasonable potential to cause or contribute to a violation of the applicable objectives. To determine reasonable potential, the maximum effluent concentrations are compared to the criteria values specified in the California Toxics Rule. If the detected concentrations are less than the objectives, it is concluded that the effluent poses no reasonable potential to exceed water quality objectives for that constituent, and numeric effluent limitations for that constituent are not required. However, periodic monitoring for such constituents is required. In situations where the criteria value and all available effluent and receiving water data are below detection limits, no reasonable potential determination could be made and again, effluent limits are not required. However, the discharger is also required to monitor these pollutants on a regular basis.

In its January 8, 2001, guidance document, the US EPA finds that a fish tissue residue water quality criterion for methylmercury (Water Quality Criterion for the Protection of Human Health: Methylmercury - EPA-823-R-01-001, January 2001) is more appropriate than a water column based water quality criterion. The EPA further states that a fish tissue residue water quality criterion is more closely tied to the Clean Water Act goal of protecting the public health because it is based directly on the human exposure route for methylmercury. Consequently, this Order specifies a receiving water limitation in fish tissue of 0.3 mg methylmercury/kg including effluent limits for total recoverable mercury. This Order also requires the discharger to conduct monitoring of fish tissue in the Santa Ana River to identify any evidence of mercury bioaccumulation, as would be indicated by the detection of methylmercury. The Order includes a re-opener provision that enables the Regional Board to revise the Order.

Using EMWD RWRF data, the reasonable potential analysis showed that chromium (VI), copper, cyanide, mercury, selenium, and bis (2-ethylhexyl) phthalate have the reasonable potential to exceed water quality criteria specified in the CTR. Following the CTR and the SIP procedures, effluent discharge limitations were developed for these pollutants. Federal regulations require that the effluent limits for metals be expressed as the total recoverable form. To comply with this requirement, the dissolved criteria are translated into total recoverable effluent limits using ratios of the total recoverable metals to dissolved metals (t/d) concentrations. The SIP stipulates that in the absence of site-specific information, the conversion factors cited in the CTR should be used as the t/d translators. No dilution credit is used in the calculation. Order No. 99-5 included effluent limitations for cadmium, lead, silver, zinc, antimony, thallium, chloroform, halomethanes, hexachlorocyclohexane-beta, hexachlorocyclohexane-gamma, and tributyltin. However, reasonable potential analyses conducted in the development of this Order showed that there was no reasonable potential for these constituents to exceed the CTR criteria values. Therefore, effluent limits for these parameters are not included in this Order.

Toxicity Limitations

This Order requires the discharger to conduct chronic[2] toxicity testing of the effluent on a monthly basis. The Order also requires the discharger to conduct an Initial Investigation

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2 The chronic test method for the water flea "Ceriodaphnia dubia" also measures acute toxicity.

Toxicity Reduction Evaluation (IITRE[3]) program when either the two-month median of toxicity test results exceeds 1 TUc or any single test exceeds 1.7 TUc for survival endpoint. Based on the results of this investigation program and at the discretion of the Executive Officer, a more rigorous Toxicity Reduction Evaluation/Toxicity Identification Evaluation (TRE/TIE) may be required. A re-opener provision is included in the Order to incorporate a chronic toxicity effluent limitation if warranted by the toxicity test results.

Compliance

Many of the objectives specified in the CTR, and the effluent limits that implement them, are at extremely low concentrations. In several cases, these concentrations are below current laboratory detection values. As such, it is necessary to require laboratory analyses to be performed to the lowest possible concentrations. The Policy for Implementation of Toxics Standards for Inland Surface Waters, Enclosed Bays, and Estuaries of California (Policy) includes a list of priority pollutants with their respective Minimum Levels (ML)[4] on which "reported Minimum Levels" (i.e., quantitation values for the sample) shall be based. The Policy recognizes that the "reported ML" may be orders of magnitude different than the listed MLs depending on the amount of dilution/concentration required for sample preparation, and the amount of dilution necessary to address matrix interference. Unfortunately, the policy lacks guidance for the development of appropriate "reported MLs".

The Regional Board has required discharges to meet Minimum Levels for all priority pollutants and practical quantitation levels (PQLs)[5] for non-priority pollutants. The PQLs for wastewater were developed based on the following:

1. A survey of laboratories in the Southern California area and a review of method detection levels (MDLs) in accordance with 40 CFR 136 for a wastewater matrix reported by local laboratories;

2. The consensus PQLs determined during the meeting of major Southern California laboratories with the Regional Board staff on January 28, 1992. The consensus PQLs are believed to represent the lowest quantitation levels that can be achieved by most laboratories in Southern California based on proven laboratory performance and the reasonable application of best available analytical technology for most toxic substances;

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3 An IITRE is the initial stage of investigation conducted prior to implementing a complete toxicity reduction evaluation (TRE) study. A TRE is a stepwise process for identifying the agent(s) and/or source(s) of toxicity in a given effluent.

4 Minimum Level is the concentration at which the entire analytical system must give a recognizable signal and acceptable calibration point. The ML is the concentration in a sample that is equivalent to the concentration of the lowest calibration standard analyzed by a specific analytical procedure, assuming that all the method specified sample weights, volumes, and processing steps have been followed.

5 PQL is the lowest concentration of a substance that can be determined within ± 20 percent of the true concentration by 75 percent of the analytical laboratories tested in a performance evaluation study. Alternatively, if performance data are not available, the PQL is the method detection limit (MDL) x 5 for carcinogens and MDL x 10 for noncarcinogens.

3. The report "A Study To Determine The Practical Quantitation Levels (PQL) For Selected Water Chemistry Parameters Analyzed by Commercial Laboratories Operating In The Santa Ana River Watershed" (Risk Sciences, 1993).

The discharger is required to meet the minimum levels in Attachment A of the Monitoring and Reporting Program (M&RP) No. R8-2004-0065 for those priority pollutants with effluent limitations in this Order. The discharger shall select and use the appropriate ML value. When there is more than one ML value for a given substance, the discharger shall select the ML value which is below the calculated effluent limitation, and use its associated analytical method, listed in Attachment A of the M&RP. If no ML value is below the effluent limitation, then Regional Board will select the lowest ML value and its associated analytical method. In cases where the discharger believes that the sample matrix justifies a different "reported ML", the discharger is required to demonstrate to the satisfaction of the Regional Board's Executive Officer the appropriateness of the alternative "reported ML" for that sample matrix.

All analytical data are required to be submitted with the corresponding MDLs and MLs. Sample results shall be reported as "DNQ" (Detected, but Not Quantified) if the results are less than the reported ML, but greater than the MDL. Sample results shall be reported as "ND" (Not Detected) if the results are less than the MDL.

The discharger shall be deemed out of compliance with an effluent concentration limit if the concentration of the effluent sample is greater than the effluent limit and greater than or equal to the "reported ML." The discharger shall not be deemed out of compliance for any sample result reported as DNQ or ND. However, the discharger is required to conduct a Pollutant Minimization Program, as described in the Policy, if there is an indication that a constituent is present in the effluent above an effluent limitation and either: a sample result is reported as DNQ and the effluent limitation is less than the "reported ML", or a sample result is reported as ND and the effluent limitation is less than the MDL.

IV. ANTIDEGRADATION ANALYSIS

Currently, treated wastewater from the five treatment facilities is recycled and used for golf course irrigation, fodder, fiber, and seed crop irrigation, and for maintaining duck ponds. Wastewater that is not recycled is discharged to percolation ponds. The current uses are at locations at or in the vicinity of each treatment facility. Excess water is discharged to Temescal Creek on an intermittent basis. The current flow rate of 26 mgd is projected to increase to 47.5 mgd. EMWD conducted an antidegradation analysis in support of Order No. 93-33, which preceded Order No. 99-5 and which authorized the discharge of up to 58 MGD to surface waters. The analysis evaluated the impact of these discharges on the quality of ground and surface waters. Specifically, the study analyzed the impact of recycled water discharges on the quality of surface water in Temescal Creek and the Santa Ana River and on the quality of groundwaters in the areas impacted by these discharges. The Regional Board's basin planning models, including the QUAL2E model were used for these studies. These studies concluded that the proposed discharges would not degrade the water quality of receiving waters. These results are contained in the Regional Board files. The Regional Board has considered antidegradation pursuant to 40 CFR 131.12 and State Board Resolution No. 68-16. The water quality of the receiving waters is

not expected to degrade as a result of this discharge. Neither the constituent concentrations of the discharge nor the mass loading of pollutants associated with the discharge will adversely impact water quality or affect the beneficial uses of the receiving waters. Therefore, these waste discharge requirements are consistent with federal and state antidegradation policies.

V. WRITTEN COMMENTS

Interested persons are invited to submit written comments on the proposed discharge limits and the Fact Sheet. Comments should be submitted by October 18, 2004, either in person or by mail to:

Jun Martirez
California Regional Water Quality Control Board
Santa Ana Region
3737 Main Street, Suite 500
Riverside, CA 92501-3348

VI. INFORMATION AND COPYING

Persons wishing further information may write to the above address or call Jun Martirez of the Regional Board at (951) 782-3258. Copies of the application, proposed waste discharge requirements, Fact Sheet, and other documents (other than those which the Executive Officer maintains as confidential) are available at the Regional Board office for inspection and copying between the hours of 9:00 a.m. and 3:00 p.m., Monday through Friday (excluding holidays).

VII. REGISTER OF INTERESTED PERSONS

Any person interested in a particular application or group of applications may leave his name, address, and phone number as part of the file for an application.

VIII. PUBLIC HEARING

The Regional Board will hold a public hearing regarding the proposed waste discharge requirements as follows:

DATE:	November 5, 2004
TIME:	9:00 a.m.
PLACE:	Eastern Municipal Water District Conference Room 2270 Trumble Road Perris, CA

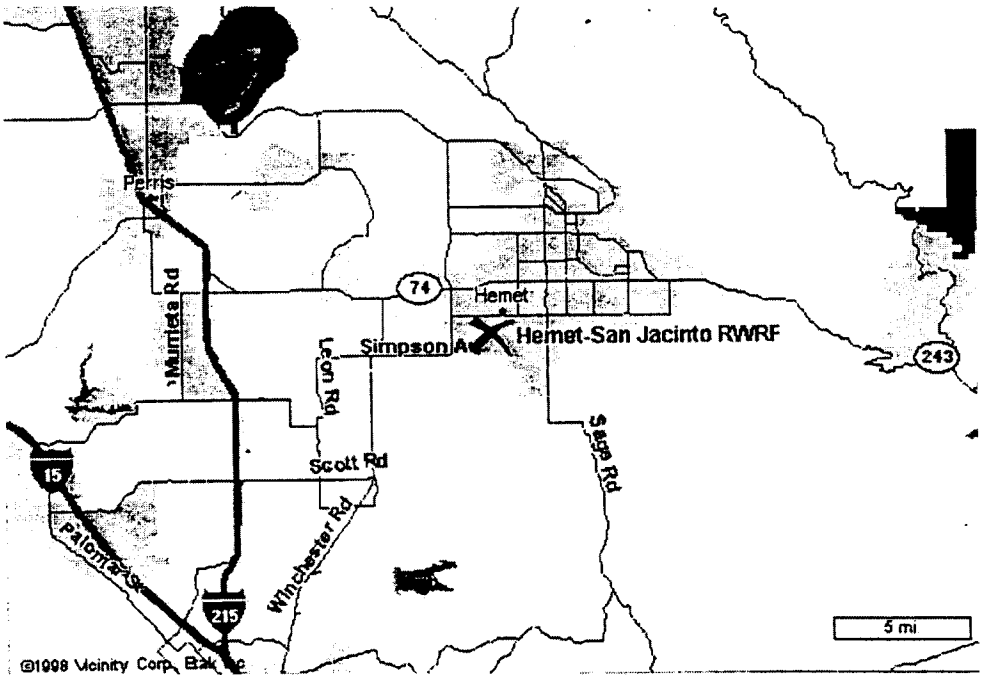
Hemet - San Jacinto Valley Regional Water Reclamation Facility
ORDER NO. 88-94 **ADDRESS :** 22251 Sanderson Avenue in the San Jacinto area of Riverside County **TREATMENT PLANT DESIGN CAPACITY** = 11.0 mgd **TREATMENT PROCESS:** Screening, grit removal, primary clarification, diffused-air activated sludge with biological nitrogen removal, secondary clarification and chlorination. Sludge is thickened with dissolved air flotation. Anaerobic digestion of thickened sludge and final dewatering by belt presses and sludge drying beds.
Moreno Valley Regional Water Reclamation Facility
ORDER NO. 90-151 **ADDRESS :** 17010 Perris Boulevard in Moreno Valley **TREATMENT PLANT DESIGN CAPACITY** = 16.0 mgd **TREATMENT PROCESS:** Screening, grit removal, primary clarification, diffused-air activated sludge with biological nitrogen removal, secondary clarification, flow equalization, chemical flocculation, filtration, and chlorination. Sludge is thickened by air flotation and undergoes anaerobic digestion. Digested sludge is dewatered by belt presses and drying beds.
Perris Valley Regional Water Reclamation Facility
ORDER NO. 90-135 **ADDRESS :** 1301 Case Road in the Perris area of Riverside County **TREATMENT PLANT DESIGN CAPACITY** =11.0 mgd **TREATMENT PROCESS:** Screening, primary clarification, diffused-air activated sludge with biological nitrogen removal, secondary clarification, flow equalization, chemical flocculation, filtration, an chlorination. Aerobically digested sludge is dewatered by belt presses and sludge drying beds.

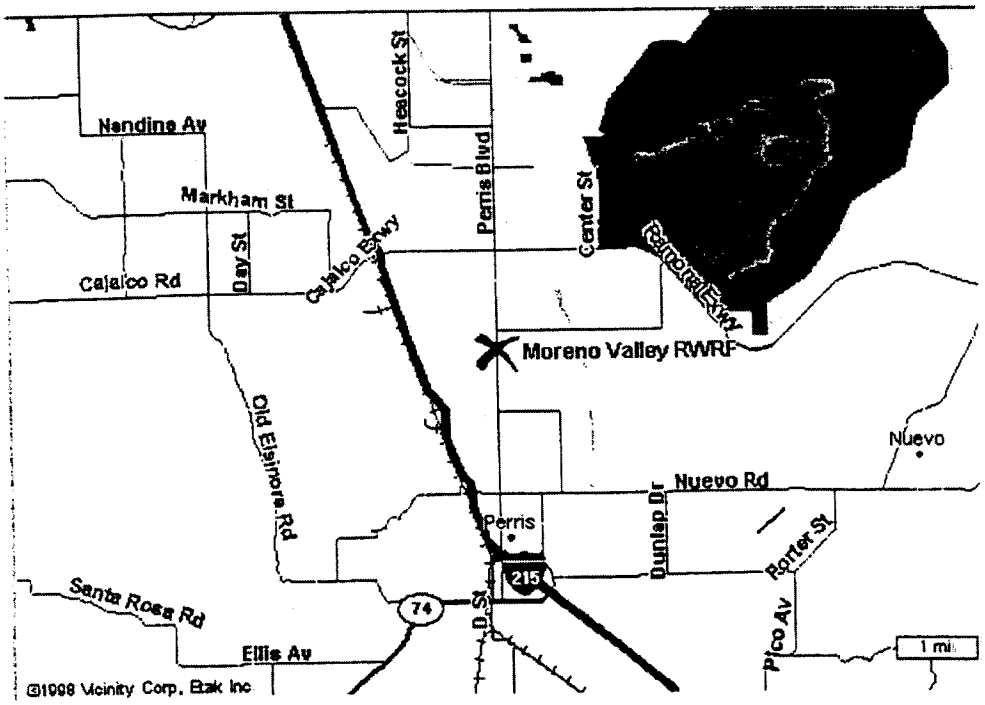
Sun City Regional Water Reclamation Facility
ORDER NO. 90-140 **ADDRESS:** 29541 Murrieta Road in Sun City **TREATMENT PLANT DESIGN CAPACITY** = 3.0 mgd **TREATMENT PROCESS:** Comminutors, grit removal, primary clarification, diffused-air activated sludge, secondary clarification, filtration and chlorination. Waste sludge is treated at the Perris Valley RWRF.
Temecula Valley[1] Regional Water Reclamation Facility
ORDER NO. 00-165[2] **ADDRESS:** 42565 Avenida Alvarado, Temecula **TREATMENT PLANT DESIGN CAPACITY** = 12.0 mgd **TREATMENT PROCESS:** Screening, grit removal, primary clarification, diffused-air activated sludge with biological nitrogen removal, secondary clarification, flow equalization, chemical flocculation, tertiary clarification, filtration, chlorination. Sludge is thickened by air flotation and gravity belt thickeners and digested in anaerobic digesters. Anaerobic sludge is dewatered by belt presses. Chemical sludge is dewatered in a dewatering basin before final disposal.

1 This facility is located in the jurisdiction of the San Diego Regional Board (Region 9).

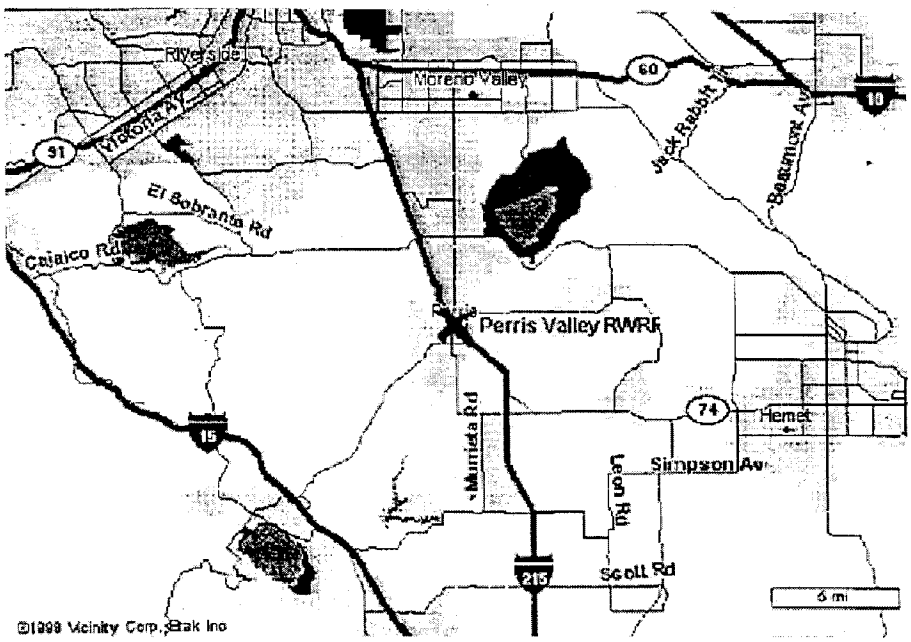
2 Order adopted by San Diego Regional Board (Region 9).

