CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
LOS ANGELES REGION

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ORDER R4-2023-XXXX
NPDES NUMBER CA0064645

WASTE DISCHARGE REQUIREMENTS (WDRs) AND NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES) PERMIT FOR THE WATER REPLENISHMENT DISTRICT OF SOUTHERN CALIFORNIA ALBERT ROBLES CENTER FOR WATER RECYCLING & ENVIRONMENTAL LEARNING ADVANCED WATER TREATMENT FACILITY

The following Discharger is subject to WDRs set forth in this Order:

Table 1. Discharger Information

Discharger:	Water Replenishment District of Southern California (Discharger or Permittee)
Name of Facility:	Albert Robles Center for Water Recycling & Environmental Learning-Advanced Water Treatment Facility (ARC-AWTF or Facility)
Facility Address:	4320 San Gabriel River Parkway Pico Rivera, CA 90660 Los Angeles County

Table 2. Discharge Location

Discharge Point	Effluent Description	Discharge Point Latitude (North)	Discharge Point Longitude (West)	Receiving Water
001	Advanced Treated Recycled Water, Tertiary-Treated Water, and Ultrafiltration Filtrate	33.93061°	118.10779°	San Gabriel River

Discharge Point	Effluent Description	Discharge Point Latitude (North)	Discharge Point Longitude (West)	Receiving Water
001A	Advanced Treated Recycled Water, Tertiary-Treated Water, and Ultrafiltration Filtrate	33.99440°	118.07347°	San Gabriel River
001B	Advanced Treated Recycled Water, Tertiary-Treated Water, and Ultrafiltration Filtrate	33.96977°	118.08886°	San Gabriel River

Table 3. Administrative Information

This Order was adopted on:	**October 19, 2023**
This Order shall become effective on:	**January 8, 2024**
This Order Shall expire on:	**January 7, 2029**
The Discharger shall file a Report of Waste Discharge (ROWD) as an application for reissuance of WDRs in accordance with title 23, California Code of Regulations, and an application for the Order reissuance of a NPDES permit no later than:	**180 days prior to the Order expiration date**
The United States Environmental Protection Agency Region 9 and the California Regional Water Quality Control Board, Los Angeles Region have classified this discharge as follows:	**Major**

I, Susana Arredondo, Executive Officer, do hereby certify that this Order with all attachments is a full, true, and correct copy of the Order adopted by the California Regional Water Quality Control Board, Los Angeles Region, on the date indicated above.

Susana Arredondo, Executive Officer

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1. FACILITY INFORMATION

Information describing the Albert Robles Center for Water Recycling & Environmental Learning-Advanced Water Treatment Facility (ARC-AWTF or Facility) is summarized in Table 1 and in sections 1 and 2 of the Fact Sheet (Attachment F). Section 1 of the Fact Sheet also includes information regarding the Facility's permit application.

2. FINDINGS

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

2.1. Legal Authorities. This Order serves as waste discharge requirements (WDRs) pursuant to article 4, chapter 4, division 7 of the California Water Code (Water Code) (commencing with section 13260). This Order is also issued pursuant to section 402 of the federal Clean Water Act (CWA) and implementing regulations adopted by the United States Environmental Protection Agency (USEPA) and chapter 5.5, division 7 of the Water Code (commencing with section 13370). It shall serve as a National Pollutant Discharge Elimination System (NPDES) permit authorizing the Discharger to discharge into waters of the United States at the discharge location described in Table 2 subject to the WDRs in this Order.

2.2. Background and Rationale Requirements. The Los Angeles Water Board developed the requirements in this Order based on information submitted as part of the application, through monitoring and reporting programs, and other available information. The Fact Sheet (Attachment F), which contains background information and rationale for the requirements in this Order, is hereby incorporated into and constitutes Findings for this Order. Attachments A through E, and G are also incorporated into this Order.

2.3. Provisions and Requirements Implementing California State Law. The provisions and requirements implementing State law are not required or authorized under the federal CWA; consequently, violations of these provisions/requirements are not subject to the enforcement remedies that are available for NPDES violations.

2.4. Notification of Interested Parties. The Los Angeles Water Board has notified the Discharger and interested agencies and persons of its intent to prescribe WDRs for the discharge and has provided them with an opportunity to submit their written comments and recommendations. Details of the notification are provided in the Fact Sheet.

