State of California
CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD, LOS ANGELES REGION

ORDER NO. R4-2007-0025
NPDES PERMIT NO. CA0055824

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM PERMIT AND WASTE DISCHARGE REQUIREMENTS FOR CITY OF LOS ANGELES, DEPARTMENT OF WATER AND POWER (Castaic Power Plant)

The California Regional Water Quality Board, Los Angeles Region (hereinafter Regional Board), finds:

Background

1. The City of Los Angeles Department of Water and Power, Castaic Power Plant (hereinafter Castaic or Discharger) discharges wastewater under waste discharge requirements (WDRs) contained in Order No. 98-020 (NPDES No. CA0055824), adopted by the Regional Board on March 2, 1998. Order No. 98-020 expired on February 10, 2003.

   40 CFR Part 122.6, Continuation of expiring permit, stipulates that the conditions of an expired permit continue in full force until the effective date of the new permit, if the permittee has submitted a timely application which is complete and the Regional Administrator, through no fault of the permittee, does not issue a new permit with an effective date on or before the expiration date. The Discharger submitted a timely application, thus the permit continued in full force and effect.

2. Castaic filed a Report of Waste Discharge (ROWD) and applied for renewal of its WDRs and NPDES permit on August 12, 2002, for discharge of wastes to surface waters. Castaic submitted an amendment to the ROWD on March 13, 2007, to include the backwash water discharges from the facility's potable water system. The revised tentative Order is the reissuance of the WDRs and NPDES permit for discharges from Castaic.

Purpose of Order

3. The purpose of this Order is to renew the WDRs and NPDES permit for Castaic. This NPDES permit regulates the discharge of cooling water and other wastewaters, through Discharge Serial No. 001 into Pyramid Lake and through Discharge Serial No. 002 into Castaic Lake, waters of the United States. The point of discharge of water from Elderberry Forebay to Pyramid Lake is located at Latitude 34°38'49" North, Longitude

118°45'43" West. The point of discharge of water from Elderberry Forebay to Castaic Lake is located at Latitude 34°33'34" North, Longitude 118°37'53" West. Additional discharges to Elderberry Forebay are comprised of non-contact cooling water, industrial use water, and floor drain sump water.

Facility Description

4. Castaic operates a hydroelectric, pump storage generating station located at 37700 Templin Highway (approximately five miles east of Interstate 5), Castaic, Los Angeles County, California. The facility provides peak-load power, generated by the movement of water from Pyramid Lake down a gradient (through a 7.2-mile long tunnel and penstocks) to turn seven turbines, with eventual discharge to Elderberry Forebay. Approximately 2.6 billion gallons per day (gpd) of water from Pyramid Lake is transferred to Elderberry Forebay during the production of electrical energy. During off-peak hours, water is pumped from Elderberry Forebay back to Pyramid Lake. A location map is provided as Figure 1. A water flow diagram for the Castaic Power Plant is provided as Figure 2.

Discharge Description

5. Source water for power generation is taken from Pyramid Lake. Source water for other uses is taken from Pyramid Lake, Elderberry Forebay, and ground water resources. Other uses for water at the Castaic Power Plant include generator cooling, turbine cooling, and industrial uses (i.e., fire suppression system and floor wash down activities). During off-peak hours, water is pumped back from Elderberry Forebay to Pyramid Lake.

6. This Order permits discharges of cooling water and other wastewaters from the facility. According to the previous Order (Order No. 98-020) and the permit renewal application, Castaic Power Plant discharges up to 13.2 million gpd of wastewater to Elderberry Forebay. In addition, Castaic discharges backwash water to Elderberry Forebay three to four times a week at 1,200 to 1,500 gallons per event. The following Table shows the sources and uses of cooling water and wastewaters at the facility.

Source	Use(s)	Volume
Elderberry Forebay	Units 1 – 6 generator cooling	11,700,000 gpd
	Units 1 – 6 turbine cooling	739,200 gpd
	Industrial water plant (industrial and domestic use, compressor cooling)	702,900 gpd
	Seal drain sump	3,000 gpd
	Draft tubes and dewatering sump	3,000 gpd
Pyramid Lake	Unit 7 generator cooling	94,300 gpd
	Gallery drain sump	2,000 gpd
	Draft tubes and dewatering sump	1,000 gpd
Ground Water	Gallery drain sump	100 gpd
	Total	13,245,500 gpd

7. The wastewater discharged to Elderberry Forebay consists of the following:

Generator and turbine cooling water - Units 1, 2, 3, 4, 5, and 6	12,402,000 gpd
Air Compressor after-cooling water	691,200 gpd
Generator cooling water - Unit 7	94,300 gpd
Mechanical turbine shaft seals - Units 1, 2, 3, 4, 5, and 6	37,200 gpd
Draft tubes dewatering sump water	4,000 gpd
Compressor after coolers cooling water	3,000 gpd
Seal drain sump water	3,000 gpd
Industrial use water	2,200 gpd
Gallery drain sump water	2,100 gpd
Air compressor after coolers cooling water	500 gpd
Backwash water from potable water system	1200 to 1500 gpd
Total discharge	13,241,000 gpd

8. There are ten wastewater discharge streams to Elderberry Forebay. They are discussed below.

   a. *Waste Streams 1 through 6: Units 1,2,3,4,5, and 6 Generator Cooling.* The generator and turbine cooling water for power generating Units 1 – 6 is non-contact cooling water, which is discharged through underwater discharge points to Elderberry Forebay without treatment. There is no designated Discharge Serial Number for these waste streams because of the location of the discharge points.

   b. *Waste Stream 7: Unit 7 Tailrace.* The wastewater discharge from Unit 7 tailrace (discharge channel) is composed of Unit 7 generator cooling water, industrial use water, and air compressor after cooler cooling water. The generator and after cooler cooling systems are closed systems that use non-contact cooling water. The industrial use water comes from sprinkler and fire suppressant systems and floor wash down water. Unit 7 tailrace wastewater is discharged to Elderberry Forebay without treatment. The proposed Order designates Discharge Serial No. 003 for this waste stream.