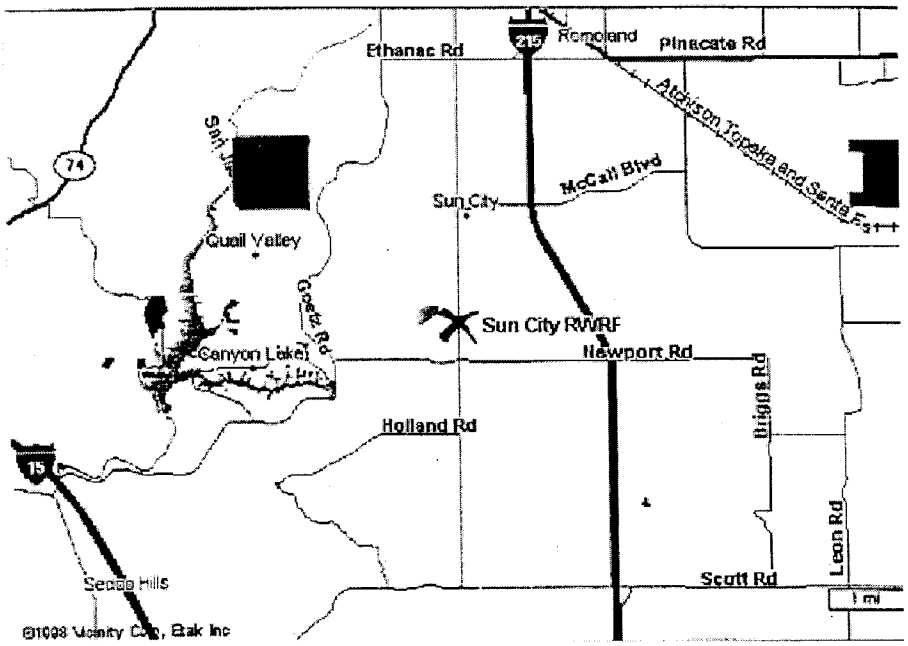
LOCATION MAP





LOCATION MAP





California Regional Water Quality Control Board
Santa Ana Region

Order No R8-2004-0065
NPDES No. CA8000188

Waste Discharge Requirements
for
Eastern Municipal Water District
Temescal Creek Discharge
Riverside County

The California Regional Water Quality Control Board, Santa Ana Region (hereinafter Regional Board), finds that:

1. The Eastern Municipal Water District (hereinafter discharger or EMWD) operates the Hemet/San Jacinto Valley, Moreno Valley, Perris Valley, Sun City, and Temecula Valley Regional Water Reclamation Facilities (RWRFs). Each of these RWRFs is regulated under individual waste discharge requirements for discharges to onsite percolation/evaporation ponds and for the use of recycled water for agricultural irrigation, golf course irrigation, wildlife enhancement, and maintenance of duck ponds and wildlife enhancement at locations near each respective plant.

2. These RWRFs (except the Hemet/San Jacinto facility (renamed the San Jacinto Valley RWRF)) discharge excess wastewater that cannot be percolated/evaporated and/or recycled to a pipeline that links the four RWRFs into a single, region-wide water reclamation system. On June 25, 1999, the Board adopted Order No. 99-5, NPDES No. CA8000188 prescribing waste discharge requirements to EMWD for the discharge of up to 26 million gallons per day (MGD) of excess tertiary treated wastewater from the region-wide water recycling system to Temescal Creek. EMWD plans to upgrade the San Jacinto Valley RWRF from secondary to tertiary treatment capability and to connect this facility to the region-wide water recycling system. Therefore, this RWRF is also included in this new Order.

3. On January 23, 2002, Order No. R8-2002-0009-A01 was adopted, amending Order No. 99-5 to authorize the discharge of approximately 1,500 acre-feet per year of tertiary treated recycled water from EMWD's RWRF system to Lake Elsinore in coordination with Elsinore Valley Municipal Water District's (EVMWD's) implementation of a two-year lake replenishment pilot project to address lake level stabilization problems and to test the effects of recycled water discharges. The amendment authorized the discharge of recycled water into the Lake until February 1, 2004.

4. On July 1, 2003, Order No. R8-2003-0066 was adopted, amending Order No. 99-5 to extend authorization for the lake replenishment pilot project, including EMWD recycled water discharges to Lake Elsinore, to December 1, 2004. Order No. R8-2003-0066 also revised the combined volume of discharge of recycled water from EMWD and EVMWD allowed to be discharged to 4,480 acre-feet per year. The amendment also added a 12-month average concentration limit for total dissolved solids (TDS) of 800 mg/L for discharges of recycled water into the Lake.

TENTATIVE

5. On June 1, 2004, Order No. 99-5, NPDES No. CA8000188 expired but was not administratively extended. The discharger submitted an application for renewal of the NPDES permit on December 23, 2003. Due to anticipated growth in the service areas of the 5 RWRFs, EMWD has requested that the authorized discharge volume of wastewater to Temescal Creek be increased from 26 to 47.5 MGD.

6. The discharger's RWRFs provide secondary or tertiary treatment. Typically, secondary un-disinfected and/or disinfected wastewater is discharged to on-site percolation/evaporation ponds and/or used for agricultural uses. The Table below shows the treatment processes at each of the RWRFs. Only tertiary-treated recycled water is discharged to Temescal Creek.

Facility / Treatment	San Jacinto Valley	Moreno Valley	Perris Valley	Sun City	Temecula Valley
Primary	Screening, grit removal, primary clarification	Screening, grit removal primary clarification			
Secondary	Diffused-air activated sludge with biological nitrogen removal				
Tertiary	Under Design	Chemical flocculation, filtration and chlorination			
Solids Handling	Anaerobic or aerobic digestion, belt presses for dewatering (future centrifuges), sludge drying beds. Biosolids are sent for land application or composting.				

7. The discharge of treated municipal wastewater from the five regional water reclamation facilities is currently regulated under Orders adopted by the Santa Ana and San Diego Regional Water Quality Control Boards, as follows:

RWRF	Order No.	Order Adoption Date	Treatment Capacity
San Jacinto Valley	88-94	September 9, 1988	11.0 MGD
Moreno Valley	90-151	December 7, 1990	16.0 MGD
Perris Valley	90-135	October 19, 1990	11.0 MGD
Sun City	90-140	December 7, 1990	3.0 MGD
Temecula Valley[1]	00-165[2]	September 13, 2000	12.0 MGD

1 This facility is located in the jurisdiction of the San Diego Regional Board (Region 9).
2 Order adopted by San Diego Regional Board (Region 9).

8. The discharge points to Temescal Creek are described as follows:

Outfall	Latitude	Longitude	Description
001	33°40'30"	117°20'0"	Primary discharge point where the Wasson Canyon flood control channel intersects Temescal Creek. Discharges will augment a wetlands enhancement project in Collier Marsh.

9. A revised Water Quality Control Plan (Basin Plan) became effective on January 24, 1995. This plan contains beneficial uses and water quality objectives for waters in the Santa Ana Region.

10. The requirements contained in this Order are necessary to implement the Basin Plan.

11. The beneficial uses of Temescal Creek and Reach 3 of the Santa Ana River include:

    a. Agricultural supply,
    b. Industrial service supply,
    c. Groundwater recharge,
    d. Water contact recreation,
    e. Non-contact water recreation,
    f. Warm freshwater habitat,
    g. Wildlife habitat, and
    h. Rare, threatened or endangered species.

12. Neither Temescal Creek nor the Santa Ana River is naturally perennial. In dry weather, the flow in these water bodies is comprised predominantly of effluent discharges from municipal wastewater treatment facilities and very little natural flow exists.

13. Article 3, Section 60305 of Title 22, Division 4, Chapter 3, "Water Recycling Criteria" of the California Code of Regulations specifies that recycled water used as a source supply for non-restricted recreational impoundments shall be at all times an adequately disinfected, oxidized, coagulated, clarified, filtered wastewater (tertiary treated). The degree of treatment specified represents an approximately 5-log reduction in the virus content of the water. The California Department of Health Services has determined that this degree of virus removal is necessary to protect the health of people using these impoundments for water contact recreation.

14. The California Department of Health Services (CDHS) has developed wastewater disinfection guidelines ("Wastewater Disinfection for Health Protection", Department of Health Services, Sanitary Engineering Branch, February 1987) for discharges of wastewater to surface waters where water contact recreation (REC-1) is a beneficial use. The disinfection guidelines recommend the same treatment requirements for wastewater discharges to REC-1 waters as those stipulated in Title 22 for supply of recycled water to non-restricted recreational impoundments, since the public health risks under both scenarios are analogous. The disinfection guidelines are based on sound science and are widely used as guidance to assure public health and beneficial use protection.

15. Neither Temescal Creek nor the Santa Ana River are "non-restricted recreational impoundments," nor is "disinfected tertiary recycled water[3] " being used as a supply source for these water bodies. However, except during major storms, most of the flow in these water bodies is composed of treated municipal wastewater discharges. They are used for water contact recreation and, accordingly, are designated REC-1 (water contact beneficial use). People recreating in them face an exposure similar to those coming in contact with recycled water in an impoundment. Therefore, to protect the water contact recreation beneficial use and to prevent nuisance and health risk, it is necessary and appropriate to require the same degree of treatment for wastewater discharges to these water bodies as would be required for the use of recycled water in a non-restricted recreational impoundment.

16. The State CDHS adopted revised Water Recycling Criteria (Title 22, California Code of Regulations) that became effective on December 2, 2000. This Order implements applicable revised Criteria for the discharge into Temescal Creek.

17. It is appropriate and necessary to control and limit the concentrations of individual mineral constituents that may be discharged from the treatment facilities.

18. The limits contained in this Order for average concentrations of dissolved solids are those that the discharger may reasonably be expected to achieve using reasonable methods such as, but not limited to a source control program and the control of water supply sources.

19. The 1995 Basin Plan includes wasteload allocations for discharges of total dissolved solids (TDS) to the Santa Ana River system. In conformance with the wasteload allocation for EMWD, this Order specifies a TDS limit of 650 milligram per liter (mg/l) for recycled water discharges into Temescal Creek. The Basin Plan recognizes that strict compliance with the TDS wasteload allocations may be difficult to achieve. The Basin Plan describes the regulatory approach the Regional Board uses to address such situations. The Board incorporates offset provisions in waste discharge requirements whereby dischargers can participate in approved programs to offset TDS discharges in excess of specified TDS limits, provided that the discharger makes all reasonable efforts to improve the TDS quality of the water supply (and thereby, the wastewater).

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3 As defined in Section 60301.230. Article 1 of Title 22, Division 4, Chapter 3, California Code of Regulations "Water Recycling Criteria."

20. This Order specifies that the TDS limits apply unless the discharger implements an approved program to offset TDS discharges in excess of the effluent limitations specified in this Order.

21. The 1995 Basin Plan includes wasteload allocations for discharges of total inorganic nitrogen (TIN) within the Region. In conformance with the TIN wasteload allocation, this Order specifies a limit of 10 mg/l TIN for discharges into Temescal Creek.

22. This Order includes limitations on inorganic and toxic substances for the protection of the quality and beneficial uses of the affected receiving waters, including Temescal Creek and the Santa Ana River.

23. The toxicity to aquatic life of, copper (Cu) for which effluent limitations are specified in this Order, is dependent on water hardness. Accordingly, effluent limits for copper were calculated using equations[4] wherein water hardness is a variable. This Order uses a hardness value of 138[5] mg/l to calculate the effluent limits. A fixed effluent hardness value was utilized to facilitate determination of compliance. Federal regulations require that effluent limits for metals be expressed as the total recoverable form. To comply with this requirement, the calculated dissolved value was translated into total recoverable effluent limit using ratios of the total recoverable metal to dissolved metal (t/d) concentrations. The translator used for, copper was developed in a study and reported in the "Santa Ana River Use-Attainability Analysis, Volume 10, Calculation of Total-to-Dissolved Metal Ratios to Translate Site-Specific Water Quality Objectives into NPDES Effluent Limits", Risk Sciences (March 1994).

24. In its January 8, 2001, guidance document, the US EPA finds that a fish tissue residue water quality criterion for methylmercury (Water Quality Criterion for the Protection of Human Health: Methylmercury - EPA-823-R-01-001, January 2001) is more appropriate than a water column based water quality criterion. The EPA further states that a fish tissue residue water quality criterion is more closely tied to the Clean Water Act goal of protecting the public health because it is based directly on the human exposure route for methylmercury. Consequently, this Order specifies a receiving water limitation in fish tissue of 0.3 mg methylmercury/kg fish including limitations for total recoverable mercury in the effluent.

25. On May 18, 2000, the U.S. Environmental Protection Agency issued a final rule for the establishment of Numeric Criteria for Priority Toxic Pollutants necessary to fulfill the requirements of Section 303(c)(2)(B) of the Clean Water Act for the State of California. This rule is commonly referred to as the California Toxics Rule (CTR).

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4 Equations were taken from the California Toxics Rule.

5 This hardness number is derived from the 5th percentile of average effluent hardness from July 1999 to December 2003.

26. As required by the Clean Water Act and regulations adopted thereunder, the chemical specific limitations contained in this Order are designed to prevent a violation of any applicable water quality standards for receiving waters adopted by the Regional Board, the State Board or U.S. EPA. If more stringent applicable water quality standards are approved pursuant to Section 303 of the Clean Water Act, or amendments thereto, the Regional Board will revise and modify this Order in accordance with such more stringent standards.

27. Effluent limitations, national standards of performance, and toxic pretreatment effluent standards established pursuant to Section 208(b), 301, 302, 303(d), 304, 306, and 307 of the Clean Water Act, and amendments thereto, are applicable to the discharge.

28. On March 2, 2000, the State Water Resources Control Board adopted the Policy for Implementation of Toxic Standards for Inland Surface Waters, Enclosed Bays, and Estuaries of California (SIP, or Policy). The SIP includes implementation provisions for the California Toxics Rule. The Policy specifies a methodology to determine if pollutants in the discharge are at a level that will cause, have the reasonable potential to cause, or contribute to an excursion of a water quality standard. The Policy also delineates procedures to be used to calculate appropriate limits.

29. This Order implements relevant provisions of the CTR and the State Board Policy. Based on the methodology outlined in the State Board Policy, chromium (VI), copper, cyanide, mercury, selenium, and bis (2-ethylhexyl) phthalate were found to pose a reasonable potential to cause or contribute to an excursion of a water quality standard. Following the CTR and the Policy procedures, effluent discharge limitations were developed for chromium (VI), copper, cyanide, heptachlor, mercury, selenium, and bis (2-ethylhexyl) phthalate. Statistical procedures as specified in the Policy are used in calculating effluent limits.

30. On April 17, 1997, the State Board adopted the General Industrial Storm Water Permit, Order No. 97-03-DWQ, NPDES No. CAS000001. This General Permit implements the Final Regulations (40 CFR 122, 123, and 124) for storm water runoff published on November 16, 1990 by the U.S. EPA in compliance with Section 402(p) of the CWA. Accordingly, this Order incorporates pertinent provisions of the General Industrial Storm Water Permit appropriate for these storm water discharges.

31. The Regional Board has considered antidegradation pursuant to 40 CFR 131.12 and State Board Resolution No. 68-16 and finds that this discharge is consistent with those provisions.

32. In accordance with Water Code Section 13389, the issuance of waste discharge requirements for this discharge is exempt from those provisions of the California Environmental Quality Act contained in Chapter 3 (commencing with Section 21100), Division 13 of the Public Resources Code.

33. The Regional Board has notified the discharger and other interested agencies and persons of its intent to prescribe waste discharge requirements for the discharge and has provided them with an opportunity to submit their written views and recommendations.

34. The Regional Board, in a public meeting, heard and considered all comments pertaining to the discharge.

IT IS HEREBY ORDERED that the discharger, in order to meet the provisions contained in Division 7 of the California Water Code and regulations adopted thereunder and the provisions of the Clean Water Act and regulations and guidelines adopted thereunder, shall comply with the following:

A. DISCHARGE SPECIFICATIONS

1. The discharge of wastes containing constituent concentrations in excess of the following limits is prohibited:

   a. Biological/Physical Limitations:

Constituent	Average Weekly Concentration Limit	Average Monthly Concentration Limit	Average Weekly Mass Emission Rate[6]	Average Monthly Mass Emission Rate
	mg/l	mg/l	lbs/day	lbs/day
Biochemical Oxygen Demand	30	20	11,885	7,923
Suspended Solids	30	20	11,885	7,923

6. Mass emission rate for this and all other tables in this permit is based on the projected 2009 discharge flow rate of 47.5 mgd.

b. Chlorine Residual/Ammonia Limitations for all discharges:

Constituent	Instantaneous Maximum Concentration Limit (mg/l)	Average Monthly Concentration Limit (mg/l)	Average Monthly Mass Emission Rate (lbs/day)
Ammonia-Nitrogen		4.5	1,783
Total Residual Chlorine	0.1	----	----

c. TDS Limitations: TDS Limitations: For Discharge Specification No. 1.c. (1) and 1.c. (2), the lower of the two dissolved solids limits is the limit

(1) The 12-month average TDS constituent concentrations and mass emission rates shall not exceed 650 mg/l and 257,498 lbs per day, respectively, unless:

(a) The discharger demonstrates to the satisfaction of the Regional Board's Executive Officer that:

i. Discharges in excess of the TDS limits are due to the quality of water supply sources utilized in the discharger's service area, and that all reasonable steps, as agreed upon by the Executive Officer, have been taken to ensure that the best quality supplies are obtained and utilized in the discharger's service area; or

ii. Discharges in excess of the TDS limits are due solely to chemical additions in the treatment process needed to meet waste discharge requirements, and the discharger has taken all steps to optimize chemical additions so as to minimize the increases; AND

(b) And if paragraph c.(1)(a)i or c.(1)(a)ii applies, the discharger implements a plan to offset discharges in excess of the TDS limits by implementation of an offset program approved by the Executive Officer.