2.5. Consideration of Public Comment. The Los Angeles Water Board, in a public meeting, heard and considered all comments pertaining to the discharge. Details of the Public Hearing are provided in the Fact Sheet.

THEREFORE, IT IS HEREBY ORDERED that Order Number R4-2017-0187 is rescinded upon the effective date of this Order except for enforcement purposes, and, in order to meet the provisions contained in Division 7 of the Water Code (commencing with section 13000) and regulations adopted thereunder, and the

provisions of the CWA and regulations and guidelines adopted thereunder, the Permittee shall comply with the requirements in this Order. This action in no way prevents the Los Angeles Water Board from taking enforcement action for past violations of the previous Order.

3. DISCHARGE PROHIBITIONS

3.1. Discharge of advanced treated recycled water, tertiary-treated effluent, or ultrafiltration recovery water at a location different from that described in this Order is prohibited.

3.2. The bypass or overflow of untreated wastewater or wastes to surface waters or surface water drainage courses is prohibited, except when meeting the criteria for exceptions in title 40 of the Code of Federal Regulations (40 CFR) part 122.41(m), as discussed in Standard Provision 1.7. of Attachment D, Standard Provisions.

3.3. The monthly average effluent dry weather discharge flow rate from the Facility shall not exceed the 14.8 million gallons per day (MGD) design capacity.

3.4. The Permittee shall not cause degradation of any water body, except as consistent with California State Water Resources Control Board (State Water Board) Resolution Number 68-16.

3.5. The treatment or disposal of advanced treated recycled water or wastes from the Facility shall not cause pollution or nuisance as defined in section 13050, subdivisions (l) and (m), of the Water Code.

3.6. The discharge of any substances in concentrations toxic to human, animal, plant, or aquatic life is prohibited.

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

3.8. The discharge of trash to surface waters of the State or the deposition of trash where it may be discharged into surface waters of the State is prohibited.

4. EFFLUENT LIMITATIONS AND DISCHARGE SPECIFICATIONS

4.1. Effluent Limitations – Discharge Points 001, 001A, and 001B

4.1.1. Final Effluent Limitations – Discharge Points 001, 001A, and 001B

a. The Discharger shall maintain compliance with the following effluent limitations in Table 4 for Discharge Points 001, and Table 5 for 001A, and 001B, with compliance measured at Monitoring Location EFF-001 as described in the Monitoring and Reporting Program (MRP), Attachment E:

Table 4. Final Effluent Limitations for Discharge Point 001

Parameter	Units	Average Monthly	Average Weekly	Maximum Daily	Note
Ammonia [as N, early life stage (ELS) Absent, year-round)	mg/L	3.4		8.0	--
Ammonia (as N, ELS Absent, year-round)	lbs/day	421	--	987	a
Chlorine, Total Residual	mg/L	--	--	0.1	--
Chlorine, Total Residual	lbs/day	--	--	12	a
Temperature	°F	--	--	80	b
Total Coliform	most probable number (MPN) or colony forming unit (CFU)/100 mL	23	2.2	240	c
Nitrate + Nitrite (as N)	mg/L	10	--	--	--
Nitrate + Nitrite (as N)	lbs/day	1,200	--	--	a
Nitrite (as N)	mg/L	1	--	--	--
Nitrite (as N)	lbs/day	123	--	--	a
Copper (Dry Weather)	µg/L	--	--	18	d & g
Lead	µg/L	3.6	--	12	g
Lead	lbs/day	0.44	--	1.5	a & g
Mercury	µg/L	0.012	--	--	e & g
Mercury	lbs/day	0.0015	--	--	a, e, & g
Selenium	µg/L	2.7	--	8.4	g
Selenium	lbs/day	0.33	--	1.0	a & g
Thallium	µg/L	6.3	--	20	g

Parameter	Units	Average Monthly	Average Weekly	Maximum Daily	Note
Thallium	lbs/day	0.78	--	2.5	a & g
Cyanide	µg/L	4.1	--	9.1	--
Cyanide	lbs/day	0.50	--	1.1	a
2,3,7,8-Tetrachlorodibenzodioxin (TCDD)	pg/L	0.014	--	0.028	--
2,3,7,8-TCDD	lbs/day	$1.7x10^{-9}$	--	$3.5x10^{-9}$	a
Chronic Toxicity *Pimephales promelas* Survival and growth endpoints	Pass or Fail, % Effect [Test of Significant Toxicity (TST)]	Pass	--	Pass (TST) and % Effect <50 (survival endpoint)	f