   c. *Waste Stream 8: Oil-Water Separator.* As water passes over the turbines to generate power, some water leaks through the surrounding mechanical turbine shaft seals. This water is collected via drains throughout the facility and channeled to a floor drain sump. A portion (500 gpd) of the industrial use water, used for sprinkler and fire suppression systems and floor wash down water, is also directed to the floor drain sump. Water from the floor drain sump passes through an oil-water separator prior to discharge to Elderberry Forebay. The total flow through the oil-water separator is 37,700 gpd. This is the only treated discharge to Elderberry Forebay. The proposed Order designates Discharge Serial No. 004 for this waste stream.

   d. *Waste Stream 9: Combined Discharge from Additional Cooling, Sump, and Industrial Use Waters.* The remaining discharge is composed of wastewaters from compressor coolers and after cooler, industrial use, and seal drain, gallery drain, and dewatering

sumps. Castaic Power Plant uses compressed air to build pressure in the draft tubes in order to prime the pumps used to pump water from Elderberry Forebay back to Pyramid Lake. The compressed air and water is then released to a dewatering sump. A gallery drain sump is used as a drain system for the penstocks (intake conduit). A seal drain sump collects water that leaks through the rubber seals connecting the three parts of the building. Water from the dewatering sump, gallery drain sump, and seal drain sump combines with non-contact cooling water from the compressor coolers and compressor after cooler and 1,500 gpd of industrial use water for discharge to Elderberry Forebay without treatment. The proposed Order designates Discharge Serial No. 005 for this waste stream.

e. *Waste Stream 10: Backwash water from potable water system.* The facility has a domestic water system designed to provide up to 100,000 gallons of potable water for the Plant's personnel use. The potable water system draws water from the Plant's penstocks. The water is treated primarily for the removal of solids via the addition of sediment-binding flocculants and the subsequent retention of this sediment in the system's clarifying units. The system is then pressurized, chlorinated, and delivered as potable supply. To maintain the delivery of high quality potable water and to remove the build up of the sediment on the filter, backwash procedure is routinely exercised. During the backwash cycle, water from the first of two pressurized reservoirs (called hydropneumatic tank I) is isolated from the system mainline and pumped in reverse to the backwash inlet of either of the two clarifier treatment systems designated for clean out (one system must remain online to provide potable water). The clarifier systems consist of a rough filter tank and a fine filter tank to remove the sediment material from the water treatment system. The material goes to two in-series 2000 gallon settling tanks and after a sufficient settling period, supernatant (backwash water) is discharged to Elderberry Forebay. The collected solids remaining in the tanks are removed and disposed of in accordance with the federal, state, and local regulations. The backwash discharge event may occur three to four times a week at 1,200 to 1,500 gallons per event, depending on the turbidity level of the raw water. The proposed Order designates Discharge Serial No. 006 for this waste stream.

9. Approximately 1.1 billion gpd of water is pumped from Elderberry Forebay back to Pyramid Lake during off-peak hours through Discharge Serial No. 001. An additional 1.5 billion gpd of water from Elderberry Forebay is released downstream to Castaic Lake for recharge purposes through Discharge Serial No. 002. The water discharged from Elderberry Forebay to Pyramid Lake and Castaic Lake via Discharge Serials 001 and 002, respectively, receives no treatment. Pyramid Lake is tributary to the Santa Clara River via Piru Creek and Lake Piru. Castaic Lake is tributary to the Santa Clara River via Castaic Creek. The receiving waters are all waters of the United States.

10. The previous Order included effluent limitations for discharges to Pyramid Lake via Discharge Serial No. 001 and to Castaic Lake via Discharge Serial No. 002. However, there were no effluent limits established to wastewater discharges to Elderberry Forebay. Since Elderberry Forebay is a water of the United States with designated beneficial uses in the Water Quality Control Plan for the Los Angeles Region (specified

in Finding 13), this Order establishes effluent limits for wastewater discharges to Elderberry Forebay for the four waste streams, and designates new Discharge Serial Numbers for these waste streams. The new Discharge Numbers are: 1) Discharge Serial No. 003: discharges from Unit 7 tailrace; 2) Discharge Serial No. 004: discharges from the oil-water separator; 3) Discharge Serial No. 005: the combined discharge from the compressor coolers and after cooler, industrial use, and seal drain, gallery drain, and dewatering sumps; and 4) Discharge Serial No. 006: discharges of backwash water from the potable water system. This proposed Order applies effluent limits to the aforementioned four discharges to Elderberry Forebay. Elderberry Forebay is a water of the United States and tributary to Castaic Lake. Therefore, the Regional Board determined the effluent limitations are appropriately applied to discharges from the facility to Elderberry Forebay (directly downstream) and to water pumped from Elderberry Forebay to Pyramid Lake as well as to water released from Elderberry Forebay to Castaic Lake (downstream).

Applicable Plans, Policies, Laws, and Regulations

11. On June 13, 1994, the Regional Board adopted a revised *Water Quality Control Plan for the Coastal Watersheds of Los Angeles and Ventura Counties* (Basin Plan) as amended on January 27, 1997 by Regional Board Resolution No. 97-02. The Basin Plan (i) designates beneficial uses for surface and groundwaters, (ii) sets narrative and numerical objectives that must be attained or maintained to protect the designated beneficial uses and conform to the state antidegradation policy (*Statement of Policy with Respect to Maintaining High Quality Waters in California*, State Board Resolution No. 68-16, October 28, 1968), and (iii) describes implementation programs to protect all waters in the Region. In addition, the Basin Plan incorporates (by reference) applicable State and Regional Board plans and policies and other pertinent water quality policies and regulations. The Regional Board prepared the 1994 update of the Basin Plan to be consistent with all previously adopted State and Regional Board plans and policies. This Order implements the plans, policies and provisions of the Regional Board's Basin Plan.