(2) The 12-month average total dissolved solids concentration of the wastewater shall not exceed the 12-month average total dissolved solids concentration of the water supply plus a 250 mg/l increment, unless:

(a) The discharger demonstrates to the satisfaction of the Regional Board's Executive Officer that TDS discharges in excess of the 250 mg/l mineral increment are due solely to chemical additions in the treatment process needed to meet waste discharge requirements, and the discharger has taken all steps to optimize chemical additions so as to minimize the TDS increases; and

(b) The discharger complies with the offset provisions in paragraph A.1.c. (1)(b) above, to offset TDS discharges in excess of the 250 mg/l mineral increment, or implements a plan, with the approval of the Executive Officer, to offset such discharges.

d. Total Inorganic Nitrogen (TIN) Limitations: The 12-month average TIN constituent concentrations and mass emission rates shall not exceed 10 mg/l and

2. The discharge of wastes containing constituent concentrations in excess of the following limits is prohibited.

Constituent	**Maximum Daily Concentration Limit (µg/l)**	**Average Monthly Concentration Limit (µg/l)**	**Maximum Daily Mass Emission Rate (lbs/day)**	**Average Monthly Mass Emission Rate (lbs/day)**
Total Recoverable Chromium (VI)[7]	16.3	8.1	6.46	3.21
Total Recoverable Copper	25.6	12.8	10.14	5.07
Total Recoverable Mercury	0.08	0.04	0.03	0.016
Total Recoverable Selenium	8	4	3.17	1.58
Free Cyanide	8.5	4.3	3.37	1.70
Bis(2-ethylhexyl) phthalate	15	5.9	5.94	2.34
Limits for metals that are hardness dependent were computed based on the median of effluent flows =138 mg/l[8]				

[7] The discharger may meet this limitation as total chromium.

[8] The hardness data used were from the Moreno Valley and Perris Valley RWRFs.

3. The discharge of wastewater or use of recycled water shall at all times be a filtered and subsequently disinfected wastewater that meets the following criteria:

   a. Filtered wastewater means an oxidized wastewater that meets either (1) or (2), below:

      (1) Has been coagulated and passed through natural undisturbed soils or a bed of filter media pursuant to the following:

         (a) At a rate that does not exceed 5 gallons per minute per square foot of surface area in mono, dual or mixed media gravity, up flow or pressure filtration systems, or does not exceed 2 gallons per minute per square foot of surface area in traveling bridge automatic backwash filters, based on peak dry weather design flow; and

         (b) The turbidity of the filtered wastewater does not exceed any of the following:

            i. An average of 2 Nephelometric Turbidity Unit (NTU) within a 24-hour period;

            ii. 5 NTU more than 5 percent of the time within a 24-hour period; and

            iii. 10 NTU at any time[9].

      (2) Has been passed through a microfiltration, ultrafiltration, nanofiltration, or reverse osmosis membrane so that the turbidity of the filtered wastewater does not exceed any of the following:

         (a) 0.2 NTU more than 5 percent of the time within a 24-hour period; and

         (b) 0.5 NTU at any time.

   b. Disinfected tertiary wastewater shall mean a filtered wastewater that has been disinfected and meets the following criteria:

      (1) The filtered wastewater has been disinfected by either:

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9 See Section E.7, "Compliance Determination."

(a) A chlorine disinfection process following filtration that provides a CT (the product of total chlorine residual and modal contact time measured at the same point) value of not less than 450 milligram-minutes per liter at all times with a modal contact time of at least 90 minutes[10], based on peak dry weather design flow[11]; or

(b) A disinfection process that, when combined with the filtration process, demonstrates[12] inactivation and/or removal of 99.999 percent of the plaque-forming units of F-specific bacteriophage MS-2[13], or poliovirus in the wastewater. A virus that is at least as resistant to disinfection as poliovirus may be used for purposes of the demonstration.

(2) The average weekly concentration of total coliform bacteria measured in the disinfected effluent shall not exceed an MPN of 2.2 per 100 milliliters. The average weekly concentration shall be evaluated using the median of the bacteriological results of the last seven days[14].

(3) The number of total coliform bacteria shall not exceed an MPN of 23 per 100 milliliters in more than one sample in any calendar month.

(4) The number of total coliform bacteria shall not exceed an MPN of 240 per 100 milliliters in any sample.

c. A coagulated wastewater shall be an oxidized wastewater in which colloidal and finely divided suspended matter have been destabilized and agglomerated upstream from a filter by the addition of suitable floc-forming chemicals.

d. An oxidized wastewater shall be wastewater in which the organic matter has been stabilized, is non-putrescible, and contains dissolved oxygen.

4. The discharge of any substances in concentrations toxic to animal or plant life is prohibited.

5. There shall be no visible oil and grease in the discharge.

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10 The modal contact time requirement is applicable only to the use of recycled water and not to surface water discharges.

11 "Peak Dry Weather Flow" means the arithmetic mean of the maximum peak flow rates sustained over some period of time (for example three hours) during the maximum 24-hour dry weather period. Dry weather period is defined as period of little or no rainfall.

12 Meeting the discharge limits in A.2.b. (2), (3), and (4) shall constitute the demonstration required by this sub-paragraph.

13 F-Specific bacteriophage MS-2 means a strain of a specific type of virus that infects coliform bacteria that is traceable to the American Type Culture Collection (ATCC) 15597B1) and is grown on lawns of E. coli (ATCC 15597).

14 See Section E.8, "Compliance Determination."

6. The pH of the discharge shall at all times be within the range of 6.5 and 8.5 pH units.

B. TOXICITY REQUIREMENTS

1. This Order contains no numeric limitation for toxicity. However, the discharger shall conduct chronic toxicity monitoring as specified in Monitoring and Reporting Program (M&RP) No. R8-2004-0065.

2. The discharger shall implement the accelerated monitoring as specified in Section C.4. of the Monitoring and Reporting Program (M&RP) No. R8-2004-0065 when the result of any single chronic toxicity test of the effluent exceeds 1.0 TUc.

3. The discharger shall develop an Initial Investigation Toxicity Reduction Evaluation (IITRE) work plan that describes the steps the discharger intends to follow if required by Toxicity Requirement No. 4, below. The work plan shall include at a minimum:

   a. A description of the investigation and evaluation techniques that will be used to identify potential causes/sources of the exceedance, effluent variability, and/or efficiency of the treatment system in removing toxic substances. This shall include a description of an accelerated chronic toxicity testing program.

   b. A description of the methods to be used for investigating and maximizing in-house treatment efficiency and good housekeeping practices.

   c. A description of the evaluation process to be used to determine if implementation of a more detailed TRE\TIE is necessary.

4. The discharger shall implement the IITRE work plan whenever the results of chronic toxicity tests of the effluent exceed:

   a. A two month median value of 1.0 TUc for survival or reproduction endpoint or,

   b. Any single test value of 1.7 TUc for survival endpoint.

5. The discharger shall develop a detailed Toxicity Reduction Evaluation and Toxicity Identification Evaluation (TRE/TIE) work plan that shall describe the steps the discharger intends to follow if the implemented IITRE fails to identify the cause of, or rectify, the toxicity.

6. The discharger shall use as guidance, at a minimum, EPA manuals EPA/600/2-88/070 (industrial), EPA/600/4-89-001A (municipal), EPA/600/6-91/005F (Phase I), EPA/600/R-92/080 (Phase II), and EPA-600/R-92/081 (Phase III) to identify the cause(s) of toxicity. If during the life of this Order the aforementioned EPA manuals are revised or updated, the revised/updated manuals may also be used as guidance. The detailed TRE/TIE work plan shall include:

a. Further actions to investigate and identify the cause of toxicity;

b. Actions the discharger will take to mitigate the impact of the discharge and to prevent the recurrence of toxicity; and

c. A schedule for these actions.

7. The discharger shall implement the TRE/TIE work plan if the IITRE fails to identify the cause of, or rectify, the toxicity, or if in the opinion of the Executive Officer the IITRE does not adequately address an identified toxicity problem.

8. The discharger shall assure that adequate resources are available to implement the required TRE/TIE.

C. STORM WATER REQUIREMENTS

1. Storm water[15] discharges shall not:

a. cause or contribute to a violation of any applicable water quality standards contained in the Basin Plan, or in the State or Federal regulations.

b. cause or threaten to cause pollution, contamination, or nuisance.

c. contain a hazardous substance equal to or in excess of a reportable quantity listed in 40 CFR Part 117 and/or 40 CFR Part 302.

d. adversely impact human health or the environment.

e. result in noncompliance with the lawful requirements of municipalities, counties, drainage districts, and other local agencies on storm water discharges into storm drain systems or other courses under their jurisdiction.

2. The discharger must update and implement the Storm Water Pollution Prevention Plan for the treatment facility in accordance with Attachment "A" of this Order.

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15 Storm water means storm water runoff and surface runoff and drainage.

D. RECEIVING WATER LIMITATIONS[16]

1. The discharge of wastes shall not cause a violation of any applicable water quality standards for receiving waters adopted by the Board or State Board, as required by the Clean Water Act and regulations adopted thereunder.

2. The discharge shall not cause any of the following:

   a. Coloration of the receiving waters which causes a nuisance or adversely affects beneficial uses.

   b. Deposition of oil, grease, wax or other materials in the receiving waters in concentrations which result in a visible film or in coating objects in the water, or which cause a nuisance or affect beneficial uses.

   c. An increase in the amounts of suspended or settleable solids in the receiving waters that will cause a nuisance or adversely affect beneficial uses as a result of controllable water quality factors.

   d. Taste or odor producing substances in the receiving waters at concentrations which cause a nuisance or adversely affect beneficial uses.

   e. The presence of radioactive materials in the receiving waters in concentrations which are deleterious to human, plant or animal life.

   f. The depletion of the dissolved oxygen concentration below 5.0 mg/l.

   g. The temperature of the receiving waters to be raised above 90°F (32°C) during the period of June through October, or above 78°F (26°C) during the rest of the year.

   h. The concentration of pollutants in the water column, sediments, or biota to adversely affect the beneficial uses of the receiving water. The discharge shall not result in the degradation of inland surface water communities and populations, including vertebrate, invertebrate, and plant species.

3. Pollutants not specifically mentioned and limited in this Order shall not be discharged at levels that will bioaccumulate in aquatic resources to levels which are harmful to human health.

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16 Receiving water limitations are specific interpretations of water quality objectives from applicable water quality control plans. As such they are a required part of this Order. A receiving water condition not in conformance with any of these receiving water limitations is not necessarily a violation of this Order. The Regional Board may require an investigation to determine the cause and culpability prior to asserting a violation has occurred, or requiring that corrective action be taken.

4. The discharge shall not contain constituent concentrations of mercury that will result in the bioaccumulation of methylmercury in fish flesh tissue greater than 0.3-milligram methylmercury/kilogram fish.

E. COMPLIANCE DETERMINATION

1. The "maximum daily" concentration is defined as the measurement made on any single grab sample or composite sample.

2. Compliance with average weekly and monthly discharge limitations specified under Discharge Specifications A.1.a. and A.1.d. shall be determined from the average of the analytical results of all samples collected during a calendar week or month, respectively. Where a calendar week overlaps two different months, compliance shall be determined for the month in which the week ends.

3. Compliance with the 12-month average limit under Discharge Specifications A.1.c.(1) and A.1.c.(2) shall be determined by the arithmetic mean of the last twelve monthly averages.

4. The discharger shall be deemed out of compliance with an effluent limitation if the concentration of the priority pollutant in the monitoring sample is greater than the effluent limitation.

    a. Compliance determination shall be based on the minimum level (ML)[17] specified in Attachment "A" of the Monitoring and Reporting Program No. R8-2004-0065, unless an alternative minimum level is approved by the Regional Board's Executive Officer. When there is more than one ML value for a given substance, the discharger shall select the ML value which is below the calculated effluent limitation, and use its associated analytical method, listed in Attachment "A" of the M&RP. If no ML value is below the effluent limitation, then the Regional Board will select the lowest ML value and its associated analytical method.

    b. When determining compliance with an average monthly limit and more than one sample result is available in a month, the discharger shall compute the arithmetic mean unless the data set contains one or more reported determinations of detected but not quantified (DNQ) or not detected (ND). In those cases, the discharger shall compute the median in place of the arithmetic mean in accordance with the following procedure:

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17 Minimum level is the concentration at which the entire analytical system must give a recognizable signal and acceptable point. The ML is the concentration in a sample that is equivalent to the concentration of the lowest calibration standard analyzed by a specific analytical procedure, assuming that all the method specified sample weights, volumes, and processing steps have been followed.

1) The data set shall be ranked from low to high, reported ND determinations lowest, DNQ determinations next, followed by quantified values (if any). The order of the individual ND or DNQ determinations is unimportant.

2) The median value of the data set shall be determined. If the data set has an odd number of data points, then the median is the middle value. If the data set has an even number of data points, then the median is the average of the two values around the middle unless one or both of the points are ND or DNQ, in which case the median value shall be the lower of the two data points where DNQ is lower than a value and ND is lower than DNQ. If a sample result, or the arithmetic mean or median of multiple sample results, is below the reported ML, and there is evidence that the priority pollutant is present in the effluent above an effluent limitation and the discharger conducts a pollutant minimization program (PMP)[18] (as described in Section I.6.), the discharger shall not be deemed out of compliance.

5. Compliance determinations for total chlorine residual shall be based on 99% compliance. To determine 99% compliance with the effluent limitation specified in Discharge Specification A.1.b. for total chlorine residual, the following conditions shall be satisfied:

   a. The total time during which the total chlorine residual values are above 0.1 mg/l (instantaneous maximum value) shall not exceed 7 hours and 26 minutes in any calendar month;

   b. No individual excursion from 0.1 mg/l value shall exceed 30 minutes; and

   c. No individual excursion shall exceed 2.0 mg/l.

6. Pursuant to 40 CFR 401.17, the discharger shall be in compliance with the pH limitation specified in this Order (Discharge Specifications A.6, above), provided that both of the following conditions are satisfied:

   a. The total time during which the pH values are outside the required range of 6.5-8.5 pH values shall not exceed 7 hours and 26 minutes in any calendar month; and

   b. No individual excursion from the range of pH values shall exceed 60 minutes.

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18 The goal of the PMP shall be to reduce all potential sources of a priority pollutant(s) through pollutant minimization (control) strategies, including pollution prevention measures as appropriate, to maintain the effluent concentration at or below the water quality-based effluent limitation.

7. Exceedances of the "10 NTU at any time" turbidity requirement referenced in Discharge Specifications A.3. (1)(b) iii. shall not be considered a violation of these waste discharge requirements if such exceedance does not exceed a duration of one minute. The discharger shall not be considered to be in violation of this requirement if the apparent exceedance was caused by interference with, or malfunction of, the monitoring instrument. If the discharger is using a properly operating backup turbidimeter, the reading of the backup turbidimeter shall be considered in determining whether there has been an actual noncompliance.

8. Compliance with the weekly average total coliform limit expressed in Discharge Specification A.3.b. (2) shall be based on a running median of the test results from the previous 7 days. To comply with the weekly average limit, the 7-day median MPN must not exceed 2.2 per 100 milliliters on any day during the week. However, only one violation is recorded for each week, even if the 7-day median MPN value is greater than 2.2 for more than one day in the week.

9. Compliance determinations shall be based on available analyses for the time interval associated with the effluent limitation. Where only one sample analysis is available in a specified time interval (e.g., monthly or weekly average), that sample shall serve to characterize the discharge for the entire interval. If quarterly sample results show noncompliance with the average monthly limit and that sample result is used for compliance determinations for each month of the quarter, then three separate violations of the average monthly limit shall be deemed to have occurred.

10. Compliance with a single effluent limitation which applies to a group of chemicals (e.g., PCBs), based on a single sample shall be determined by considering the concentrations of individual members of the group to be zero if the analytical response for the individual chemical falls below the method detection limit (MDL or PQL) for that chemical.

11. For non-priority pollutants, compliance based on a single sample analysis shall be determined where appropriate, as described below:

    a. When the effluent limitation is greater than or equal to the PQL, compliance shall be determined based on the effluent limitation in either single or multiple sample analyses.

    b. When the effluent limitation is less than the PQL, compliance determinations based on analysis of a single sample shall only be undertaken if the concentration of the constituent of concern in the sample is greater than or equal to the PQL.

12. For non-priority pollutants, the discharge shall be considered to be in compliance with an effluent limitation which is less than or equal to the PQL specified in Attachment "A" of M&RP No. R8-2004-0065 if the arithmetic mean of all test results for the monitoring period is less than the constituent effluent limitation. Analytical results that are less than the specified PQL shall be assigned a value of zero.