Footnotes for Table 4

a. The mass-based effluent limitations are based on the plant design flow rate of 14.8 MGD and are calculated as follows: Flow (MGD) x Concentration (mg/L) x 8.34 (conversion factor) = lbs/day, Flow (MGD) x Concentration (µg/L) x 0.00834 (conversion factor) = lbs/day.

b. An interim effluent limitation for temperature is included in section 4.1.2 of this Order for the duration of the compliance schedule.

c. The wastes and advanced treated recycled water discharged to water courses shall at all times be adequately disinfected. For the purpose of this requirement, the wastes and advanced treated recycled water shall be considered adequately disinfected if: (1) the median number of total coliform bacteria in the disinfected effluent does not exceed a 7-day median of 2.2 MPN or CFU per 100 mL utilizing the bacteriological results of the last seven (7) days for which an analysis has been completed, (2) the number of total coliform bacteria does not exceed 23 MPN or CFU per 100 mL in more than one sample within any 30-day period, and (3) no sample shall exceed 240 MPN or CFU of total coliform bacteria per 100 mL. Samples shall be collected at a time when flow and its characteristics are most demanding on treatment facilities and disinfection processes.

d. Dry-weather effluent limitations apply when the maximum daily flow measured at the San Gabriel River, United States Geological Survey gauging station 11087020 is less than 260 cubic feet per second (cfs).

e. This is an annual average effluent limitation.

f. A numeric water quality-based effluent limitation (WQBEL) is established because effluent data showed that there was reasonable potential for the effluent to cause or contribute to an exceedance of the chronic toxicity water quality objective. The Chronic Toxicity final effluent limitation is protective of both the numeric acute toxicity and the narrative toxicity Water Quality Control Plan for the Los Angeles Region (Basin Plan) water quality objectives. These final effluent limitations are based on the *State Policy for Water Quality Control: Toxicity Provisions* (Toxicity Provisions), adopted by the State Water Resources Control Board on October 5, 2021, and approved by OAL and USEPA on April 25, 2022, and May 1, 2023, respectively.

g. Expressed for total recoverable.

End of Footnotes for Table 4

Table 5. Final Effluent Limitations for Discharge Points 001A and 001B

Parameter	Units	Average Monthly	Average Weekly	Maximum Daily	Note
Ammonia (as N, ELS Absent, October 1 – March 31)	mg/L	3.5	--	6.8	--
Ammonia (as N, ELS Absent, October 1 – March 31)	lbs/day	429	--	839	a
Ammonia (as N, ELS Present, April 1 – September 30)	mg/L	4.0	--	6.0	--
Ammonia (as N, ELS Present, April 1 – September 30)	lbs/day	494	--	741	a
Chlorine, Total Residual	mg/L	--	--	0.1	--
Chlorine, Total Residual	lbs/day	--	--	12	a
Temperature	°F	--	--	80	b
Total Coliform	MPN or CFU/100 mL	23	2.2	240	c
Total dissolved solid (TDS)	mg/L	750	--	--	--
TDS	lbs/day	92,574	--	--	a
Sulfate	mg/L	300	--	--	--
Sulfate	lbs/day	37,030	--	--	a
Chloride	mg/L	180	--	--	--
Chloride	lbs/day	22,218	--	--	a
Boron	mg/L	1.0	--	--	--