12. The Basin Plan contains water quality objectives and beneficial uses for inland surface waters and for the Pacific Ocean. Inland surface waters consist of rivers, streams, lakes, reservoirs, and inland wetlands. Beneficial uses for a surface water can be designated, whether or not they have been attained on a waterbody, in order to implement either federal or state mandates and goals (such as fishable and swimmable for regional waters).

13. The immediate receiving water bodies for the permitted discharge covered by this permit are Elderberry Forebay, Castaic Lake, and Pyramid Lake. The Basin Plan contains beneficial uses and water quality objectives for Elderberry Forebay, Castaic Lake, and Pyramid Lake, and are listed below. The beneficial uses listed in the Basin Plan for Elderberry Forebay are:

    Existing uses: municipal and domestic supply; industrial service supply; industrial process supply; agricultural supply; ground water recharge; freshwater replenishment; hydropower generation; water contact recreation; non-contact water recreation; warm freshwater habitat;

wildlife habitat; rare, threatened, or endangered species; spawning, reproduction, and/or early development.

The Basin Plan contains the following beneficial uses and water quality objectives for Castaic Lake:

Existing uses: municipal and domestic supply; industrial service supply; industrial process supply; agricultural supply; ground water recharge; freshwater replenishment; hydropower generation; water contact recreation; non-contact water recreation; warm freshwater habitat; wildlife habitat; rare, threatened, or endangered species; spawning, reproduction, and/or early development.

Intermittent uses: cold freshwater habitat.

The Basin Plan contains the following beneficial uses and water quality objectives for Pyramid Lake:

Existing uses: municipal and domestic supply; industrial service supply; industrial process supply; agricultural supply; ground water recharge; hydropower generation; water contact recreation; non-contact water recreation; warm freshwater habitat; cold freshwater habitat; wildlife habitat; rare, threatened, or endangered species.

Potential uses: freshwater replenishment.

Applicability of NPDES Program to Hydroelectric Facilities

14. In *National Wildlife Federation v. Consumer Power Co.,* 862 F.2d 580, 28 ERC 1572 (6th Circuit, 1988), environmental plaintiffs sought to impose NPDES permit requirements on a hydroelectric facility that drew water from lake Michigan into a man-made impoundment above a dam and generated power by discharging the lake water back into the Lake through the dam's turbines. 862 F.2d at 581-582. The facility operation caused fish entrainment and mortality. The 6th Circuit ruled that the operator did not need an NPDES permit in that situation. Id. At 581, 590. Yet, in its ruling, the 6th Circuit decision, specifically recognized that the introduction of pollutants, such as from oil/water separator, to these waters would make the facility subject to the NPDES program. Id at 586.

15. In *Arizona Department of Water Quality v. Bureau of Reclamation Glen Canyon Dam and Power Plant,* Notice of Violation, Case ID #31682, the USEPA opined that a hydroelectric facility that discharges wastewater from floor drains from maintenance areas, seal water leakage, drainage from under the penstock, drainage from oil/water separators, and other pollutants is subject to the permitting requirements of the Clean Water Act.

Ammonia Basin Plan Amendment.

16. The 1994 Basin Plan provided water quality objectives for ammonia to protect aquatic life, in Tables 3-1 through Tables 3-4. However, those ammonia objectives were revised on April 25, 2002, by the Regional Board with the adoption of Resolution No. 2002-011, *Amendment to the Water Quality Control Plan for the Los Angeles Region to Update the Ammonia Objectives for Inland Surface Waters (Including Enclosed Bays, Estuaries and Wetlands) with Beneficial Use Designations for Protection of Aquatic Lif*e. The ammonia Basin Plan amendment was approved by the State Board, the Office of Administrative Law, and U.S. EPA on April 30, 2003, June 5, 2003, and June 19, 2003, respectively. Although the revised ammonia water quality objectives may be less stringent than those contained in the 1994 Basin Plan, they are still protective of aquatic life and are consistent with U.S. EPA's 1999 ammonia criteria update.

17. The State Board adopted a *Water Quality Control Plan for Control of Temperature in the Coastal and Interstate Water and Enclosed Bays and Estuaries of California* (Thermal Plan) on May 18, 1972, and amended this plan on September 18, 1975. This plan contains temperature objectives for inland surface waters.

18. On May 18, 2000, the U.S. EPA promulgated numeric criteria for priority pollutants for the State of California [known as the *California Toxics Rule* (CTR) and codified as Title 40, Code of Federal Regulations (40 CFR) 131.38]. In the CTR, U.S. EPA promulgated criteria that protect the general population at an incremental cancer risk level of one in a million (10^{-6}), for all priority toxic pollutants regulated as carcinogens. The CTR also allows for a schedule of compliance not to exceed 5 years from the date of permit issuance for a point source discharge if the Discharger demonstrates that it is infeasible to promptly comply with effluent limitations derived from the CTR criteria.

19. On March 2, 2000, the State Board adopted the *Policy for Implementation of Toxics Standards for Inland Surface Waters, Enclosed Bays, and Estuaries of California* (State Implementation Policy or SIP*).* The SIP was effective on April 28, 2000, with respect to the priority pollutant criteria promulgated for California by the U.S. EPA through the National Toxics Rule (NTR), and to the priority pollutant objectives established by the Regional Boards in their basin plans, with the exception of the provision on alternate test procedures for individual discharges that have been approved by the U.S. EPA Regional Administrator. The alternate test procedures provision was effective on May 22, 2000. The SIP was effective on May 18, 2000, with respect to the priority pollutant criteria promulgated by the U.S. EPA through the CTR. The SIP requires the dischargers' submittal of data sufficient to conduct the determination of priority pollutants requiring water quality-based effluent limits (WQBELs) and to calculate the effluent limitations. The CTR criteria for fresh water or human health for consumption of organisms, whichever is more stringent, are used to develop the effluent limitations in this Order to protect the beneficial uses of Elderberry Forebay, Castaic Lake, and Pyramid Lake.