13. "Upset," means an exceptional incident in which there is unintentional and temporary noncompliance with permit effluent limitations because of factors beyond the reasonable control of the discharger. An upset does not include noncompliance to the extent caused by operational error, improperly designed treatment facilities, inadequate treatment facilities, lack of preventive maintenance, or careless or improper action. A discharger that wishes to establish the affirmative defense of an upset in an action brought for non-compliance shall demonstrate, through properly signed, contemporaneous operating logs, or other relevant evidence that:

    a. an upset occurred and that the discharger can identify the cause(s) of the upset:

    b. the permitted facility was being properly operated at the time of the upset;

    c. the discharger submitted notice of the upset as required in Section F.11, below;

    d. the discharger complied with any remedial measures required under Section H.9, below.

    e. No determination made before an action for noncompliance, such as during administrative review of claims that noncompliance was caused by an upset, is final administrative action subject to judicial review. In any enforcement proceeding, the discharger seeking to establish the occurrence of an upset has the burden of proof.

F. REQUIRED NOTICES AND REPORTS

1. Reporting Provisions:

    a. All applications, reports, or information submitted to the Regional Board shall be signed and certified in accordance with 40 CFR 122.22 except as otherwise specified by the Regional Board's Executive Officer.

    b. The discharger shall furnish, within a reasonable time, any information the Regional Board or EPA may request to determine compliance with this Order or whether cause exists for modifying, revoking and reissuing, or terminating this Order. The discharger shall also furnish to the Regional Board, upon request, copies of records required to be kept by this Order.

    c. Except for data determined to be confidential under Section 308 of the CWA, all reports prepared in accordance with the terms of this Order shall be available for public inspection at the offices of the Regional Board and the Regional Administrator of EPA. As required by the CWA, effluent data shall not be considered confidential. Knowingly making any false statements on any such report may result in the imposition of criminal penalties as provided for in Section 309 of the CWA and Section 13387 of the California Water Code.

2. By February 1, 2005, the discharger shall notify the Executive Officer of its continuous involvement with the comprehensive methylmercury investigation program currently being conducted by a group of Santa Ana River system dischargers. If the discharger discontinues its involvement with this comprehensive program, the discharger shall, within 60 days of that date, submit for the approval of the Executive Officer its plan for the annual testing of methylmercury levels in fish flesh samples collected from the Santa Ana River, upstream of, at, and downstream of the point of the River's confluence with the Temescal Creek where treatment plant treated effluent is discharged. Upon approval, the discharger shall implement the plan.

3. By February 1, 2005, the discharger shall submit an updated written description of electrical power failure safeguards. Such safeguards may include alternate power sources, standby generators, retention capacity, operating procedures, or other means. The description of the safeguards provided shall include an analysis of the frequency, duration, and impact of power failures experienced over the past year(s) of treatment plant operation on effluent quality and on the capability of the discharger to comply with the requirements of this Order. Deficiencies in present safeguards must be identified together with a plan for any necessary corrective actions. The adequacy of the safeguards and the corrective action plan (if necessary) is subject to the approval of the Executive Officer.

4. By February 1, 2005, the discharger shall submit an updated technical report on the discharger's preventive (failsafe) and contingency (response and cleanup) plans for controlling accidental discharges and for minimizing the effect of such events. This technical report may be combined with that required under Section F.2, above. The technical report shall:

    a. Identify the possible sources of accidental loss, untreated waste bypass, and contaminated drainage. Loading and storage areas, power outage, waste treatment outage, and failure of process equipment, tanks, and pipes should be considered.

    b. Evaluate the effectiveness of present facilities and procedures and state when they become operational.

    c. Describe any new facilities and procedures needed. Predict the effectiveness of the proposed facilities and procedures and provide an implementation schedule containing interim and final dates when they will be constructed, implemented, or operational.

    d. Describe proposed and completed training programs and schedules to train and familiarize plant operating personnel with the discharger's preventive (failsafe) and contingency (response and cleanup) plans for controlling accidental discharges and for minimizing the effect of such events.

5. By February 1, 2005, the discharger shall submit for approval by the Executive Officer, a report which details the manner in which sampling, monitoring and reporting will be performed as required in this Order.

6. By May 1, 2005, the discharger shall submit a copy of the Initial Investigation Toxicity Reduction Evaluation work plan specified in Toxicity Requirement B.3. of this Order.

7. By May 1, 2005, the discharger shall submit a copy of the TRE/TIE work plan specified in Toxicity Requirement B.5. of this Order.

8. The discharger shall give advance notice to the Regional Board of any planned physical alterations or additions to the permitted facility or changes in operation or activity that may result in noncompliance with these waste discharge requirements.

9. The discharger shall provide adequate notice to the Regional Board of:

    a. Any new introduction of pollutants into the POTW from an indirect discharger that would be subject to Sections 301 or 306 of the CWA if it were directly discharging those pollutants.[19]

    b. Any change in the volume or character of pollutants being introduced by an existing or new source into the treatment facility that will cause or threaten to cause a violation of this Order.

    c. Any planned changes in the discharger's biosolids use or disposal practice, or provision of additional disposal sites not reported during the permit application process.

    d. Any proposed change in the character, location, or method of disposal of the discharge, or any proposed change in ownership of the facility.

    e. All instances of noncompliance. Reports of noncompliance shall be submitted with the discharger's next scheduled self-monitoring report or earlier, as specified in this Order, or if requested by the Executive Officer, or if required by an applicable standard for biosolids use and disposal.

10. The discharger shall file with the Regional Board a Report of Waste Discharge at least 180 days before making any material change in the character, location, or volume of the discharge. A material change includes, but is not limited to, the following:

    a. Adding a major industrial waste discharge to a discharge of essentially domestic sewage, or adding a new process or product by an industrial facility resulting in a change in the character of the waste.

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19 Adequate notice shall include information on the quality and quantity of effluent introduced, and any anticipated impact of the change on the quantity or quality of the discharger's effluent and/or sludge.

b. Significantly changing the disposal method or location, such as changing the disposal to another drainage area or water body.

c. Significantly changing the method of treatment.

d. Increasing the treatment plant design capacity beyond that specified in this Order.

e. The discharger shall submit a Title 22 Engineering Report for review and approval by the Department of Health Services before making any of the material changes identified above. The Engineering Report shall be in compliance with the California Code of Regulations, Title 22, Chapter 3.

11. The discharger shall immediately report any condition related to the discharger's collection, treatment or disposal facilities that may endanger human health or the environment including any unauthorized discharge not regulated by this Order of treated, partially treated, or untreated wastewater from the discharger's collection, treatment, or disposal system in excess of 1000 gallons. All available information concerning the condition and/or unauthorized discharge shall be provided to the Executive Officer or the Executive Officer's designee (951-782-4130) and the Office of Emergency Services (1-800-852-7550), as soon as the discharger becomes aware of the circumstances. A written report shall be submitted within 5 days and shall contain a description of the condition and its cause; the duration of the condition, including exact dates and times, and, if the condition has not been corrected, the anticipated time it is expected to continue; and the steps taken or planned to reduce, eliminate, and prevent recurrence of the condition, with a schedule for their implementation. The following shall be included as information that must be reported within 24 hours under this paragraph:

a. Any unanticipated bypass that exceeds any requirement of this Order.

b. Any upset that exceeds any requirement of this Order.

c. Any violation of a maximum daily discharge limitation for any of the pollutants listed in this Order.

d. Any unauthorized discharge not regulated by this Order of treated, partially treated, or untreated wastewater resulting from the intentional or unintentional diversion of wastewater from a collection, treatment or disposal system.

e. The Executive Officer or the Executive Officer's designee may waive the above required written report on a case-by-case basis.

Discharges of less than 1000 gallons that do not endanger human health or the environment shall be reported to the Executive Officer's designee no later than the last day of the month following the month the discharges occurred.

G. PENALTIES

1. Violation of any of the provisions of the NPDES program or of any of the provisions of this Order may subject the violator to any of the penalties described under Section 309(c) of the CWA, or any subsequent amendments to Section 309(c). The violator may be subjected to any combination of the penalties described herein at the discretion of the prosecuting authority; however, only one kind of penalty may be applied for each kind of violation.

2. The CWA provides that any person who violates any portion of this Order implementing Sections 301, 302, 306, 307, 308, 318, or 405 of the CWA, or any order requirement or limitation implementing any such sections in this Order, is subject to a civil penalty not to exceed $25,000 per day for each violation. The CWA provides that any person who willfully or negligently violates this Order with regard to these sections of the CWA is subject to criminal penalties of $2,500 to $25,000 per day of violation, or imprisonment of not more than 1 year, or both. Any person who knowingly violates a provision implementing these sections is subject to criminal penalties of $5,000 to $50,000 per day of violation, or imprisonment of not more than 3 years, or both.

3. The CWA provides that any person who knowingly falsifies, tampers with, or knowingly renders inaccurate any monitoring device or method required to be maintained under this Order shall, upon conviction, be punished by a fine of not more than $10,000 per violation, or by imprisonment for not more than 2 years per violation, or by both.

4. The CWA provides that any person who knowingly makes any false statement, representation, or certification in any record or other document submitted or required to be maintained under this Order, including monitoring reports or reports of compliance or noncompliance shall, upon conviction, be punished by a fine of not more than $10,000 per violation, or by imprisonment for not more than 2 years per violation, or by both.

5. The California Water Code provides that any person who violates an order of the Regional Board is subject to civil penalties of up to $25,000 per day of violation, and when the violation involves the discharge of pollutants, additional civil penalties of up to $25 per gallon.

H. PROVISIONS

1. This Order shall serve as a National Pollutant Discharge Elimination System permit pursuant to Section 402 of the CWA, or amendments thereto, that shall become effective 10 days after the date of adoption, provided the Regional Administrator of the EPA has no objection. If the Regional Administrator objects to its issuance, this Order shall not serve as an NPDES permit until such objection is withdrawn.

2. Neither the treatment nor the discharge of waste shall create, or threaten to create, a nuisance or pollution as defined by Section 13050 of the California Water Code.

3. This Order expires November 1, 2009 and the discharger must file a Report of Waste Discharge in accordance with Title 23, Division 3, Chapter 9 of the California Code of Regulations not later than 180 days in advance of this expiration date. The Report of Waste Discharge shall serve as the application for issuance of new waste discharge requirements.

4. Order No. 99-5 as amended by Order Nos. R8-2002-0009-A01 and R8-2003-0066 is hereby rescinded.

5. The discharger shall comply with M&RP No. R8-2004-0065. This monitoring and reporting program may be modified by the Executive Officer at any time during the term of this Order to include an increase in the number of parameters to be monitored, the frequency of the monitoring or the number and size of samples to be collected. Any such modifications may be reduced back to the levels specified in the original monitoring and reporting program at the discretion of the Executive Officer.

6. The discharger shall maintain a copy of this Order at the site so that it is available to site operating personnel at all times. Key operating personnel shall be familiar with its content.

7. The discharger shall implement a Pollutant Minimization Program (PMP) when there is evidence that the priority pollutant is present in the effluent above an effluent limitation (e.g., sample results reported as detected but not quantified (DNQ) when the effluent limitation is less than the MDL, sample results from analytical methods more sensitive than those methods included in this Order, presence of whole effluent toxicity, health advisories for fish consumption, results of benthic or aquatic organism tissue sampling) and either: (i) A sample result is reported as DNQ and the effluent limitation is less than the reported ML; or (ii) A sample result is reported as ND and the effluent limitation is less than the MDL. The PMP shall include, but not be limited to, the following actions and submittals acceptable to the Regional Board:

   a. An annual review and semi-annual monitoring of potential sources of the reportable priority pollutant(s), which may include fish tissue monitoring and other bio-uptake sampling;

   b. Quarterly monitoring for the reportable priority pollutant(s) in the influent to the wastewater treatment system;

   c. Submittal of a control strategy designed to proceed toward the goal of maintaining concentrations of the reportable priority pollutant(s) in the effluent at or below the effluent limitation;

   d. Implementation of appropriate cost-effective control measures for the reportable priority pollutant(s), consistent with the control strategy; and

   e. An annual status report that shall be sent to the Regional Board including:

(1) All PMP monitoring results for the previous year;
(2) A list of potential sources of the reportable priority pollutant(s);
(3) A summary of all actions undertaken pursuant to the control strategy; and
(4) A description of actions to be taken in the following year.

8. The discharger must comply with all of the requirements of this Order. Any violation of this Order constitutes a violation of the California Water Code and may constitute a violation of the CWA and its regulations, and is grounds for enforcement action, termination of this Order, revocation and re-issuance of this Order, denial of an application for re-issuance of this Order; or a combination thereof.

9. The discharger shall take all reasonable steps to:

   a. minimize or prevent any discharge that has a reasonable likelihood of adversely affecting human health or the environment.

   b. minimize any adverse impact to receiving waters resulting from noncompliance with any requirements specified in this Order, including such accelerated or additional monitoring as necessary to determine the nature and impact of the noncomplying discharge.

10. The discharger shall provide safeguards to assure that should there be reduction, loss, or failure of electric power, the discharger will comply with the requirements of this Order.

11. The discharger shall, at all times, properly operate and maintain all facilities and systems of treatment and control including sludge use, disposal facilities, and related appurtenances which are installed or used by the discharger to achieve compliance with this Order. Proper operation and maintenance includes adequate laboratory controls, appropriate quality assurance procedures, effective performance, adequate funding, adequate staffing and training, and adequate process controls. This provision requires the operation of back up or auxiliary facilities or similar systems which are installed by a discharger only when the operation is necessary to achieve compliance with the requirements of this Order.

12. The discharger shall update as necessary, the "Operation and Maintenance Manual (O&M Manual)" which it has developed for the treatment plant to conform with latest plant changes and requirements. The O&M Manual shall be readily available to operating personnel onsite. The O&M Manual shall include the following:

   a. Description of the treatment plant table of organization showing the number of employees, duties and qualifications and plant attendance schedules (daily, weekends and holidays, part-time, etc). The description should include documentation that the personnel are knowledgeable and qualified to operate the treatment facility so as to achieve the required level of treatment at all times.

   b. Detailed description of safe and effective operation and maintenance of treatment processes, process control instrumentation and equipment.

c. Description of laboratory and quality assurance procedures.

d. Process and equipment inspection and maintenance schedules.

e. Description of safeguards to assure that, should there be reduction, loss, or failure of electric power, the discharger will be able to comply with requirements of this Order.

f. Description of preventive (fail-safe) and contingency (response and cleanup) plans for controlling accidental discharges, and for minimizing the effect of such events. These plans shall identify the possible sources (such as loading and storage areas, power outage, waste treatment unit failure, process equipment failure, tank and piping failure) of accidental discharges, untreated or partially treated waste bypass, and polluted drainage.

13. The discharge of any radiological, chemical, or biological warfare agent or high level radiological waste is prohibited.

14. The provisions of this Order are severable, and if any provision of this Order, or the application of any provisions of this Order to any circumstance, is held invalid, the application of such provision to other circumstances, and the remainder of this Order shall not be affected thereby.

15. The filing of a request by the discharger for modification, revocation and re-issuance, or termination of this Order or a notification of planned changes or anticipated noncompliance does not stay any requirements of this Order.

16. The requirements prescribed herein do not authorize the commission of any act causing injury to the property of another, nor protect the discharger from liabilities under federal, state, or local laws, nor guarantee the discharger a capacity right in the receiving waters.

17. This Order does not convey any property rights of any sort, or any exclusive privilege.

18. This Order is not transferable to any person except after notice to, and approval by the Executive Officer. The Regional Board may require modification or revocation and re-issuance of this Order to change the name of the discharger and incorporate such other requirements as may be necessary under the CWA.

19. If the discharger demonstrates a correlation between the biological oxygen demand (BOD) and total organic carbon (TOC) concentrations in the effluent to the satisfaction of the Executive Officer, compliance with the BOD limits contained in this Order may be determined based on analyses of the TOC of the effluent.

20. In the event of any change in control or ownership of land or waste discharge facility 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 forwarded to the Regional Board.

21. It shall not be a defense for a discharger in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the requirements of this Order.

22. Bypass (the intentional diversion of waste streams from any portion of a treatment facility or collection system) is prohibited unless it is permitted under the terms of this Order. The Regional Board may take enforcement action against the discharger for unpermitted bypass unless:

    a. Bypass was unavoidable to prevent loss of life, personal injury, or severe property damage. (Severe property damage means substantial physical damage to property, damage to the treatment facilities that causes them to become inoperable, or substantial and permanent loss of natural resources that can reasonably be expected to occur in the absence of a bypass. Severe property damage does not mean economic loss caused by delays in production.);

    b. There were no feasible alternatives to bypass, such as the use of auxiliary treatment facilities, retention of untreated waste, or maintenance during normal periods of equipment down time. This condition is not satisfied if adequate back-up equipment should have been installed in the exercise of reasonable engineering judgment to prevent a bypass that could occur during normal periods of equipment down time or preventive maintenance; and

    c. The discharger submitted a notice to the Regional Board at least ten days in advance of the need for a bypass. The discharger may allow a bypass to occur that does not cause effluent limitations to be exceeded, but only if the by-pass is required for essential maintenance to assure efficient operation, and neither effluent nor receiving water limitations are exceeded. In such a case, the above bypass conditions are not applicable. The discharger shall promptly notify the Regional Board and the EPA within 24 hours of each such bypass.

23. The Regional Board, EPA, and other authorized representatives shall be allowed:

    a. Entry upon premises where a regulated facility or activity is located or conducted, or where records are kept under the requirements of this Order;

    b. Access to copy any records that are kept under the requirements of this Order;

    c. To inspect any facility, equipment (including monitoring and control equipment), practices, or operations regulated or required under this Order; and

    d. To photograph, sample and monitor for the purpose of assuring compliance with this Order, or as otherwise authorized by the CWA.

I. PERMIT RE-OPENING, REVISION, REVOCATION, AND RE-ISSUANCE

1. This Order may be modified, revoked and reissued, or terminated for cause.

2. This Order may be reopened to address any changes in State or federal plans, policies or regulations that would affect the quality requirements for the discharges.

3. This Order may be reopened to include effluent limitations for pollutants determined to be present in the discharge in concentrations that pose a reasonable potential to cause or contribute to violations of water quality objectives.

4. This Order may be reopened to include an appropriate bioaccumulation based effluent limit for mercury when scientifically defensible guidance is developed to translate methylmercury in fish tissue to total mercury in effluent discharges.