Parameter	Units	Average Monthly	Average Weekly	Maximum Daily	Note
Boron	lbs/day	123	--	--	a
Nitrate + Nitrite (as N)	mg/L	8	--	--	--
Nitrate + Nitrite (as N)	lbs/day	987	--	--	a
Nitrite (as N)	mg/L	1.0	--	--	--
Nitrite (as N)	lbs/day	123	--	--	a
Copper	µg/L	8.3	--	27	i
Copper	lbs/day	1.0	--	3.4	a & i
Lead (Dry Weather)	µg/L	3.6	--	12	d & i
Lead (Dry Weather)	lbs/day	0.44	--	1.5	a, d, & i
Lead (Wet Weather)	µg/L	--	--	166	e & i
Lead (Wet Weather)	lbs/day	--	--	--	a, e, & i
Mercury	µg/L	0.012	--	--	f & i
Mercury	lbs/day	0.0015	--	--	a, f, & i
Selenium	µg/L	2.7	--	8.4	i
Selenium	lbs/day	0.33	--	1.0	a & i
Thallium	µg/L	6.3	--	20	i
Thallium	lbs/day	0.78	--	2.5	a & i
Cyanide	µg/L	4.1	--	9.1	--
Cyanide	lbs/day	0.50	--	1.1	a
2,3,7,8-TCDD	pg/L	0.014	--	0.028	--
2,3,7,8-TCDD	lbs/day	1.7×10^{-9}	--	3.5×10^{-9}	a
Combined Radium-226 and Radium-228	picoCuries per liter (pCi/L)	5	--	--	g

Parameter	Units	Average Monthly	Average Weekly	Maximum Daily	Note
Gross Alpha particle activity (excluding radon and uranium)	pCi/L	15	--	--	g
Gross Beta/photon emitters	millirem/year	4	--	--	g
Strontium-90	pCi/L	8	--	--	g
Tritium	pCi/L	20,000	--	--	g
Uranium	pCi/L	20	--	--	g
Chronic Toxicity *Pimephales promelas* Survival and growth endpoints	Pass or Fail, (TST), % Effect	Pass	--	Pass (TST) and % Effect <50 (survival endpoint)	h

Footnotes for Table 5

a. The mass-based effluent limitations are based on the plant design flow rate of 14.8 MGD and are calculated as follows: Flow (MGD) x Concentration (mg/L) x 8.34 (conversion factor) = lbs/day, Flow (MGD) x Concentration (µg/L) x 0.00834 (conversion factor) = lbs/day.

b. An interim effluent limitation for temperature is included in section 4.1.2 of this Order for the duration of the compliance schedule.

c. The wastes and advanced treated recycled water discharged to water courses shall at all times be adequately disinfected. For the purpose of this requirement, the wastes and advanced treated recycled water shall be considered adequately disinfected if: (1) the median number of total coliform bacteria in the disinfected effluent does not exceed a 7-day median of 2.2 MPN or CFU/100 mL utilizing the bacteriological results of the last seven (7) days for which an analysis has been completed, (2) the number of total coliform bacteria does not exceed 23 MPN or CFU per 100 mL in more than one sample within any 30-day period, and (3) no sample shall exceed 240 MPN or CFU of total coliform bacteria per 100 mL. Samples shall be collected at a time when flow and characteristics are most demanding on treatment facilities and disinfection processes.

d. Dry-weather effluent limitations apply when the maximum daily flow measured at the San Gabriel River, United States Geological Survey gauging station 11087020 is less than 260 cfs.

e. Wet-weather effluent limitations apply when the maximum daily flow measured at the San Gabriel River, United States Geological Survey gauging station 11087020 is equal to or greater than 260 cfs.

f. This is an annual average effluent limitation.

g. The radioactivity final effluent limitations shall not exceed the limits specified in Title 22, chapter 15, article 5, sections 64442 and 64443 of the California Code of Regulations (CCR), or subsequent revisions.

h. A numeric WQBEL is established because effluent data showed that there was reasonable potential for the effluent to cause or contribute to an exceedance of the chronic toxicity water quality objective. The Chronic Toxicity final effluent limitation is protective of both the numeric acute toxicity and the narrative toxicity Basin Plan water quality objectives. These final effluent limitations are established based on the *State Policy for Water Quality Control: Toxicity Provisions* (Toxicity Provisions), adopted by the State Water Resources Control Board on October 5, 2021, and approved by OAL and USEPA on April 25, 2022, and May 1, 2023, respectively.

i. Expressed as total recoverable.

End of Footnotes for Table 5

b. The effluent values for pH shall be maintained within the limits of 6.5 standard units and 8.5 standard units.

c The turbidity of the treated effluent shall not exceed any of the following: (a) 0.2 Nephelometric turbidity units (NTUs) more than 5 percent of the time (72 minutes) within a 24-hour period; and (b) 0.5 NTU at any time.

d. For the protection of the groundwater recharge (GWR) beneficial use of the surface water, which is intended to protect groundwater quality where surface water recharges groundwater, the wastes and advanced treated recycled water discharged at Discharge Points 001A and 001B shall not adversely affect the GWR beneficial use or cause a condition of pollution or nuisance.