20. Under 40 CFR 122.44(d), Water Quality Standards and State Requirements, "Limitations must control all pollutants or pollutant parameters (either conventional, non-conventional, or toxic pollutants), which the Director [permitting authority] determines are or may be discharged at a level which will cause, have the reasonable potential to cause, or contribute to an excursion above any State water quality standard, including State narrative criteria for water quality." Where numeric effluent limitations for a pollutant or pollutant parameter have not been established in the applicable state water quality control plan, 40 CFR section 122.44(d)(1)(vi) specifies that WQBELs may be set based on U.S. EPA criteria, and may be supplemented where necessary by other relevant information to attain and maintain narrative water quality criteria, and to fully protect designated beneficial uses.

21. Effluent limitation guidelines requiring the application of best practicable control technology currently available (BPT), best conventional pollutant control technology (BCT), and best available technology economically achievable (BAT), were promulgated by the U.S. EPA for some pollutants in this discharge. Effluent limitations for pollutants not subject to the U.S. EPA effluent limitation guidelines are based on one of the following: best professional judgment (BPJ) of BPT, BCT or BAT; current plant performance; or WQBELs. The WQBELs are based on the Basin Plan, other State plans and policies, or U.S. EPA water quality criteria which are taken from the CTR. These requirements, as they are met, will protect and maintain existing beneficial uses of the receiving water. The attached Fact Sheet for this Order includes specific bases for the effluent limitations.

22. State and Federal antibacksliding and antidegradation policies require Regional Board actions to protect the water quality of a water body and to ensure that the waterbody will not be further degraded. The antibacksliding provisions are specified in section 402(o) and 303(d)(4) of the Clean Water Act (CWA) and in 40 CFR, section 122.44(l). Those provisions require a reissued permit to be as stringent as the previous permit with some exceptions where effluent limitations may be relaxed.

23. Effluent limitations are established in accordance with sections 301, 304, 306, and 307 of the CWA, and amendments thereto. These requirements, as they are met, will maintain and protect the beneficial uses of Elderberry Forebay, Castaic Lake, and Pyramid Lake.

Watershed Management Approach and Total Maximum Daily Loads (TMDLs)

24. The Regional Board has implemented the Watershed Management Approach to address water quality issues in the region. Watershed management may include diverse issues as defined by stakeholders to identify comprehensive solutions to protect, maintain, enhance, and restore water quality and beneficial uses. To achieve this goal, the Watershed Management Approach integrates the Regional Board's many diverse programs, particularly Total Maximum Daily Loads (TMDLs), to better assess cumulative impacts of pollutants from all point and non-point sources. A TMDL is a tool for implementing water quality standards and is based on the relationship between pollution sources and in-stream water quality conditions. The TMDL establishes the allowable loadings or other quantifiable parameters for a waterbody and thereby provides the basis to establish water quality-based controls. These controls should provide the pollution reduction necessary for a waterbody to meet water quality standards. This process

facilitates the development of watershed-specific solutions that balance the environmental and economic impacts within the watershed. The TMDLs will establish waste load allocation (WLAs) and load allocations (LAs) for point and non-point sources, and will result in achieving water quality standards for the waterbody.

25. The U.S. EPA approved the State's 2002 303(d) list of impaired water bodies on July 25, 2003. Pyramid Lake, Elderberry Forebay, and Castaic Lake are located in the northeastern portion of the Los Angeles Basin in the Santa Clara River watershed. Pyramid Lake is tributary to the Santa Clara River via Piru Creek; Elderberry Forebay is tributary to Castaic Lake, which is tributary to the Santa Clara River via Castaic Creek. The 2002 State Board's California 303(d) List does not classify Pyramid Lake, Elderberry Forebay, Castaic Lake, Piru Creek, or Castaic Creek as impaired. According to the 2002 303(d) list, the Santa Clara River is impaired in Reach 3 for ammonia and chlorides. However, these pollutants are not known to be present in the discharge from Castaic Power Plant. In addition, Reach 3 of the Santa Clara River is a significant distance downstream from Castaic Power Plant through several unimpaired water bodies and reaches. All other impaired reaches of the Santa Clara River are upstream of the convergence point of Castaic Creek and Piru Creek.

Data Availability and Reasonable Potential Monitoring

26. 40 CFR 122.44(d)(1)(i) and (ii) require that each toxic pollutant be analyzed with respect to its reasonable potential to (1) cause; (2) have the reasonable potential to cause; or (3) contribute to the exceedance of a receiving water quality objective. This is done by performing a reasonable potential analysis (RPA) for each pollutant.

27. Section 1.3 of the SIP requires that a limit be imposed for a toxic pollutant if (1) the maximum effluent concentration (MEC) is greater than the most stringent CTR criteria, or (2) the background concentration is greater than the CTR criteria, or (3) other information is available. Sufficient effluent data are needed for this analysis.

28. Regional Board staff has determined that pollutants that have effluent limits in the previous Order will be included in this permit, except for PCBs. Certain effluent limitations have been established based on the revised water quality criteria contained in the CTR and the requirements contained in Section 1.4 of the SIP. This permit also includes requirements for additional monitoring to provide the data needed to complete an RPA on all of the priority pollutants.

29. An RPA was completed using the data collected at the site for the period June 2002 through October 2003 for Discharge Serial Nos. 001 and 002 to determine if any of the constituents sampled previously at the site had a positive RPA. Based on the RPA, there is reasonable potential to exceed water quality standards for dieldrin for the discharge through Discharge Serial No. 001. The RPA indicated that the discharge has the potential to exceed the WQBELs for dieldrin for Discharge Serial No. 001.

    Furthermore, the data submitted as part of the amendment to the ROWD on March 13, 2007, showed reasonable potential to exceed WQBELs for copper, lead, zinc, and dichlorobromomethane for discharges through Discharge Serial No. 006. Therefore,

effluent limitations for dieldrin (Discharge Serial No. 001), and for copper, lead, zinc, and dichlorobromomethane (Discharge Serial No. 006) are prescribed based on the California Toxic Rule (CTR).