5. This Order may be reopened and modified in accordance with the requirements set forth at 40 CFR 122 and 124, to include the appropriate conditions or limits to address demonstrated effluent toxicity based on newly available information, or to implement any EPA-approved new State water quality standards applicable to effluent toxicity.

6. This Order may be reopened to incorporate appropriate biosolids requirements if the State Water Resources Control Board and the Regional Water Quality Control Board are given the authority to implement regulations contained in 40 CFR 503.

I, Gerard J. Thibeault, Executive Officer, do hereby certify that the foregoing is a full, true, and correct copy of an order adopted by the California Regional Water Quality Control Board, Santa Ana Region, on November 5, 2004.

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Gerard J. Thibeault
Executive Officer

STORM WATER POLLUTION PREVENTION PLAN REQUIREMENTS

1. *Implementation Schedule*

The storm water pollution prevention plan (SWPPP) shall be updated and implemented in a timely manner, but in no case later than June 30, 2005.

2. *Objectives*

The SWPPP has two major objectives: (a) to identify and evaluate sources of pollutants associated with industrial activities that may affect the quality of storm water discharges and authorized non-storm water discharges from the facility; and (b) to identify and implement site-specific best management practices (BMPs) to reduce or prevent pollutants associated with industrial activities in storm water discharges and authorized non-storm water discharges. BMPs may include a variety of pollution prevention measures or other low-cost pollution control measures. They are generally categorized as non-structural BMPs (activity schedules, prohibitions of practices, maintenance procedures, and other low-cost measures) and as structural BMPs (treatment measures, run-off controls, over-head coverage). To achieve these objectives, dischargers should consider the five phase process for SWPPP development and implementation as shown in Table A (see page 10 of 11, below).

The SWPPP requirements are designed to be sufficiently flexible to meet the various needs of the facility. SWPPP requirements that are not applicable to the facility should not be included in the SWPPP.

A facility's SWPPP is a written document that shall contain a compliance activity schedule, a description of industrial activities and pollutant sources, descriptions of BMPs, drawings, maps, and relevant copies or references of parts of other plans. The SWPPP shall be revised whenever appropriate and shall be readily available for review by facility employees or Regional Board inspectors.

3. *Planning and Organization*

a. Pollution Prevention Team

The SWPPP shall identify a specific individual or individuals and their positions within the facility organization as members of a storm water pollution prevention team responsible for developing the SWPPP, assisting the facility manager in SWPPP implementation and revision, and conducting all monitoring program activities required in the Stormwater monitoring program of Order No. R8-2004-0065. The SWPPP shall clearly identify the storm water pollution prevention related responsibilities, duties, and activities of each team member.

b. Review Other Requirements and Existing Facility Plans

The SWPPP may incorporate or reference the appropriate elements of other regulatory requirements. The discharger shall review all local, state, and federal requirements that impact, complement, or are consistent with the requirements of Order No. R8-2004-0065. The discharger shall identify any existing facility plans that contain storm water pollutant control measures or relate to the requirements of Order No. R8-2004-0065. As examples, dischargers whose facilities are subject to Federal Spill Prevention Control and Countermeasures' requirements should already have instituted a plan to control spills of certain hazardous materials. Similarly, the discharger whose facilities are subject to air quality related permits and regulations may already have evaluated industrial activities that generate dust or particulates.

4. *Site Map*

The SWPPP shall include a site map. The site map shall be provided on an 8-1/2 x 11 inch or larger sheet and include notes, legends, and other data as appropriate to ensure that the site map is clear and understandable. If necessary, the discharger may provide the required information on multiple site maps. The following information shall be included on the site map:

a. The facility boundaries; the outline of all storm water drainage areas within the facility boundaries; portions of the drainage area impacted by run-on from surrounding areas; and direction of flow of each drainage area, on-site surface water bodies, and areas of soil erosion. The map shall also identify nearby water bodies (such as rivers, lakes, ponds) and municipal storm drain inlets where the facility's storm water discharges and authorized non-storm water discharges may be received.

b. The location of the storm water collection and conveyance system, associated points of discharge, and direction of flow. Include any structural control measures that affect storm water discharges, authorized non-storm water discharges, and run-on. Examples of structural control measures are catch basins, berms, detention ponds, secondary containment, oil/water separators, diversion barriers, etc.

c. An outline of all impervious areas of the facility, including paved areas, buildings, covered storage areas, or other roofed structures.

d. Locations where materials are directly exposed to precipitation and the locations where significant spills or leaks identified in Section 6.a.(4)., below, have occurred.

e. Areas of industrial activity. This shall include the locations of all storage areas and storage tanks, shipping and receiving areas, fueling areas, vehicle and equipment storage/maintenance areas, material handling and processing areas, waste treatment and disposal areas, dust or particulate generating areas, cleaning and rinsing areas, and other areas of industrial activity which are potential pollutant sources.

5. *List of Significant Materials*

The SWPPP shall include a list of significant materials handled and stored at the site. For each material on the list, describe the locations where the material is being stored, received, shipped, and handled, as well as the typical quantities and frequency. Materials shall include raw materials, intermediate products, final or finished products, recycled materials, and waste or disposed materials.

6. *Description of Potential Pollutant Sources*

a. The SWPPP shall include a narrative description of the facility's industrial activities, as identified in Section 4.e., above, associated potential pollutant sources, and potential pollutants that could be discharged in storm water discharges or authorized non-storm water discharges. At a minimum, the following items related to a facility's industrial activities shall be considered:

(1) Industrial Processes

Describe each industrial process, the type, characteristics, and quantity of significant materials used in or resulting from the process, and a description of the processes (manufacturing or treatment), cleaning, rinsing, recycling, disposal, or other activities related to the process. Where applicable, areas protected by containment structures and the corresponding containment capacity shall be described.

(2) Material Handling and Storage Areas

Describe each handling and storage area, type, characteristics, and quantity of significant materials handled or stored, description of the shipping, receiving, and loading procedures, and the spill or leak prevention and response procedures. Where applicable, areas protected by containment structures and the corresponding containment capacity shall be described.

(3) Dust and Particulate Generating Activities

Describe all industrial activities that generate dust or particulates that may be deposited within the facility's boundaries and identify their discharge locations; the characteristics of dust and particulate pollutants; the approximate quantity of dust and particulate pollutants that may be deposited within the facility boundaries; and a description of the primary areas of the facility where dust and particulate pollutants would settle.

(4) Significant Spills and Leaks

Describe materials that have spilled or leaked in significant quantities in storm water discharges or non-storm water discharges. Include toxic chemicals (listed in 40 Code of Federal Regulations [CFR] Part 302) that have been discharged to storm water as reported on U.S. Environmental Protection Agency (U.S. EPA) Form R, and oil and hazardous substances in excess of reportable quantities (see 40 CFR, Parts 110, 117, and 302).

The description shall include the type, characteristics, and approximate quantity of the material spilled or leaked, the cleanup or remedial actions that have occurred or are planned, the approximate remaining quantity of materials that may be exposed to storm water or non-storm water discharges, and the preventative measures taken to ensure spills or leaks do not reoccur. Such list shall be updated as appropriate during the term of Order No. R8-2004-0065.

(5) Non-Storm Water Discharges

The discharger shall investigate the facility to identify all non-storm water discharges and their sources. As part of this investigation, all drains (inlets and outlets) shall be evaluated to identify whether they connect to the storm drain system.

All non-storm water discharges shall be described. This shall include the source, quantity, frequency, and characteristics of the non-storm water discharges and associated drainage area.

Non-storm water discharges that contain significant quantities of pollutants or that do not meet the conditions of Order No. R8-2004-0065 are prohibited. (Examples of prohibited non-storm water discharges are contact and non-contact cooling water, boiler blowdown, rinse water, wash water, etc.). The SWPPP must include BMPs to prevent or reduce contact of non-storm water discharges with significant materials or equipment.

(6) Soil Erosion

Describe the facility locations where soil erosion may occur as a result of industrial activity, storm water discharges associated with industrial activity, or authorized non-storm water discharges.

b. The SWPPP shall include a summary of all areas of industrial activities, potential pollutant sources, and potential pollutants. This information should be summarized similar to Table B (see page 11 of 11, below). The last column of Table B, "Control Practices", should be completed in accordance with Section 8., below.

7. <u>*Assessment of Potential Pollutant Sources*</u>

a. The SWPPP shall include a narrative assessment of all industrial activities and potential pollutant sources as described in Section 6., above, to determine:

(1) Which areas of the facility are likely sources of pollutants in storm water discharges and authorized non-storm water discharges, and

(2) Which pollutants are likely to be present in storm water discharges and authorized non-storm water discharges. The discharger shall consider and evaluate various factors when performing this assessment such as current storm water BMPs; quantities of significant materials handled, produced, stored, or disposed of; likelihood of exposure to storm water or authorized non-storm water discharges; history of spill or leaks; and run-on from outside sources.

b. The discharger shall summarize the areas of the facility that are likely sources of pollutants and the corresponding pollutants that are likely to be present in storm water discharges and authorized non-storm water discharges.

The discharger is required to develop and implement additional BMPs as appropriate and necessary to prevent or reduce pollutants associated with each pollutant source. The BMPs will be narratively described in Section 8., below.

8. *Storm Water Best Management Practices*

The SWPPP shall include a narrative description of the storm water BMPs to be implemented at the facility for each potential pollutant and its source identified in the site assessment phase (Sections 6. and 7., above). The BMPs shall be developed and implemented to reduce or prevent pollutants in storm water discharges and authorized non-storm water discharges. Each pollutant and its source may require one or more BMPs. Some BMPs may be implemented for multiple pollutants and their sources, while other BMPs will be implemented for a very specific pollutant and its source.

The description of the BMPs shall identify the BMPs as (1) existing BMPs, (2) existing BMPs to be revised and implemented, or (3) new BMPs to be implemented. The description shall also include a discussion on the effectiveness of each BMP to reduce or prevent pollutants in storm water discharges and authorized non-storm water discharges. The SWPPP shall provide a summary of all BMPs implemented for each pollutant source. This information should be summarized similar to Table B.

The discharger shall consider the following BMPs for implementation at the facility:

a. Non-Structural BMPs: Non-structural BMPs generally consist of processes, prohibitions, procedures, schedule of activities, etc., that prevent pollutants associated with industrial activity from contacting with storm water discharges and authorized non-storm water discharges. They are considered low technology, cost-effective measures. The discharger should consider all possible non-structural BMPs options before considering additional structural BMPs (see Section 8.b., below). Below is a list of non-structural BMPs that should be considered:

(1) Good Housekeeping: Good housekeeping generally consist of practical procedures to maintain a clean and orderly facility.

(2) Preventive Maintenance: Preventive maintenance includes the regular inspection and maintenance of structural storm water controls (catch basins, oil/water separators, etc.) as well as other facility equipment and systems.

(3) Spill Response: This includes spill clean-up procedures and necessary clean-up equipment based upon the quantities and locations of significant materials that may spill or leak.

(4) Material Handling and Storage: This includes all procedures to minimize the potential for spills and leaks and to minimize exposure of significant materials to storm water and authorized non-storm water discharges.

(5) Employee Training: This includes training of personnel who are responsible for (a) implementing activities identified in the SWPPP, (b) conducting inspections, sampling, and visual observations, and (c) managing storm water. Training should address topics such as spill response, good housekeeping, and material handling procedures, and actions necessary to implement all BMPs identified in the SWPPP. The SWPPP shall identify periodic dates for such training. Records shall be maintained of all training sessions held.

(6) Waste Handling/Recycling: This includes the procedures or processes to handle, store, or dispose of waste materials or recyclable materials.

(7) Record Keeping and Internal Reporting: This includes the procedures to ensure that all records of inspections, spills, maintenance activities, corrective actions, visual observations, etc., are developed, retained, and provided, as necessary, to the appropriate facility personnel.

(8) Erosion Control and Site Stabilization: This includes a description of all sediment and erosion control activities. This may include the planting and maintenance of vegetation, diversion of run-on and runoff, placement of sandbags, silt screens, or other sediment control devices, etc.

(9) Inspections: This includes, in addition to the preventative maintenance inspections identified above, an inspection schedule of all potential pollutant sources. Tracking and follow-up procedures shall be described to ensure adequate corrective actions are taken and SWPPPs are made.

(10) Quality Assurance: This includes the procedures to ensure that all elements of the SWPPP and Monitoring Program are adequately conducted.

b. Structural BMPs: Where non-structural BMPs as identified in Section 8.a., above, are not effective, structural BMPs shall be considered. Structural BMPs generally consist of structural devices that reduce or prevent pollutants in storm water discharges and authorized non-storm water discharges. Below is a list of structural BMPs that should be considered:

(1) Overhead Coverage: This includes structures that provide horizontal coverage of materials, chemicals, and pollutant sources from contact with storm water and authorized non-storm water discharges.

(2) Retention Ponds: This includes basins, ponds, surface impoundments, bermed areas, etc., that do not allow storm water to discharge from the facility.

(3) Control Devices: This includes berms or other devices that channel or route run-on and runoff away from pollutant sources.

(4) Secondary Containment Structures: This generally includes containment structures around storage tanks and other areas for the purpose of collecting any leaks or spills.

(5) Treatment: This includes inlet controls, infiltration devices, oil/water separators, detention ponds, vegetative swales, etc., that reduce the pollutants in storm water discharges and authorized non-storm water discharges.

9. *Annual Comprehensive Site Compliance Evaluation*

The discharger shall conduct one comprehensive site compliance evaluation in each reporting period (July 1-June 30). Evaluations shall be conducted within 8-16 months of each other. The SWPPP shall be revised, as appropriate, and the revisions implemented within 90 days of the evaluation. Evaluations shall include the following:

a. A review of all visual observation records, inspection records, and sampling and analysis results.

b. A visual inspection of all potential pollutant sources for evidence of, or the potential for, pollutants entering the drainage system.

c. A review and evaluation of all BMPs (both structural and non-structural) to determine whether the BMPs are adequate, properly implemented and maintained, or whether additional BMPs are needed. A visual inspection of equipment needed to implement the SWPPP, such as spill response equipment, shall be included.

d. An evaluation report that includes, (1) identification of personnel performing the evaluation, (2) the date(s) of the evaluation, (3) necessary SWPPP revisions, (4) schedule, as required in Section 10.e, below, for implementing SWPPP revisions, (5) any incidents of non-compliance and the corrective actions taken, and (6) a certification that the discharger is in compliance with Order No. R8-2004-0065. If the above certification cannot be provided, explain in the evaluation report why the discharger is not in compliance with this order. The evaluation report shall be submitted as part of the annual report, retained for at least five years, and signed and certified in accordance with Section E.1. "Required Notices and Reports" of Order No. R8-2004-0065.

10. *SWPPP General Requirements*

a. The SWPPP shall be retained on site and made available upon request by a representative of the Regional Board and/or local storm water management agency (local agency) which receives the storm water discharges.

b. The Regional Board and/or local agency may notify the discharger when the SWPPP does not meet one or more of the minimum requirements of this section. As requested by the Regional Board and/or local agency, the discharger shall submit a SWPPP revision and implementation schedule that meets the minimum requirements of this section to the Regional Board and/or local agency that requested the SWPPP revisions. Within 14 days after implementing the required SWPPP revisions, the discharger shall provide written certification to the Regional Board and/or local agency that the revisions have been implemented.

c. The SWPPP shall be revised, as appropriate, and implemented prior to changes in industrial activities which (1) may significantly increase the quantities of pollutants in storm water discharge, (2) cause a new area of industrial activity at the facility to be exposed to storm water, or (3) begin an industrial activity which would introduce a new pollutant source at the facility.

d. The SWPPP shall be revised and implemented in a timely manner, but in no case more than 90 days after a discharger determines that the SWPPP is in violation of any requirement(s) of Order No. R8-2004-0065.

e. When any part of the SWPPP is infeasible to implement by the deadlines specified in Order No. R8-2004-0065, due to proposed significant structural changes, the discharger shall submit a report to the Regional Board prior to the applicable deadline that (1) describes the portion of the SWPPP that is infeasible to implement by the deadline, (2) provides justification for a time extension, (3) provides a schedule for completing and implementing that portion of the SWPPP, and (4) describes the BMPs that will be implemented in the interim period to reduce or prevent pollutants in storm water discharges and authorized non-storm water discharges. Such reports are subject to Regional Board approval and/or modifications. The discharger shall provide written notification to the Regional Board within 14 days after the SWPPP revisions are implemented.

f. The SWPPP shall be provided, upon request, to the Regional Board. The SWPPP is considered a report that shall be available to the public by the Regional Board under Section 308(b) of the Clean Water Act.

TABLE A

FIVE PHASES FOR DEVELOPING AND IMPLEMENTING INDUSTRIAL STORM WATER POLLUTION PREVENTION PLANS

PLANNING AND ORGANIZATION

*Form pollution prevention team
*Review other plans

ASSESSMENT PHASE

*Develop a site map
*Identify potential pollutant sources
*Inventory of materials and chemicals
*List significant spills and leaks
*Identify non-storm water discharges
*Assess pollutant risks

BEST MANAGEMENT PRACTICES IDENTIFICATION PHASE

*Non-structural BMPs
*Structural BMPs
*Select activity and site-specific BMPs

IMPLEMENTATION PHASE

*Train employees
*Implement BMPs
*Conduct record keeping and reporting

EVALUATION / MONITORING

*Conduct annual site evaluation
*Review monitoring information
*Evaluate BMPs
*Review and revise SWPPP

TABLE B

EXAMPLE

ASSESSMENT OF POTENTIAL POLLUTION SOURCES AND CORRESPONDING BEST MANAGEMENT PRACTICES SUMMARY

AREA	ACTIVITY	POLLUTANT SOURCE	POLLUTANT	BEST MANAGEMENT PRACTICES
Vehicle & equipment fueling	Fueling	Spills and leaks during delivery	Fuel oil	- Use spill and overflow protection - Minimize run-on of storm water into the fueling area - Cover fueling area - Use dry cleanup methods rather than hosing down area - Implement proper spill prevention control program - Implement adequate preventative maintenance program to prevent tank and line leaks - Inspect fueling areas regularly to detect problems before they occur - Train employees on proper fueling, cleanup, and spill response techniques.
		Spills caused by topping off fuel oil	Fuel oil	
		Hosing or washing down fuel area	Fuel oil	
		Leaking storage tanks	Fuel oil	
		Rainfall running off fueling areas, and rainfall running onto and off fueling area	Fuel oil	

California Regional Water Quality Control Board
Santa Ana Region

Monitoring and Reporting Program (M&RP) No. R8-2004-0065
NPDES No. CA8000188
For
Eastern Municipal Water District
Temescal Creek Discharge
Riverside County

A. MONITORING AND REPORTING REQUIREMENTS

1. All sampling and sample preservation shall be in accordance with the current edition of "*Standard Methods for the Examination of Water and Wastewater*" (American Public Health Association).