Compliance Schedules and Interim Limitations

30. The Castaic facility may not be able to achieve immediate compliance with the WQBELs for dieldrin for Discharge Serial No. 001, in Section I.B.3. of this Order. Data submitted in self-monitoring reports indicate that this constituent has been detected at concentration greater than the new limit proposed in this Order. The Discharger may not be able to achieve immediate compliance with an effluent limitation based on CTR criterion for this constituent.

    In addition, the data submitted by LADWP as part of the ROWD on March 13, 2007, showed that the Discharger may not be able to immediately comply with the CTR-based effluent limitations for copper, lead, zinc, and dichlorobromomethane.

31. Section 2.1 of the SIP provides that, based on a discharger's request and demonstration that it is infeasible for an existing discharger to achieve immediate compliance with an effluent limitation derived from a CTR criterion, compliance schedules may be allowed in an NPDES permit. Unless an exception has been granted under section 5.3 of the SIP, a compliance schedule may not exceed 5 years from the date that the permit is issued or reissued, nor may it extend beyond 10 years from the effective date of the SIP (or May 17, 2010) to establish and comply with CTR criterion-based effluent limitations. Where a compliance schedule for a final effluent limitation exceeds 1 year, the Order must include interim numeric limitations for that constituent or parameter. Where allowed by the Los Angeles Region Basin Plan, compliance schedules and interim effluent limitations or discharge specifications may also be granted to allow time to implement a new or revised water quality objective.

32. 40 CFR 131.38(e) and the CTR provide conditions under which interim effluent limit and compliance schedules may be issued. The CTR and SIP allow inclusion of an interim limit with a specific compliance schedule included in a NPDES permit for priority pollutants if the limit for the priority pollutant is CTR-based. Interim limits have been included in this Order for dieldrin for Discharge Serial No. 001, and for copper, lead, zinc, and dichlorobromomethane for Discharge Serial No. 006.

33. The SIP requires that the Regional Board establish other interim requirements, such as requiring the discharger to develop a Pollutant Minimization Plan (PMP) and/or source control measures, and participate in the activities necessary to achieve final effluent limitation. This interim limitation shall be effective for three years from the date of adoption of this Order. After which, the Discharger shall demonstrate compliance with the final effluent limitation.

34. According to the SIP, pollution prevention measures may be particularly appropriate for persistent bioaccumulative priority pollutants where there is evidence that beneficial uses are being impacted. Dieldrin has strong bioaccumulative properties and can cause adverse health impacts, and because the RPA determined that it could exceed the

WQBELs, the permit requires that the Discharger develop and implement a pollution minimization plan for dieldrin.

CEQA and Notifications

35. The Regional Board has notified the Discharger and interested agencies and persons of its intent to issue waste discharge requirements for this discharge, and has provided them with an opportunity to submit their written views and recommendations.

36. The Regional Board, in a public hearing, heard and considered all comments pertaining to the discharge and to the tentative requirements.

37. This Order shall serve as a National Pollutant Discharge Elimination System permit pursuant to Section 402 of the Federal CWA or amendments thereto, and is effective 30 days (June 2, 2007) from the date of its adoption, in accordance with federal law, provided the Regional Administrator, U.S. EPA, has no objections.

38. Pursuant to California Water Code section 13320, any aggrieved party may seek review of this Order by filing a petition with the State Board. A petition must be sent to the State Water Resources Control Board, Office of Chief Counsel, ATTN: Elizabeth Miller Jennings, Senior Staff Counsel, 1001 I Street, 22nd Floor, Sacramento, California, 95814, within 30 days of adoption of this Order.

39. The issuance of waste discharge requirements for this discharge is exempt from the provisions of Chapter 3 (commencing with Section 21100) of Division 13 of the Public Resources Code (CEQA) in accordance with the California Water Code, section 13389.

IT IS HEREBY ORDERED that City of Los Angeles Department of Water and Power, Castaic Power Plant (Castaic), in order to meet the provisions contained in Division 7 of the California Water Code and regulations adopted there under, and the provisions of the Federal Clean Water Act and regulations and guidelines adopted there under, shall comply with the following:

I. DISCHARGE REQUIREMENTS

A. Discharge Prohibitions

1. Wastes discharged shall be limited to a maximum of 13.2 million gallons per day (gpd) of cooling water, industrial use water, and floor drain sump water; 1,200 to 1,500 gallons per discharge event of backwash water; up to 1.1 billion gpd of water from Elderberry Forebay back to Pyramid Lake; and up to 1.5 billion gpd of water from Elderberry Forebay to Castaic Lake.

2. Discharges of water, materials, thermal wastes, elevated temperature wastes, toxic wastes, deleterious substances, or wastes other than those authorized by this Order, to a storm drain system, Elderberry Forebay, Castaic Lake, or Pyramid Lake, or waters of the State, are prohibited.

B. Effluent Limitations

The discharge of an effluent in excess of the following limitations is prohibited:

1. A pH value less than 6.5 or greater than 8.5.

2. A temperature greater than 86° F.

3. Final effluent limitations:

(a) In addition to the Requirements I.B.1 and I.B.2, the discharge due to off-peak pumping from Elderberry Forebay to Pyramid Lake through Discharge Serial No. 001 (Latitude 34°38'49", Longitude 118°45'43"); the release to Castaic Lake through Discharge Serial 002; the discharge of non-contact cooling water and industrial use water from the Unit 7 tailrace to Elderberry Forebay through Discharge Serial No. 003; the discharges of non-contact cooling water, industrial use water and other wastewaters from the combined discharge from compressor coolers and after coolers, industrial use, and seal drain, gallery drain, and dewatering sumps to Elderberry Forebay through Discharge Serial No. 005 containing constituents in excess of the following limitations is prohibited:

Constituent (units)	Discharge Limitations	
	Monthly Average	**Daily Maximum**
Settleable solids (ml/L)	0.1	0.3
Suspended solids (mg/L)	50	150
Turbidity (NTU) [1]	5	25
Dieldrin (µg/L)[2]	0.00014	0.00028

[1] During periods of storm runoff where natural turbidity is between 0 and 50 NTU (nephelometric turbidity units), increases shall not exceed 20%. Where natural turbidity is greater than 50 NTU, increases shall not exceed 10%.

[2] Applies only to Discharge Serial No. 001.

(b) In addition to the Requirements I.B.1 and I.B.2, the discharge from the oil-water separator to Elderberry Forebay (industrial use water and leakage from mechanical turbine shaft seals for Units 1 – 6) through Discharge Serial No. 004 containing constituents in excess of the following limitations is prohibited:

Constituent (units)	Discharge Limitations	
	Monthly Average	**Daily Maximum**
Oil and Grease (mg/L)	10	15
$BOD_5$20°C (mg/L)	--	10

(c) In addition to the Requirements I.B.1 and I.B.2, the discharge of backwash water from the potable water system to Elderberry Forebay through Discharge Serial No. 006 containing constituents in excess of the following limitations is prohibited:

Constituent (units)	Discharge Limitations	
	Monthly Average	Daily Maximum
Settleable solids (ml/L)	0.1	0.3
Suspended solids (mg/L)	50	150
Turbidity (NTU)	5	25
Residual chlorine (mg/L)	--	0.1
Oil and Grease (mg/L)	10	15
$BOD_5$20℃ (mg/L)	--	10
Methylene blue activated substances (MBAS) (mg/L)	--	0.5
Copper (µg/L) [1]	9.33	14
Lead (µg/L) [1]	3.18	81.65
Zinc (µg/L) [1]	120	120
Dichlorobromomethane (µg/L)		0.56
Acute Toxicity [2]	--	--

[1] Limits for these metals are expressed as total recoverable.

[2] The acute toxicity of the effluent shall be such that (i) the average survival in the undiluted effluent for any three (3) consecutive 96-hour static or continuous flow bioassay tests shall be at least 90%, and (ii) no single test producing less than 70% survival.

If either of the above requirements is not met, the Discharger shall conduct six additional tests over a six-week period. The Discharger shall ensure that they receive results of a failing acute toxicity test within 24 hours of the completion of the test, and the additional tests shall begin within 3 business days of the receipt of the result. If the additional tests indicate compliance with acute toxicity limitation, the Discharger may resume regular testing. However, if the results of any two of the six accelerated tests are less than 90% survival, then the Discharger shall begin a Toxicity Identification Evaluation (TIE). The TIE shall include all reasonable steps to identify the source(s) of toxicity. Once the source(s) of toxicity is identified, the Discharger shall take all reasonable steps to reduce the toxicity to meet the objective.

If the initial test and the additional six acute toxicity bioassay tests result in less than 70% survival, including the initial test, the Discharger shall immediately begin a TIE.

The Discharger shall conduct acute toxicity monitoring as specified in Monitoring and Reporting Program No. 6112.

4. Interim Effluent Limitation: From the effective date of this Order until May 17, 2010, the discharges due to off-peak pumping from Elderberry Forebay to Pyramid Lake through Discharge Serial No. 001 (Latitude 34°38'49", Longitude 118°45'43") in excess of the following is prohibited:

Constituent (units)	Monthly Average Concentration Discharge Serial No. 001 (Elderberry Forebay to Pyramid Lake)
Dieldrin (µg/L)	0.06

Discharges after May 17, 2010 must comply with the final limit for this constituent stipulated in the Table in section I.B.3(a) .

5. Interim Effluent Limitation: From the effective date of this Order until June 3, 2009, the discharges of backwash water from the potable water system to Elderberry Forebay through Discharge Serial No. 006 in excess of the following is prohibited:

Constituent (units)	Monthly Average Concentration Discharge Serial No. 006	Daily Maximum Concentration Discharge Serial No. 006
Copper (µg/L)	243	--
Lead (µg/L)	35.8	--
Zinc (µg/L)	218	--
Dichlorobromomrthane (µg/L)		2.37

Discharges after June 3, 2009, must comply with the final limit for this constituent stipulated in the Table in section I.B.3(c).

C. Receiving Water Limitations

1. The discharge shall not cause the following conditions to exist in the receiving waters:

   (a) Floating, suspended or deposited macroscopic particulate matter or foam;

   (b) Alteration of temperature, turbidity, or apparent color beyond present natural background levels;

   (c) Visible, floating, suspended or deposited oil or other products of petroleum origin;

   (d) Bottom deposits or aquatic growths; or,

   (e) Toxic or other deleterious substances to be present in concentrations or quantities which cause deleterious effects on aquatic biota, wildlife, or waterfowl or render any of these unfit for human consumption either at levels created in the receiving waters or as a result of biological concentration.

2. The discharge shall not cause nuisance, or adversely effect beneficial uses of the receiving water.

3. No discharge shall cause a surface water temperature rise greater than $5^{o}F$ above the natural temperature of the receiving waters at any time or place.

4. The discharge shall not cause the following limitations to be exceeded in the receiving waters at any place within the waterbody of the receiving waters:

   (a) The pH shall not be depressed below 6.5 nor raised above 8.5, nor caused to vary from normal ambient pH levels by more than 0.5 units;

(b) Dissolved oxygen shall not be less than 5.0 mg/L anytime, and the median dissolved oxygen concentration for any three consecutive months shall not be less than 80 percent of the dissolved oxygen content at saturation;

(c) Dissolved sulfide shall not be greater than 0.1 mg/L;

(d) The ammonia in the 1994 Basin Plan were revised by Regional Board Resolution No. 2002-011, adopted on April 28, 2002, to be consistent with the 1999 U.S. EPA update on ammonia criteria. Regional Board Resolution No. 2002-011 was approved by State Board, OAL and U.S. EPA on April 30, 2003, June 5, 2003, and June 19, 2003, respectively and is now in effect. Total ammonia (as N) shall not exceed concentrations specified in the Regional Board Resolution 2002-011.