2. All laboratory analyses shall be performed in accordance with test procedures under 40 CFR 136 (latest edition) "*Guidelines Establishing Test Procedures for the Analysis of Pollutants*," promulgated by the United States Environmental Protection Agency (EPA), unless otherwise specified in this monitoring and reporting program (M&RP). In addition, the Regional Board and/or EPA, at their discretion, may specify test methods which are more sensitive than those specified in 40 CFR 136.

3. Chemical, bacteriological, and bioassay analyses shall be conducted at a laboratory certified for such analyses by the California Department of Health Services or EPA or at laboratories approved by the Regional Board's Executive Officer.

4. In conformance with federal regulations 40 CFR 122.45(c), analyses to determine compliance with the effluent limitations for metals shall be conducted using the total recoverable method. For Chromium (VI), the dissolved method in conformance with 40 CFR 136 may be used to measure compliance with the Chromium (VI) limitation.

5. For effluent and ambient receiving water monitoring:

   a. The discharger shall require its testing laboratory to calibrate the analytical system down to the minimum level (ML)[1] specified in Attachment "A" for priority pollutants with effluent limitations in this Order, unless an alternative minimum level is approved by the Regional Board's Executive Officer. When there is more than one ML value for a given substance, the discharger shall use the ML values, and their associated analytical methods, listed in Attachment "A" that are below the calculated effluent limitation. The discharger may select any one of those cited analytical methods for compliance determination. If no ML value is below the effluent limitation, then the lowest ML value, and its associated analytical method, listed in Attachment "A" shall be used. Any internal quality control data associated with the sample must be reported when requested by the

TENTATIVE

[1] Minimum level is the concentration at which the entire analytical system must give a recognizable signal and acceptable point. The ML is the concentration in a sample that is equivalent to the concentration of the lowest calibration standard analyzed by a specific analytical procedure, assuming that all the method specified sample weights, volumes, and processing steps have been followed.

Executive Officer. The Regional Board will reject the quantified laboratory data if quality control data is unavailable or unacceptable.

b. The discharger shall report the results of analytical determinations for the presence of chemical constituents in a sample using the following reporting protocols:

1) Sample results greater than or equal to the reported ML shall be reported as measured by the laboratory (i.e., the measured chemical concentration in the sample).

2) Sample results less than the reported ML, but greater than or equal to the laboratory's current Method Detection Limit (MDL)[2], shall be reported as "Detected, but Not Quantified," or "DNQ." The estimated chemical concentration of the sample shall also be reported.

3) Sample results not detected above the laboratory's MDL shall be reported as "not detected" or "ND."

c. The discharger shall submit to the Regional Board reports necessary to determine compliance with effluent limitations for priority pollutants in this Order and shall follow the chemical nomenclature and sequential order of constituents shown in Attachment "B" – Priority Pollutant Lists. The discharger shall report with each sample result:

1) The ML or PQL[3] listed in Attachment "C" achieved by the testing laboratory; and
2) The laboratory's current MDL, as determined by the procedure found in 40 CFR 136 (revised as of May 14, 1999).

d. For receiving water monitoring and for those priority pollutants without effluent limitations, the discharger shall require its testing laboratory to quantify constituent concentrations to the lowest achievable MDL as determined by the procedure found in 40 CFR 136 (revised as of May 14, 1999). In situations where the most stringent applicable receiving water objective (freshwater or human health (consumption of organisms only), as specified for that pollutant in 40 CFR 131.38[4]) is below the minimum level value specified in Attachment "A" and the discharger cannot achieve an MDL value for that pollutant below the ML value, the discharger shall submit justification why a lower MDL value cannot be achieved. Justification shall be submitted together with monthly monitoring reports.

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2 MDL is the minimum concentration of a substance that can be measured and reported with 99 percent confidence that the analytical concentration is greater than zero, as defined in 40 CFR 136, Appendix B, revised as of May 14, 1999.

3 PQL is the lowest concentration of a substance that can be determined within ± 20 percent of the true concentration by 75 percent of the analytical laboratories tested in a performance evaluation study. Alternatively, if performance data are not available, the PQL is the method detection limit (MDL) x 5 for carcinogens and MDL x 10 for noncarcinogens.

4 See Federal Register/ Vol. 65, No. 97 / Thursday, May 18, 2000 / Rules and Regulations.

6. For non-priority pollutants monitoring, all analytical data shall be reported with identification of practical quantitation levels and with method detection limits, as determined by the procedure found in 40 CFR 136 (revised as of May 14, 1999).

7. The discharger shall have and implement an acceptable written quality assurance (QA) plan for laboratory analyses. Duplicate chemical analyses must be conducted on a minimum of ten percent (10%) of the samples, or at least one sample per month, whichever is greater. A similar frequency shall be maintained for analyzing spiked samples. When requested by the Regional Board or EPA, the discharger will participate in the NPDES discharge monitoring report QA performance study.

8. Discharge monitoring data shall be submitted in a format acceptable by the Regional Board and EPA. Specific reporting format may include preprinted forms and/or electronic media. The results of all monitoring required by this Order shall be reported to the Regional Board, and shall be submitted in such a format as to allow direct comparison with the limitations and requirements of this Order. The hard copy of submitted reports shall serve as the official submittal.

9. The discharger shall tabulate the monitoring data to clearly illustrate compliance and/or noncompliance with the requirements of the Order.

10. For every item of monitoring data where the requirements are not met, the monitoring report shall include a statement discussing the reasons for noncompliance, the actions undertaken or proposed that will bring the discharge into full compliance with requirements at the earliest time, and an estimate of the date when the discharger will be in compliance. The discharger shall notify the Regional Board by letter when compliance with the time schedule has been achieved.

11. By April 1 of each year, the discharger shall submit an annual report to the Regional Board. The report shall contain both tabular and graphical summaries of the monitoring data obtained during the previous year. In addition, the discharger shall discuss the compliance record and the corrective actions taken or planned, which may be needed to bring the discharge into full compliance with the waste discharge requirements. The annual report shall include a summary of the quality assurance (QA) activities for the previous year.

12. The discharger shall assure that records of all monitoring information are maintained and accessible for a period of at least five years from the date of the sample, report, or application. This period of retention shall be extended during the course of any unresolved litigation regarding this discharge or by the request of the Regional Board at any time. Records of monitoring information shall include:

    a. The date, exact place, and time of sampling or measurements;

    b. The individual(s) who performed the sampling, and/or measurements;

    c. The laboratory which performed the analyses;

    d. The date(s) analyses were performed;

    e. The individual(s) who performed the analyses;

f. The analytical techniques or methods used, including any modification to those methods;

g. All sampling and analytical results, including

1) units of measurement used;
2) minimum reporting limit for the analysis (minimum level, practical quantitation level (PQL));
3) results less than the reporting limit but above the method detection limit (MDL);
4) data qualifiers and a description of the qualifiers;
5) quality control test results (and a written copy of the laboratory quality assurance plan);
6) dilution factors, if used; and
7) sample matrix type; and

h. All monitoring equipment calibration and maintenance records;

i. All original strip charts from continuous monitoring devices;

j. All data used to complete the application for this Order; and,

k. Copies of all reports required by this Order.

l. Electronic data and information generated by the Supervisory Control And Data Acquisition (SCADA) System.

13. The flow measurement system shall be calibrated at least once per year or more frequently, to ensure continued accuracy.

14. All monitoring instruments and devices used by the discharger to fulfill the prescribed monitoring program shall be properly maintained and calibrated as necessary to ensure their continued accuracy. In the event that continuous monitoring equipment is out of service for greater than a 24-hour period, the discharger shall obtain a representative grab sample each day the equipment is out of service. The discharger shall correct the cause(s) of failure of the continuous monitoring equipment as soon as practicable. In its monitoring report, the discharger shall specify the period(s) during which the equipment was out of service and if the problem has not been corrected, shall identify the steps which the discharger is taking or proposes to take to bring the equipment back into service and the schedule for these actions.

15. Monitoring and reporting shall be in accordance with the following:

a. Samples and measurements taken for the purpose of monitoring shall be representative of the monitored activity.

b. The monitoring and reporting of influent, effluent, and sludge shall be done, at a minimum, on an annual basis, and more frequently, depending on the nature and effect of the sewage sludge use or disposal practice, or as specified in this Order.

c. All monitoring, including that of sludge use or disposal, must be conducted according to test procedures approved under 40 CFR 136 or as specified in this Order.

Report	***Reporting***	***Report Due Date***
Storm Water Monitoring Reports	Annually	July 1, each year
Annual Monitoring Report	Annually	April 30 of each year

2. The following reports shall also be submitted by the dates indicated:

REQUIRED REPORTS OF ORDER NO. R8-2004-0065	
Report	**Report Due Date**
Report per Section F.2.	February 1, 2005
Report per Section F.3.	February 1, 2005
Report per Section F.4.	February 1, 2005
Report per Section F.5.	February 1, 2005
Report per Section F.6.	May 1, 2005
Report per Section F.7.	May 1, 2005
Report per Section F.8.	See Section F. 8. of the Order
Report per Section F.9.	See Section F. 9. of the Order
Report per Section F.10.	180-days before any plant changes (See Section F.10. of the Order)
Non-compliance Reporting per Section F.11.	Within 24-hours followed by a written report within 5-working days (see Section F.11. of the Order)
This table attempts to summarize all of the special reports that are required to be submitted in accordance with Order No. R8-2004-0065; however, the omission of a report from this table does not absolve the discharger from the requirement to submit that report.	

Ordered by_____

Gerard J. Thibeault
Executive Officer

November 5, 2004

d. The results of any analysis of samples taken more frequently than required at the locations specified in this M&RP shall be reported to the Regional Board.

e. A "grab" sample is defined as any individual sample collected in less than 15 minutes.

f. A composite sample is defined as a combination of no fewer than eight individual grab samples obtained over the specified sampling period. The volume of each individual grab sample shall be proportional to the discharge flow rate at the time of sampling. The compositing period shall equal the specific sampling period, or 24 hours, if no period is specified.

g. Daily samples shall be collected on each day of the week.

h. Monthly samples shall be collected on any representative day of each month.

i. Semi-annual samples shall be collected in June and December.

j. Annual samples shall be collected during the first discharge of each calendar year.

16. All reports shall be signed by either a principal executive officer or ranking elected or appointed official or a duly authorized representative of a principal executive officer or ranking elected or appointed official. A duly authorized representative of a principal executive officer or ranking elected or appointed official may sign the reports only if;

a. The authorization is made in writing by a principal executive officer or ranking elected or appointed official,

b. The authorization specifies either an individual or a position having responsibility for the overall operation of the regulated facility or activity, such as the position of plant manager, superintendent, or position of equivalent responsibility. (A duly authorized representative may thus be either a named individual or any individual occupying a named position), and

c. The written authorization is submitted to the Regional Board.

Each person signing a report required by this Order or other information requested by the Regional Board shall make the following certification:

"I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate[5], and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations."

17. The discharger, unless otherwise specified elsewhere in this M&RP, shall deliver a copy of each monitoring report in the appropriate format to:

    a. California Regional Water Quality Control Board
    Santa Ana Region
    3737 Main Street, Suite 500
    Riverside, CA 92501-3348, and

    b. NPDES/DMR
    CWA Compliance Office, WTR-7
    Water Division
    75 Hawthorne Street
    San Francisco, CA 94105

B. EFFLUENT MONITORING

1. Sampling stations shall be established where representative samples of the effluent can be obtained. Samples for coliform and turbidity shall be taken at the discharge point of each RWRF. Samples for toxicity shall be collected at the point of discharge to Temescal Creek. Samples for all other constituents shall be collected at the Sun City pump station. The date and time of sampling (as appropriate) shall be reported with the analytical values determined.

2. The following shall constitute the effluent monitoring program:

Constituent	Units	Type of Sample	Minimum Frequency of Sampling & Analysis
Flow	mgd	Recorder/Totalizer	Continuous
Specific Conductance	µmhos/cm	Recorder	"
pH	pH units	"	"
Chlorine (Combined Residual)	mg/l	Recorder	Continuous
Turbidity	NTU[6]	"	"

5 For the purposes of this certification the term "accurate" refers to the veracity of the information submittal and not to the performance characteristics of the measurement system.

6 NTU = Nephelometric Turbidity Units.

Constituent	Units	Type of Sample	Minimum Frequency of Sampling & Analysis
BOD_5	mg/l	Composite	Daily
Suspended Solids	"	"	"
Ammonia-Nitrogen	"	"	"
Coliform Organisms	MPN/100mL[7]	Grab	Daily (See note (2), below)
Toxicity Monitoring	TUc	(See Section C., below)	(See Section C., below)
Bicarbonate	mg/l	24-hr Composite	Monthly
Boron	"	"	"
Calcium	"	"	"
Carbonate	"	"	"
Chloride	"	"	"
Fluoride	"	"	"
Magnesium	mg/l	24-hr Composite	Monthly
Nitrate (as Nitrogen)	"	"	"
Sodium	"	"	"
Sulfate	"	"	"
Total Dissolved Solids	"	"	"
Total Hardness	"	"	"
Total Inorganic Nitrogen	"	"	"
Iron	"	"	"
Manganese	"	"	"
Total Recoverable Cadmium	µg/l	"	"
Chromium VI or Total Chromium	"	"	"
Total Recoverable Copper	"	"	"
Cyanide (free)	"	Grab	"
Chloroform	"	"	"
Halomethanes[8]	"	"	"
Antimony	"	Composite	"
Thallium	"	"	"
Total Recoverable Lead	"	"	"
Total Recoverable Mercury	"	"	"
Total Recoverable Selenium	"	"	"
Total Recoverable Silver	"	"	"
Total Recoverable Zinc	"	"	"

7 MPN/100mL = Most Probable Number per 100 milliliters

8 Halomethanes shall mean the sum of bromoform, bromomethane (methyl bromide), chloromethane (methyl chloride), chlorodibromomethane, and dichlorobromomethane.

Constituent	Units	Type of Sample	Minimum Frequency of Sampling & Analysis
Hexachlorocyclohexane: alpha, beta, and gamma	µg/l	Composite	Monthly
Perchlorate		Grab	Annually
Remaining EPA Priority Pollutants[8] (See Attachment "B"[9])	µg/l	Composite	Annually

Notes:

(1) Turbidity analysis shall be continuous, performed by a continuous recording turbidimeter. In the case of equipment failure for continuous monitoring devices for pH and turbidity, compliance with the effluent limits shall be determined by averaging the levels of grab samples taken at a minimum of four-hour intervals over a 24-hour period. The results of the daily average turbidity determinations shall be reported monthly.

(2) Samples for total coliform bacteria shall be collected at least daily. Samples shall be taken from the disinfected effluent.

(3) CT shall be calculated based on one-hour peak flow within 24-hour period and corresponding chlorine residual at that time.

(4) Modal contact time and filter loading rate shall be calculated based on one-hour peak flow within 24-hour period.

3. The monitoring frequency for those priority pollutants that are detected during the required annual monitoring at a concentration greater than fifty percent of the most stringent applicable receiving water objectives (freshwater or human health (consumption of organisms only) as specified for that pollutant[10] in 40 CFR 131.38[11]) shall be accelerated to quarterly for one year following detection. To return to the monitoring frequency specified, the discharger shall request and receive approval from the Regional Board's Executive Officer or designee.

4. The monitoring frequency for this pollutant shall be reduced to quarterly if after three consequent monitorings there is no detected (ND) value (4 µg/l). To reduce the monitoring frequency to quarterly, the discharger shall request and receive approval from the Regional Board's Executive Officer or designee.

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9 TCDD not required to be monitored.

10 For those priority pollutants without specified criteria values, accelerated monitoring is not required.

11 See Federal Register/ Vol. 65, No. 97 / Thursday, May 18, 2000 / Rules and Regulations.

C. TOXICITY MONITORING REQUIREMENTS

1. The discharger shall conduct critical life stage chronic toxicity testing in accordance with Method 1002.0 - Survival and Reproduction test for water flea, Ceriodaphnia dubia as specified in "Short-term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to Freshwater Organisms", Fourth Edition, Environmental Monitoring Systems Laboratory, U.S. Environmental Protection Agency 2002, Cincinnati, Ohio (October 2002, EPA-821-R-02-013).

2. The discharger shall establish procedures to ensure that the toxicity testing laboratory notifies the discharger of the results of toxicity testing within twenty-four hours of completing such tests.

3. A minimum of one monthly chronic toxicity test shall be conducted on 24-hour composite samples.

4. The discharger shall increase the frequency of chronic toxicity testing to every two weeks whenever any test result exceeds 1.0 TUc. The first test under the accelerated schedule shall be conducted within two weeks of receiving notice of the test which exceeds 1.0 TUc, and every two weeks thereafter. The discharger may resume the regular test schedule when two consecutive chronic toxicity tests result in 1.0 TUc, or when the results of the Initial Investigation Reduction Evaluation conducted by the discharger have adequately addressed the identified toxicity problem.

5. 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.