5. The discharge shall not cause a violation of any applicable water quality standards for receiving waters adopted by the Regional Board or State Board. If more stringent applicable water quality standards are promulgated or approved pursuant to Section 303 of the Clean Water Act, or amendments thereto, the Regional Board will revise or modify this Order in accordance with such standards.

6. The discharge shall not cause the following to be present in receiving waters:

   a. Biostimulatory substances at concentrations that promote aquatic growth to the extent that such growth causes nuisance or adversely affects beneficial uses;

   b. Chemical substances in amounts that adversely affect any designated beneficial use;

   c. Oils, greases, waxes, or other materials in concentrations that result in a visible film or coating on the surface of the receiving water or on objects in the water;

   d. Suspended or settleable materials in concentrations that cause nuisance or adversely affect beneficial uses;

   e. Taste or odor-producing substances in concentrations that alter the natural taste, odor, and/or color of fish, shellfish, or other edible aquatic resources; cause nuisance; or adversely affect beneficial uses;

   f. Substances that result in increases of $BOD_5$20℃ that adversely affect beneficial uses;

7. The discharge shall not alter the color, create a visual contrast with the natural appearance, nor cause aesthetically undesirable discoloration of the receiving waters.

8. The discharge shall not degrade surface water communities and populations including vertebrate, invertebrate, and plant species.

9. The discharge shall not damage, discolor, nor cause formation of sludge deposits on flood control structures or facilities nor overload their design capacity.

10. The discharge shall not cause problems associated with breeding of mosquitoes, gnats, black flies, midges, or other pests.

II. REQUIREMENTS

A. Compliance Plan

1. The Discharger shall develop and implement a compliance plan that will identify the measures that will be taken to reduce the concentrations of dieldrin in their discharge. This plan must evaluate options to achieve compliance with the permit limitations specified in section I.B.3 of this Order.

2. The Discharger shall submit quarterly progress reports to describe the progress of studies and or actions undertaken to reduce dieldrin in the effluent, and to achieve compliance with the limits in this Order by the deadline specified in provision I.B.4. The Regional Board shall receive the first annual progress report at the same time the annual summary report is due, as required in Section I.B of Monitoring and Reporting Program (*M&RP*) No. 6112.

3. The Discharger shall develop a PMP to maintain effluent concentrations of dieldrin at or below the effluent limitations specified in provision I.B.3. The PMP shall include the following:

   (a) Annual review and semi-annual monitoring of the potential sources of dieldrin;
   (b) Quarterly monitoring of the influent to the wastewater treatment system;
   (c) Submittal of a control strategy designed to proceed toward the goal of maintaining effluent concentrations at or below the effluent limitation;
   (d) Implementation of appropriate cost-effective control measures consistent with the control strategy;
   (e) An annual status report that shall be sent to the Regional Board at the same time the annual summary report is submitted in accordance with Section I.B. of Monitoring and Reporting Program No. 6112, and include:
      - All PMP monitoring results for the previous year
      - A list of potential sources of dieldrin
      - A summary of all actions undertaken pursuant to the control strategy
      - A description of actions to be taken in the following year.

   LADWP has commenced a “Source Study” to identify the sources of dieldrin. Should

the Source Study shows that dieldrin is from a source other than Castaic, the PMP requirement has been fulfilled and LADWP will discontinue the submission of the PMP progress report and satisfies the PMP requirement.

4. The interim limits stipulated in section I.B.4 shall be in effect for a period not to extend beyond May 17, 2010. Thereafter, the Discharger shall comply with the limitations specified in Section I.B.3 of this Order.

B. Pursuant to the requirements of 40 CFR 122.42(a), the Discharger must notify the Board as soon as it knows, or has reason to believe (1) that it has begun or expected to begin, to use or manufacture a toxic pollutant not reported in the permit application, or (2) a discharge of toxic pollutant not limited by this Order has occurred, or will occur, in concentrations that exceed the specified limitations in 40 CFR 122.42(a).

C. The Discharger shall at all times properly operate and maintain all facilities and systems installed or used to achieve compliance with this Order.

D. The Discharger shall comply with the waste load allocations that will be developed from the TMDL process for the 303 (d)-listed pollutants.

E. The discharge of any product registered under the Federal Insecticide, Fungicide, and Rodenticide Act to any waste stream which may ultimately be released to waters of the United States, is prohibited unless specifically authorized elsewhere in this permit or another NPDES permit. This requirement is not applicable to products used for lawn and agricultural purposes.

F. The discharge of any waste resulting from the combustion of toxic or hazardous wastes to any waste stream which ultimately discharges to waters of the United States is prohibited, unless specifically authorized elsewhere in this permit.

G. The Discharger shall notify the Executive Officer in writing no later than 6 months prior to planned discharge of any chemical, other than chlorine or other product previously reported to the Executive Officer, which may be toxic to aquatic life. Such notification shall include:

   a. Name and general composition of the chemical,
   b. Frequency of use,
   c. Quantities to be used,
   d. Proposed discharge concentrations, and
   e. U.S. EPA registration number, if applicable.

   No discharge of such chemical shall be made prior to the Executive Officer's approval.

H. The Regional Board and U.S. EPA shall be notified immediately by telephone, of the presence of adverse conditions in the receiving waters or on beaches and shores as a result of wastes discharged; written confirmation shall follow as soon as possible but not later than five working days after occurrence.

III. PROVISIONS

A. This Order includes the attached *Standard Provisions and General Monitoring and Reporting Requirements* (Standard Provisions, Attachment N). If there is any conflict between provisions stated herein and the attached Standard Provisions, those provisions stated herein shall prevail.

B. This Order includes the attached *M&RP* No. 6112. If there is any conflict between provisions stated in the *M&RP* and the Standard Provisions, those provisions stated in the *M&RP* shall prevail.

C. This Order may be modified, revoked, reissued, or terminated in accordance with the provisions of 40 CFR sections 122.44, 122.62, 122.63, 122.64, 125.62 and 125.64. Causes for taking such actions include, but are not limited to: failure to comply with any condition of this Order; endangerment to human health or the environment resulting from the permitted activity; or acquisition of newly-obtained information which would have justified the application of different conditions if known at the time of Order adoption. The filing of a request by the Discharger for an Order modification, revocation, and issuance or termination, or a notification of planned changes or anticipated noncompliance does not stay any condition of this Order.

E. The Discharger must comply with the lawful requirements of municipalities, counties, drainage districts, and other local agencies regarding discharges of storm water to storm drain systems or other water courses under their jurisdiction; including applicable requirements in municipal storm water management program developed to comply with NPDES permits issued by the Regional Board to local agencies.

F. Discharge of wastes to any point other than specifically described in this Order and permit is prohibited and constitutes a violation thereof.

G. The Discharger shall comply with all applicable effluent limitations, national standards of performance, toxic effluent standards, and all federal regulations established pursuant to Sections 301, 302, 303(d), 304, 306, 307, 316, and 423 of the Federal Clean Water Act and amendments thereto.

H. Compliance Determination

1. Compliance with single constituent effluent limitation – If the concentration of the pollutant in the monitoring sample is greater than the effluent limitation and greater than or equal to the reported Minimum Level (see Reporting Requirement II.C. of the *M&RP* No. CI-6112*)*, then the Discharger is out of compliance.

2. Compliance with monthly average limitations - In determining compliance with monthly average limitations, the following provisions shall apply to all constituents:

    a. If the analytical result of a single sample, monitored monthly, quarterly, semi-annually, or annually, does not exceed the monthly average limit for that constituent, the Discharger has demonstrated compliance with the monthly average limit for that month.

    b. If the analytical result of a single sample, monitored monthly, quarterly, semi-annually, or annually, exceeds the monthly average limit for any constituent, the Discharger shall collect up to four additional samples at approximately equal intervals during the month. All analytical results shall be reported in the monitoring report for that month, or 45 days after results for the additional samples were received, whichever is later.

        When all sample results are greater than or equal to the reported Minimum Level (see Reporting Requirement II.C. of *M&RP* No. CI-6112), the numerical average of the analytical results of these samples will be used for compliance determination.

        When one or more sample results are reported as "Not-Detected (ND)" or "Detected, but Not Quantified (DNQ)" (see Reporting Requirement II.C. of *M&RP* No. CI-6112), the median value of these samples shall be used for compliance determination. If one or both of the middle values is ND or DNQ, the median shall be the lower of the two middle values.

    c. In the event of noncompliance with a monthly average effluent limitation, the sampling frequency for that constituent shall be increased to weekly and shall continue at this level until compliance with the monthly average effluent limitation has been demonstrated.

    d. If only one sample was obtained for the month or more than a monthly period and the result exceed the monthly average, then the Discharger is in violation of the monthly average limit.

3. Compliance with effluent limitations expressed as a sum of several constituents – If the sum of the individual pollutant concentrations is greater than the effluent limitation, then the Discharger is out of compliance. In calculating the sum of the concentrations of a group of pollutants, consider constituents reported as ND or DNQ to have concentrations equal to zero, provided that the applicable ML is used.

4. Compliance with effluent limitations expressed as a median – in determining compliance with a median limitation, the analytical results in a set of data will be arranged in Order of magnitude (either increasing or decreasing Order); and

    a. If the number of measurements (n) is odd, then the median will be calculated as = $X_{(n+1)/2}$, or

b. If the number of measurements (n) is even, then the median will be calculated as = $[X_{n/2} + X_{(n/2)+1}]$, i.e. the midpoint between the n/2 and n/2+1 data points.

I. In calculating mass emission rates from the monthly average concentrations, use one half of the method detection limit for "Not Detected" (ND) and the estimated concentration for "Detected, but Not Quantified" (DNQ) for the calculation of the monthly average concentration. To be consistent with section III.H.3., if all pollutants belonging to the same group are reported as ND or DNQ, the sum of the individual pollutant concentrations should be considered as zero for the calculation of the monthly average concentration.

IV. REOPENERS

A. This Order may be reopened and modified, in accordance with SIP Section 2.2.2.A, to incorporate new limits based on future RPA to be conducted, upon completion of the collection of additional data by the Discharger.

B. This Order may be reopened and modified, to incorporate in accordance with the provisions set forth in 40 CFR Parts 122 and 124, to include requirements for the implementation of the watershed management approach.

C. This Order may be reopened and modified, in accordance with the provisions set forth in 40 CFR Parts 122 and 124, to include new minimum levels (MLs) for each pollutant.

D. This Order may be reopened and modified, to revise effluent limitations as a result of future Basin Plan Amendments.

E. This Order may be reopened upon the submission by the Discharger, of adequate information, as determined by the Regional Board, to provide for dilution credits or a mixing zone, as may be appropriate.

F. This Order may also be reopened and modified, revoked, and reissued or terminated in accordance with the provisions of 40 CFR sections 122.44, 122.62 to 122.64, 125.62, and 125.64. Causes for taking such actions include, but are not limited to, failure to comply with any condition of this order and permit, endangerment to human health or the environment resulting from the permitted activity.

V. EXPIRATION DATE

This Order expires on April 10, 2012.

The Discharger must file a Report of Waste Discharge in accordance with Title 23, California Code of Regulations, not later than 180 days in advance of such date as application for issuance of new waste discharge requirements.

VI. RESCISSION

Order No. 98-020, adopted by this Regional Board on March 2, 1998, is hereby rescinded except for enforcement purposes.

I, Deborah J. Smith, Interim 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, Los Angeles Region, on May 3, 2007.

Deborah J. Smith
Interim Executive Officer