6. Results for both survival and reproduction endpoints shall be reported in TUc, where TUc = 100/NOEC or $100/IC_p$ or EC_p (p is the percent effluent). The no observed effect concentration (NOEC) is the highest concentration of toxicant to which organisms are exposed in a chronic test, that causes no observable adverse effect on the tests organisms (e.g., the highest concentration of toxicant to which the values for the observed responses are not statistically significant different from the controls). The inhibition concentration (IC) is a point estimate of the toxicant concentration that causes a given percent reduction in a non-quantal biological measurement (e.g., reproduction or growth) calculated from a continuous model (the EPA Interpolation Method). The effective concentration (EC) is a point estimate of the toxicant concentration that would cause a given percent reduction in quantal biological measurement (e.g., larval development, survival) calculated from a continuous model (e.g., probit).

7. Additional Testing Requirements.

   a. A series of at least five dilutions and a control will be tested. The series shall be within 60% to 100% effluent concentration.

   b. If organisms are not cultured in-house, concurrent testing with reference toxicants shall be conducted. Where organisms are cultured in-house, monthly reference toxicant testing is sufficient. Reference toxicants shall also be conducted using the same test conditions as the effluent toxicity test (e.g., same test duration, etc).

   c. If either of the reference toxicant test or the effluent tests do not meet all test acceptability criteria as specified in the manual[12], then the discharger must re-sample and re-test within 14 days or as soon as the discharger receives notification of failed tests.

   d. Control and dilution water should be receiving water or lab water, as appropriate, as described in the manual. If the dilution water used is different from the culture water, a second control, using culture water shall also be used.

8. Quality Assurance/Control:

   a. A quality assurance/quality control (QA/QC) program shall be instituted to verify the results of the effluent toxicity monitoring program. The QA/QC program shall include but shall not be limited to the following: (1) Selection of an independent testing laboratory; (2) Approval by the Regional Board's Executive Officer or Executive Officer's designee of the independent testing laboratory; (3) Once during the year, the discharger shall split samples with the independent laboratory for conducting chronic toxicity testing; (4) Results from the independent laboratory shall be submitted to the Regional Board and the discharger for evaluation; (5) The discharger shall review the test acceptability criteria in accordance with the EPA test protocols, EPA-821-R-02-013.

   b. Results from the independent laboratory of the annual QA/QC split samples are to be used for Quality Assurance/Quality Control (QA/QC) purposes only and not for purposes of determining compliance with other requirements of this Order.

9. The use of alternative methods for measuring chronic toxicity may be considered by the Executive Officer on a case–by-case basis. The use of a different test species, in lieu of conducting the required test species may be considered/approved by the Executive Officer on a case-by case basis upon submittal of the documentation supporting discharger's determination that a different species is more sensitive and appropriate.

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12 Refers to USEPA Manual "Short-Term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to Freshwater Organisms. Fourth Edition. EPA-821-R-02-013.

10. Reporting: Results of all toxicity testing conducted within the month following the reporting period shall be submitted monthly in accordance with "Short-term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to Freshwater Organisms", Fourth Edition, Environmental Monitoring Systems Laboratory, U.S. Environmental Protection Agency 2002, Cincinnati, Ohio (October 2002, EPA-821-R-02-013). The report shall include a determination of the median value of all chronic toxicity testing results conducted during the two previous months.

11. Whenever an Initial Investigation Reduction Evaluation is conducted, the results of the evaluation shall be submitted upon completion. In addition, monthly status reports shall be submitted as part of the discharger's monitoring report for the previous month.

D. STORM WATER MONITORING:

For storm water discharges, the discharger shall comply with the monitoring and reporting requirements as outlined in Attachment "D".

E. RECEIVING WATER MONITORING

1. Unless otherwise directed by the Regional Board Executive Officer, the discharger shall implement the approved plan for the annual sampling and testing of mercury levels in fish flesh samples collected from the Santa Ana River (see Section F.2. of the Order). The frequency of monitoring and submission of reports shall be as stipulated in the approved plan.

F. REPORTING

1. Monitoring reports shall be submitted by the dates in the following schedule:

Report	***Reporting***	***Report Due Date***
Continuous Effluent Constituents	Monthly	By the 30th day of the month following the monitoring period
Daily Effluent Constituents	"	"
Monthly Effluent Constituents	Monthly	By the 30th day of the month following the monitoring period
Toxicity Testing	See Section C., above	By the 30th day of the month following the monitoring period
Annual Priority Pollutants Analysis	Annually	"
Fish Flesh Mercury Testing	Annually	April 30, each year

MINIMUM LEVELS IN PPB (µg/l)

Table 2a - VOLATILE SUBSTANCES[1]	GC	GCMS
Acrolein	2.0	5
Acrylonitrile	2.0	2
Benzene	0.5	2
Bromoform	0.5	2
Carbon Tetrachloride	0.5	2
Chlorobenzene	0.5	2
Chlorodibromomethane	0.5	2
Chloroethane	0.5	2
Chloroform	0.5	2
Dichlorobromomethane	0.5	2
1,1 Dichloroethane	0.5	1
1,2 Dichloroethane	0.5	2
1,1 Dichloroethylene	0.5	2
1,2 Dichloropropane	0.5	1
1,3 Dichloropropylene (volatile)	0.5	2
Ethylbenzene	0.5	2
Methyl Bromide (*Bromomethane*)	1.0	2
Methyl Chloride (*Chloromethane*)	0.5	2
Methylene Chloride (*Dichloromethane*)	0.5	2
1,1,2,2 Tetrachloroethane	0.5	1
Tetrachloroethylene	0.5	2
Toluene	0.5	2
trans-1,2 Dichloroethylene	0.5	1
1,1,1 Trichloroethane	0.5	2
1,1,2 Trichloroethane	0.5	2
Trichloroethylene	0.5	2
Vinyl Chloride	0.5	2
1,2 Dichlorobenzene (volatile)	0.5	2
1,3 Dichlorobenzene (volatile)	0.5	2
1,4 Dichlorobenzene (volatile)	0.5	2

Selection and Use of Appropriate ML Value:

ML Selection: When there is more than one ML value for a given substance, the discharger may select any one of those ML values, and their associated analytical methods, listed in Attachment "A" that are below the calculated effluent limitation for compliance determination. If no ML value is below the effluent limitation, then the discharger shall select the lowest ML value, and its associated analytical method, listed in this Attachment "A".

ML Usage: The ML value in Attachment "A" represents the lowest quantifiable concentration in a sample based on the proper application of all method-based analytical procedures and the absence of any matrix interferences. Assuming that all method-specific analytical steps are followed, the ML value will also represent, after the appropriate application of method-specific factors, the lowest standard in the calibration curve for that specific analytical technique. Common analytical practices sometimes require different treatment of the sample relative to calibration standards.

Note: chemical names in parenthesis and italicized is another name for the constituent.

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[1] The normal method-specific factor for these substances is 1; therefore, the lowest standard concentration in the calibration curve is equal to the above ML value for each substance.

MINIMUM LEVELS IN PPB (µg/l)

Table 2b – Semi-Volatile Substances[2]	GC	GCMS	LC
2-Chloroethyl vinyl ether	1	1	
2 Chlorophenol	2	5	
2,4 Dichlorophenol	1	5	
2,4 Dimethylphenol	1	2	
4,6 Dinitro-2-methylphenol	10	5	
2,4 Dinitrophenol	5	5	
2- Nitrophenol		10	
4- Nitrophenol	5	10	
4 Chloro-3-methylphenol	5	1	
2,4,6 Trichlorophenol	10	10	
Acenaphthene	1	1	0.5
Acenaphthylene		10	0.2
Anthracene		10	2
Benzidine		5	
Benzo (a) Anthracene (*1,2 Benzanthracene*)	10	5	
Benzo(a) pyrene (*3,4 Benzopyrene*)		10	2
Benzo (b) Flouranthene (*3,4 Benzofluoranthene*)		10	10
Benzo(g,h,i)perylene		5	0.1
Benzo(k)fluoranthene		10	2
bis 2-(1-Chloroethoxyl) methane		5	
bis(2-chloroethyl) ether	10	1	
bis(2-Chloroisopropyl) ether	10	2	
bis(2-Ethylhexyl) phthalate	10	5	
4-Bromophenyl phenyl ether	10	5	
Butyl benzyl phthalate	10	10	
2-Chloronaphthalene		10	
4-Chlorophenyl phenyl ether		5	
Chrysene		10	5
Dibenzo(a,h)-anthracene		10	0.1
1,2 Dichlorobenzene (semivolatile)	2	2	
1,3 Dichlorobenzene (semivolatile)	2	1	
1,4 Dichlorobenzene (semivolatile)	2	1	
3,3' Dichlorobenzidine		5	
Diethyl phthalate	10	2	
Dimethyl phthalate	10	2	
di-n-Butyl phthalate		10	
2,4 Dinitrotoluene	10	5	
2,6 Dinitrotoluene		5	
di-n-Octyl phthalate		10	
1,2 Diphenylhydrazine		1	
Fluoranthene	10	1	0.05
Fluorene		10	0.1
Hexachloro-cyclopentadiene	5	5	
1,2,4 Trichlorobenzene	1	5	

MINIMUM LEVELS IN PPB (µg/l)

Table 2b - SEMI-VOLATILE SUBSTANCES[2]	GC	GCMS	LC	COLOR
Pentachlorophenol	1	5		
Phenol [3]	1	1		50
Hexachlorobenzene	5	1		
Hexachlorobutadiene	5	1		
Hexachloroethane	5	1		
Indeno(1,2,3,cd)-pyrene		10	0.05	
Isophorone	10	1		
Naphthalene	10	1	0.2	
Nitrobenzene	10	1		
N-Nitroso-dimethyl amine	10	5		
N-Nitroso -di n-propyl amine	10	5		
N-Nitroso diphenyl amine	10	1		
Phenanthrene		5	0.05	
Pyrene		10	0.05	

Table 2c – INORGANICS[4]	FAA	GFAA	ICP	ICPMS	SPGF AA	HYDRIDE	CVAA	COLOR	DCP
Antimony	10	5	50	0.5	5	0.5			1000
Arsenic		2	10	2	2	1		20	1000
Beryllium	20	0.5	2	0.5	1				1000
Cadmium	10	0.5	10	0.25	0.5				1000
Chromium (total)	50	2	10	0.5	1				1000
Chromium VI	5							10	
Copper		5	10	0.5	2				
Lead	20	5	5	0.5	2				10000
Mercury				0.5			0.2		
Nickel	50	5	20	1	5				1000
Selenium		5		2	5	1			
Silver	10	1	10	0.25	2				1000
Thallium	10	2	10	1	5				1000
Zinc	20		20	1	10				1000
Cyanide								5	

2 With the exception of phenol by colorimetric technique, the normal method-specific factor for these substances is 1000; therefore, the lowest standards concentration in the calibration curve is equal to the above ML value for each substance multiplied by 1000.

3 Phenol by colorimetric technique has a factor of 1.

4 The normal method-specific factor for these substances is 1; therefore, the lowest standard concentration in the calibration curve is equal to the above ML value for each substance.

MINIMUM LEVELS IN PPB (µg/l)

Table 2d - PESTICIDES – PCBs[5]	GC
Aldrin	0.005
alpha–BHC (*a-Hexachloro-cyclohexane*)	0.01
beta–BHC (*b-Hexachloro-cyclohexane*)	0.005
Gamma–BHC (*Lindane; g-Hexachloro-cyclohexane*)	0.02
Delta-BHC (*d-Hexachloro-cyclohexane*)	0.005
Chlordane	0.1
4,4'-DDT	0.01
4,4'-DDE	0.05
4,4'-DDD	0.05
Dieldrin	0.01
Alpha-Endosulfan	0.02
Beta-Endosulfan	0.01
Endosulfan Sulfate	0.05
Endrin	0.01
Endrin Aldehyde	0.01
Heptachlor	0.01
Heptachlor Epoxide	0.01
PCB 1016	0.5
PCB 1221	0.5
PCB 1232	0.5
PCB 1242	0.5
PCB 1248	0.5
PCB 1254	0.5
PCB 1260	0.5
Toxaphene	0.5

Techniques:
GC - Gas Chromatography
GCMS - Gas Chromatography/Mass Spectrometry
HRGCMS - High Resolution Gas Chromatography/Mass Spectrometry (i.e., EPA 1613, 1624, or 1625)
LC - High Pressure Liquid Chromatography
FAA - Flame Atomic Absorption
GFAA - Graphite Furnace Atomic Absorption
HYDRIDE - Gaseous Hydride Atomic Absorption
CVAA - Cold Vapor Atomic Absorption
ICP - Inductively Coupled Plasma
ICPMS - Inductively Coupled Plasma/Mass Spectrometry
SPGFAA - Stabilized Platform Graphite Furnace Atomic Absorption (i.e., EPA 200.9)
DCP - Direct Current Plasma
COLOR - Colorimetric

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5 The normal method-specific factor for these substances is 100; therefore, the lowest standard concentration in the calibration curve is equal to the above ML value for each substance multiplied by 100.

EPA PRIORITY POLLUTANT LIST

Metals		Acid Extractibles		Base/Neutral Extractibles (continuation)	
1.	Antimony	45.	2-Chlorophenol	91.	Hexachloroethane
2.	Arsenic	46.	2,4-Dichlorophenol	92.	Indeno (1,2,3-cd) Pyrene
3.	Beryllium	47.	2,4-Dimethylphenol	93.	Isophorone
4.	Cadmium	48.	2-Methyl-4,6-Dinitrophenol	94.	Naphthalene
5a.	Chromium (III)	49.	2,4-Dinitrophenol	95.	Nitrobenzene
5b.	Chromium (VI)	50.	2-Nitrophenol	96.	N-Nitrosodimethylamine
6.	Copper	51.	4-Nitrophenol	97.	N-Nitrosodi-N-Propylamine
7.	Lead	52.	3-Methyl-4-Chlorophenol	98.	N-Nitrosodiphenylamine
8.	Mercury	53.	Pentachlorophenol	99.	Phenanthrene
9.	Nickel	54.	Phenol	100.	Pyrene
10.	Selenium	55.	2, 4, 6 – Trichlorophenol	101.	1,2,4-Trichlorobenzene
11.	Silver	**Base/Neutral Extractibles**		**Pesticides**	
12.	Thallium	56.	Acenaphthene	102.	Aldrin
13.	Zinc	57.	Acenaphthylene	103.	Alpha BHC
Miscellaneous		58.	Anthracene	104.	Beta BHC
14.	Cyanide	59.	Benzidine	105.	Delta BHC
15.	Asbestos (not required unless requested)	60.	Benzo (a) Anthracene	106.	Gamma BHC
16.	2,3,7,8-Tetrachlorodibenzo-P-Dioxin (TCDD)	61.	Benzo (a) Pyrene	107.	Chlordane
Volatile Organics		62.	Benzo (b) Fluoranthene	108.	4, 4' - DDT
17.	Acrolein	63.	Benzo (g,h,i) Perylene	109.	4, 4' - DDE
18.	Acrylonitrile	64.	Benzo (k) Fluoranthene	110.	4, 4' - DDD
19.	Benzene	65.	Bis (2-Chloroethoxy) Methane	111.	Dieldrin
20.	Bromoform	66.	Bis (2-Chloroethyl) Ether	112.	Alpha Endosulfan
21.	Carbon Tetrachloride	67.	Bis (2-Chloroisopropyl) Ether	113.	Beta Endosulfan
22.	Chlorobenzene	68.	Bis (2-Ethylhexyl) Phthalate	114.	Endosulfan Sulfate
23.	Chlorodibromomethane	69.	4-Bromophenyl Phenyl Ether	115.	Endrin
24.	Chloroethane	70.	Butylbenzyl Phthalate	116.	Endrin Aldehyde
25.	2-Chloroethyl Vinyl Ether	71.	2-Chloronaphthalene	117.	Heptachlor
26.	Chloroform	72.	4-Chlorophenyl Phenyl Ether	118.	Heptachlor Epoxide
27.	Dichlorobromomethane	73.	Chrysene	119.	PCB 1016
28.	1,1-Dichloroethane	74.	Dibenzo (a,h) Anthracene	120.	PCB 1221
29.	1,2-Dichloroethane	75.	1,2-Dichlorobenzene	121.	PCB 1232
30.	1,1-Dichloroethylene	76.	1,3-Dichlorobenzene	122.	PCB 1242
31.	1,2-Dichloropropane	77.	1,4-Dichlorobenzene	123.	PCB 1248
32.	1,3-Dichloropropylene	78.	3,3'-Dichlorobenzidine	124.	PCB 1254
33.	Ethylbenzene	79.	Diethyl Phthalate	125.	PCB 1260
34.	Methyl Bromide	80.	Dimethyl Phthalate	126.	Toxaphene
35.	Methyl Chloride	81.	Di-n-Butyl Phthalate		
36.	Methylene Chloride	82.	2,4-Dinitrotoluene		
37.	1,1,2,2-Tetrachloroethane	83.	2-6-Dinitrotoluene		
38.	Tetrachloroethylene	84.	Di-n-Octyl Phthalate		
39.	Toluene	85.	1,2-Dipenylhydrazine		
40.	1,2-Trans-Dichloroethylene	86.	Fluoranthene		
41.	1,1,1-Trichloroethane	87.	Fluorene		
42.	1,1,2-Trichloroethane	88.	Hexachlorobenzene		
43.	Trichloroethylene	89.	Hexachlorobutadiene		
44.	Vinyl Chloride	90.	Hexachlorocyclopentadiene		

PRACTICAL QUANTITATION LEVELS FOR COMPLIANCE DETERMINATION

	Constituent	RL µg/l	Analysis Method
1	Arsenic	7.5	GF/AA
2	Barium	20	ICP/GFAA
3	Cadmium	15	ICP
4	Chromium (VI)	15.0	ICP
5	Cobalt	10.0	GF/AA
6	Copper	19.0	GF/ICP
7	Cyanide	50.0	335.2/335.3
8	Iron	100.0	ICP
9	Lead	26.0	GF/AA
10	Manganese	20.0	ICP
11	Mercury	0.5	CV/AA
12	Nickel	50.0	ICP
13	Selenium	14.0	GF/HYDRIDE GENERATION
14	Silver	16.0	ICP
15	Zinc	20	ICP
16	1,2 - Dichlorobenzene	5.0	601/602/624
17	1,3 - Dichlorobenzene	5.0	601
18	1,4 - Dichlorobenzene	5.0	601
18	2,4 - Dichlorophenol	10.0	625/604
20	4 - Chloro -3-methylphenol	10.0	625/604
21	Aldrin	0.04	608
22	Benzene	1.0	602/624
23	Chlordane	0.30	608
24	Chloroform	5.0	601/624
25	DDT	0.10	608
26	Dichloromethane	5.0	601/624
27	Dieldrin	0.10	608
28	Fluorantene	10.0	625/610
29	Endosulfan	0.50	608
30	Endrin	0.10	608
31	Halomethanes	5.0	601/624
32	Heptachlor	0.03	608
33	Hepthachlor Epoxide	0.05	608
34	Hexachlorobenzene	10.0	625
35	Hexachlorocyclohexane		
	Alpha	0.03	608
	Beta	0.03	608
	Gamma	0.03	608
36	PAH's	10.0	625/610
37	PCB	1.0	608
38	Pentachlorophenol	10.0	625/604
39	Phenol	10.0	625/604
40	TCDD Equivalent	0.05	8280
41	Toluene	1.0	602/625
42	Toxaphene	2.0	608
43	Tributyltin	0.02	GC
44	2,4,6-Trichlorophenol	10.0	625/604

STORMWATER MONITORING PROGRAM AND REPORTING REQUIREMENTS

1. *Implementation Schedule*

The discharger shall continue to implement their existing Stormwater monitoring program and implement any necessary revisions to their Stormwater monitoring program in a timely manner, but in no case later than June 30, 2005. The discharger may use the monitoring results conducted in accordance with their existing Stormwater monitoring program to satisfy the pollutant/parameter reduction requirements in Section 5.c., below, and Sampling and Analysis Exemptions and Reduction Certifications in Section 10, below.

2. *Objectives*

The objectives of the monitoring program are to:

a. Ensure that storm water discharges are in compliance with waste discharge requirements specified in Order No. R8-2004-0065.

b. Ensure practices at the facility to reduce or prevent pollutants in storm water discharges and authorized non-storm water discharges are evaluated and revised to meet changing conditions.

c. Aid in the implementation and revision of the SWPPP required by Attachment "A" Stormwater Pollution Prevention Plan of Order No. R8-2004-0065.

d. Measure the effectiveness of best management practices (BMPs) to prevent or reduce pollutants in storm water discharges and authorized non-storm water discharges. Much of the information necessary to develop the monitoring program, such as discharge locations, drainage areas, pollutant sources, etc., should be found in the Storm Water Pollution Prevention Plan (SWPPP). The facility's monitoring program shall be a written, site-specific document that shall be revised whenever appropriate and be readily available for review by employees or Regional Board inspectors.

3. *Non-Storm Water Discharge Visual Observations*

a. The discharger shall visually observe all drainage areas within their facility for the presence of unauthorized non-storm water discharges;

b. The discharger shall visually observe the facility's authorized non-storm water discharges and their sources;

c. The visual observations required above shall occur quarterly, during daylight hours, on days with no storm water discharges, and during scheduled facility operating hours[1]. Quarterly visual observations shall be conducted in each of the following periods: January-March, April-June, July-September, and October-December. The discharger shall conduct quarterly visual observations within 6-18 weeks of each other.

d. Visual observations shall document the presence of any discolorations, stains, odors, floating materials, etc., as well as the source of any discharge. Records shall be maintained of the visual observation dates, locations observed, observations, and response taken to eliminate unauthorized non-storm water discharges and to reduce or prevent pollutants from contacting non-storm water discharges. The SWPPP shall be revised, as necessary, and implemented in accordance with Attachment "A" Stormwater Pollution Prevention Plan of Order No. R8-2004-0065.

4. *Storm Water Discharge Visual Observations*

a. With the exception of those facilities described in Section 4.d., below, the discharger shall visually observe storm water discharges from one storm event per month during the wet season (October 1-May 30). These visual observations shall occur during the first hour of discharge and at all discharge locations. Visual observations of stored or contained storm water shall occur at the time of release, if applicable.

b. Visual observations are only required of storm water discharges that occur during daylight hours that are preceded by at least three (3) working days[2] without storm water discharges and that occur during scheduled facility operating hours.

c. Visual observations shall document the presence of any floating and suspended material, oil and grease, discolorations, turbidity, odor, and source of any pollutants. Records shall be maintained of observation dates, locations observed, observations, and response taken to reduce or prevent pollutants in storm water discharges. The SWPPP shall be revised, as necessary, and implemented in accordance with Attachment "A" Stormwater Pollution Prevention Plan of Order No. R8-2004-0065.

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1 "Scheduled facility operating hours" are the time periods when the facility is staffed to conduct any function related to industrial activity, but excluding time periods where only routine maintenance, emergency response, security, and/or janitorial services are performed.

2 Three (3) working days may be separated by non-working days such as weekends and holidays provided that no storm water discharges occur during the three (3) working days and the non-working days.

d. The discharger with storm water containment facilities shall conduct monthly inspections of their containment areas to detect leaks and ensure maintenance of adequate freeboard, if applicable. Records shall be maintained of the inspection dates, observations, and any response taken to eliminate leaks and to maintain adequate freeboard.

5. *Sampling and Analysis*

a. The discharger shall collect storm water samples during the first hour of discharge from (1) the first storm event of the wet season, and (2) at least one other storm event in the wet season. All storm water discharge locations shall be sampled. Sampling of stored or contained storm water shall occur at the time the stored or contained storm water is released. The discharger that does not collect samples from the first storm event of the wet season are still required to collect samples from two other storm events of the wet season and shall explain in the "Annual Stormwater Report" (see Section 12, below) why the first storm event was not sampled.

b. Sample collection is only required of storm water discharges that occur during scheduled facility operating hours and that are preceded by at least (3) three working days without storm water discharge.

c. The samples shall be analyzed for:

(1) Total suspended solids (TSS) pH, specific conductance, and total organic carbon (TOC). Oil and grease (O&G) may be substituted for TOC;

(2) Toxic chemicals and other pollutants that are likely to be present in storm water discharges in significant quantities. If these pollutants are not detected in significant quantities after two consecutive sampling events, the discharger may eliminate the pollutant from future sample analysis until the pollutant is likely to be present again;

(3) The discharger is not required to analyze a parameter when either of the two following conditions are met: (a) the parameter has not been detected in significant quantities from the last two consecutive sampling events, or (b) the parameter is not likely to be present in storm water discharges and authorized non-storm water discharges in significant quantities based upon the discharger's evaluation of the facilities industrial activities, potential pollutant sources, and SWPPP; and

(4) Other parameters as required by the Regional Board.

6. *Sample Storm Water Discharge Locations*

a. The discharger shall visually observe and collect samples of storm water discharges from all drainage areas that represent the quality and quantity of the facility's storm water discharges from the storm event.

b. If the facility's storm water discharges are commingled with run-on from surrounding areas, the discharger should identify other visual observation and sample collection locations that have not been commingled by run-on and that represent the quality and quantity of the facility's storm water discharges from the storm event.

c. If visual observation and sample collection locations are difficult to observe or sample (e.g., sheet flow, submerged outfalls), the discharger shall identify and collect samples from other locations that represent the quality and quantity of the facility's storm water discharges from the storm event.

d. The discharger that determines that the industrial activities and BMPs within two or more drainage areas are substantially identical may either (1) collect samples from a reduced number of substantially identical drainage areas, or (2) collect samples from each substantially identical drainage area and analyze a combined sample from each substantially identical drainage area. The discharger must document such a determination in the annual Stormwater report.

7. Visual Observation and Sample Collection Exceptions

The discharger is required to be prepared to collect samples and conduct visual observations at the beginning of the wet season (October 1) and throughout the wet season until the minimum requirements of Sections 4. and 5., above, are completed with the following exceptions:

a. The discharger is not required to collect a sample and conduct visual observations in accordance with Section 4 and Section 5, above, due to dangerous weather conditions, such as flooding, electrical storm, etc., when storm water discharges begin after scheduled facility operating hours or when storm water discharges are not preceded by three working days without discharge. Visual observations are only required during daylight hours. The discharger that does not collect the required samples or visual observations during a wet season due to these exceptions shall include an explanation in the "Annual Stormwater Report" why the sampling or visual observations could not be conducted.

b. The discharger may conduct visual observations and sample collection more than one hour after discharge begins if the discharger determines that the objectives of this section will be better satisfied. The discharger shall include an explanation in the "Annual Stormwater Report" why the visual observations and sample collection should be conducted after the first hour of discharge.

8. *Alternative Monitoring Procedures*

The discharger may propose an alternative monitoring program that meets Section 2, above, monitoring program objectives for approval by the Regional Board's Executive Officer. The discharger shall continue to comply with the monitoring requirements of this section and may not implement an alternative monitoring plan until the alternative monitoring plan is approved by the Regional Board's Executive Officer. Alternative monitoring plans are subject to modification by the Regional Board's Executive Officer.

9. *Monitoring Methods*

a. The discharger shall explain how the facility's monitoring program will satisfy the monitoring program objectives of Section 2., above. This shall include:

(1) Rationale and description of the visual observation methods, location, and frequency;

(2) Rationale and description of the sampling methods, location, and frequency; and

(3) Identification of the analytical methods and corresponding method detection limits used to detect pollutants in storm water discharges. This shall include justification that the method detection limits are adequate to satisfy the objectives of the monitoring program.

b. All sampling and sample preservation shall be in accordance with the current edition of "Standard Methods for the Examination of Water and Wastewater" (American Public Health Association). All monitoring instruments and equipment (including the discharger's own field instruments for measuring pH and Electro-conductivity) shall be calibrated and maintained in accordance with manufacturers' specifications to ensure accurate measurements. All laboratory analyses must be conducted according to test procedures under 40 CFR Part 136, unless other test procedures have been specified in Order No. R8-2004-0065 or by the Regional Board's Executive Officer. All metals shall be reported as total recoverable metals or unless otherwise specified in Order No. R8-2004-0065. With the exception of analysis conducted by the discharger, all laboratory analyses shall be conducted at a laboratory certified for such analyses by the State Department of Health Services. The discharger may conduct their own sample analyses if the discharger has sufficient capability (qualified employees, laboratory equipment, etc.) to adequately perform the test procedures.

10. *Sampling and Analysis Exemptions and Reductions*

A discharger who qualifies for sampling and analysis exemptions, as described below in Section 10.a.(1) or who qualifies for reduced sampling and analysis, as described below in Section 10.b., must submit the appropriate certifications and required documentation to the Regional Board prior to the wet season (October 1) and certify as part of the annual Stormwater report submittal. A discharger that qualifies for either the Regional Board or local agency certification programs, as described below in Section 10.a.(2) and (3), shall submit certification and documentation in accordance with the requirements of those programs. The discharger who provides certification(s) in accordance with this section are still required to comply with all other monitoring program and reporting requirements. The discharger shall prepare and submit their certification(s) using forms and instructions provided by the State Water Board, Regional Board, or local agency or shall submit their information on a form that contains equivalent information. The discharger whose facility no longer meets the certification conditions must notify the Regional Board's Executive Officer (and local agency) within 30 days and immediately comply with Section 5., Sampling and Analysis requirements. Should a Regional Board (or local agency) determine that a certification does not meet the conditions set forth below, the discharger must immediately comply with the Section 5., Sampling and Analysis requirements.

a. Sampling and Analysis Exemptions

A discharger is not required to collect and analyze samples in accordance with Section 5., above, if the discharger meets all of the conditions of one of the following certification programs:

(1) No Exposure Certification (NEC)

This exemption is designed primarily for those facilities where all industrial activities are conducted inside buildings and where all materials stored and handled are not exposed to storm water. To qualify for this exemption, the discharger must certify that their facilities meet all of the following conditions:

(a) All prohibited non-storm water discharges have been eliminated or otherwise permitted.

(b) All authorized non-storm water discharges have been identified and addressed in the SWPPP.

(c) All areas of past exposure have been inspected and cleaned, as appropriate.

(d) All significant materials related to industrial activity (including waste materials) are not exposed to storm water or authorized non-storm water discharges.

(e) All industrial activities and industrial equipment are not exposed to storm water or authorized non-storm water discharges.

(f) There is no exposure of storm water to significant materials associated with industrial activity through other direct or indirect pathways such as from industrial activities that generate dust and particulates.

(g) There is periodic re-evaluation of the facility to ensure conditions (a), (b), (d), (e), and (f) above are continuously met. At a minimum, re-evaluation shall be conducted once a year.

(2) Regional Board Certification Programs

The Regional Board may grant an exemption to the Section 5. Sampling and Analysis requirements if it determines a discharger has met the conditions set forth in a Regional Board certification program. Regional Board certification programs may include conditions to (a) exempt the discharger whose facilities infrequently discharge storm water to waters of the United States, and (b) exempt the discharger that demonstrate compliance with the terms and conditions of Order No. R8-2004-0065.

(3) Local Agency Certifications

A local agency may develop a local agency certification program. Such programs must be approved by the Regional Board. An approved local agency program may either grant an exemption from Section 5. Sampling and Analysis requirements or reduce the frequency of sampling if it determines that a discharger has demonstrated compliance with the terms and conditions of the Industrial Activities Storm Water General Permit Order No. 97-03-DWQ which was adopted by the State Water Resources Control Board on April 17, 1997.

b. Sampling and Analysis Reduction

(1) A discharger may reduce the number of sampling events required to be sampled for the remaining term of Order No. R8-2004-0065 if the discharger provides certification that the following conditions have been met:

(a) The discharger has collected and analyzed samples from a minimum of six storm events from all required drainage areas;

(b) All prohibited non-storm water discharges have been eliminated or otherwise permitted;

(c) The discharger demonstrates compliance with the terms and conditions of the Order No. R8-2004-0065 for the previous two years (i.e., completed Annual Stormwater Reports, performed visual observations, implemented appropriate BMPs, etc.);

(d) The discharger demonstrates that the facility's storm water discharges and authorized non-storm water discharges do not contain significant quantities of pollutants; and

(e) Conditions (b), (c), and (d) above are expected to remain in effect for a minimum of one year after filing the certification.

(2) Unless otherwise instructed by the Regional Board, the discharger shall collect and analyze samples from two additional storm events during the remaining term of Order No. R8-2004-0065 in accordance with Table A, below. The discharger shall collect samples of the first storm event of the wet season. The discharger that does not collect samples from the first storm event of the wet season shall collect samples from another storm event during the same wet season. The discharger that does not collect a sample in a required wet season shall collect the sample from another storm event in the next wet season. The discharger shall explain in the "Annual Stormwater Report" why the first storm event of a wet season was not sampled or a sample was not taken from any storm event in accordance with the Table A schedule, below.

Table A
REDUCED MONITORING SAMPLING SCHEDULE

Discharger Filing Sampling Reduction Certification By	Samples Shall be Collected and Analyzed in these wet seasons	
	Sample 1	Sample 2
Sept. 1, 2003	Oct. 1, 2004-May 31, 2005	Oct. 1, 2006-May 31, 2007
Sept. 1, 2004	Oct. 1, 2005-May 31, 2006	Oct. 1, 2007-May 31, 2008
Sept. 1, 2005	Oct. 1, 2006-May 31, 2007	Oct. 1, 2008-May 31, 2009
Sept. 1, 2006	Oct. 1, 2007-May 31, 2008	Oct. 1, 2009-May 31, 2010

11. Records

Records of all storm water monitoring information and copies of all reports (including the Annual Stormwater Reports) required by Order No. R8-2004-0065 shall be retained for a period of at least five years. These records shall include:

a. The date, place, and time of site inspections, sampling, visual observations, and/or measurements;

b. The individual(s) who performed the site inspections, sampling, visual observations, and or measurements;

c. Flow measurements or estimates;

d. The date and approximate time of analyses;

e. The individual(s) who performed the analyses;

f. Analytical results, method detection limits, and the analytical techniques or methods used;

g. Quality assurance/quality control records and results;

h. Non-storm water discharge inspections and visual observations and storm water discharge visual observation records (see Sections 3. and 4., above);

i. Visual observation and sample collection exception records (see Section 5.a, 6.d, 7, and 10.b. (2), above;

j. All calibration and maintenance records of on-site instruments used;

k. All Sampling and Analysis Exemption and Reduction certifications and supporting documentation (see Section 10);

l. The records of any corrective actions and follow-up activities that resulted from the visual observations.

12. Annual Report

The discharger shall submit an Annual Stormwater Report by July 1 of each year to the Executive Officer of the Regional Board and to the local agency (if requested). The report shall include a summary of visual observations and sampling results, an evaluation of the visual observation and sampling and analysis results, laboratory reports, the Annual Comprehensive Site Compliance Evaluation Report required in Section 9. of Attachment "A" of Order No. R8-2004-0065, an explanation of why a facility did not implement any activities required by Order No. R8-2004-0065 (if not already included in the Evaluation Report), and records specified in Section 11., above. The method detection limit of each analytical parameter shall be included. Analytical results that are less than the method detection limit shall be reported as "less than the method detection limit". The Annual Stormwater Report shall be signed and certified in accordance with Section E.1. "Required Notices and Reports" of Order No. R8-2004-0065. The discharger shall prepare and submit their Annual Stormwater Reports using the annual report forms provided by the State Water Board or Regional Board or shall submit their information on a form that contains equivalent information.

13. Watershed Monitoring Option

Regional Boards may approve proposals to substitute watershed monitoring for some or all of the requirements of this section if the Regional Board finds that the watershed monitoring will provide substantially similar monitoring information in evaluating discharger compliance with the requirements of Order No. R8-2004-0065.