4.1.2. Interim Effluent Limitations for Discharge Points 001, 001A, and 001B

This Order includes a new, more stringent effluent limitation for temperature based on a new interpretation of the narrative water quality objective for temperature contained in the Basin Plan. Consistent with Section 1.e. of the State Water Board's Resolution 2008-0025 – *Policy for Compliance Schedules in National Pollutant Discharge Elimination System Permits* (Compliance Schedule Policy), the Discharger shall have up to eight years to implement actions specified in Table 7 to comply with a more stringent permit limitation. The interim effluent limitation in Table 6 shall apply from the effective date of this Order until the expiration date of the compliance schedule.

Table 6. Interim Effluent Limitation for Discharge Points 001, 001A, and 001B

Constituent	Unit	Daily Maximum	Note
Temperature	°F	86	a

Footnotes for Table 6

a. The temperature of the effluent shall not exceed 86°F except as a result of external ambient or influent temperature. This interim limitation is based on the final effluent limitation for temperature in Order R4-2017-0187.

End of Footnotes for Table 6

4.2. Land Discharge Specifications – Not Applicable

4.3. Recycling Specifications

The Discharger is currently recycling the advanced-treated effluent from the ARC-AWTF for groundwater recharge through surface application in the Montebello Forebay Spreading Grounds under the WDRs/Water Reclamation Requirements (WRRs) Order No. R4-2018-0129. The Discharger shall continue to investigate the feasibility of recycling, conservation, and/or alternative disposal methods for wastewater or the advanced treated recycled water (such as groundwater injection), and/or capture and treatment of dry-weather urban runoff and stormwater on a permissive basis for beneficial reuse. The Discharger shall submit a detailed feasibility investigation as part of the submittal of the Report of Waste Discharge (ROWD) for the next Order renewal.

5. RECEIVING WATER LIMITATIONS

5.1. Surface Water Limitations

Receiving water limitations are based on the water quality objectives in the Basin Plan. The discharge shall not cause the following in the receiving water:

5.1.1. The natural receiving water temperature of all regional waters shall not be altered unless it can be demonstrated to the satisfaction of the Los Angeles Water Board that such alteration in temperature does not adversely affect beneficial uses. Additionally, for waters designated with a warm freshwater habitat (WARM) beneficial use, water temperature shall not be altered by more than 5°F above the natural temperature. At no time shall these WARM-designated waters be raised above 80°F as a result of waste or the advanced treated recycled water discharge except during the term of the compliance schedule set forth in Table 7 section 6.3.7, when the following interim receiving water limitation is in effect: at no time shall these WARM-designated waters be raised above 86°F as a result of waste or the advanced treated recycled water discharge, except as a result of external ambient or influent temperature.

5.1.2. The pH of inland surface waters shall not be depressed below 6.5 or raised above 8.5 as a result of wastes or the advanced treated recycled water discharged. Ambient pH levels shall not be changed more than 0.5 units

from natural conditions as a result of the wastes or advanced treated recycled water discharged. Natural conditions shall be determined on a case-by-case basis.

5.1.3. The dissolved oxygen (DO) in the receiving water shall not be depressed below 5 mg/L as a result of the wastes or advanced treated recycled water discharged.

5.1.4. The total residual chlorine shall not persist in the receiving waters at any concentration that causes impairment of beneficial uses as a result of the wastes or advanced treated recycled water discharged.

5.1.5. Waters shall be free of changes in turbidity that cause nuisance or adversely affect beneficial uses. Increases in natural turbidity attributable to controllable water quality factors shall not exceed the following limits, as a result of wastes or the advanced treated recycled water discharged:

a. Where natural turbidity is between 0 and 50 NTU, increases shall not exceed 20%.

b. Where natural turbidity is greater than 50 NTU, increases shall not exceed 10%.

5.1.6. The wastes or advanced treated recycled water discharged shall not produce concentrations of substances in the receiving water that are toxic to or cause detrimental physiological responses in human, animal, or aquatic life.

5.1.7. The wastes or advanced treated recycled water discharged shall not cause concentrations of contaminants to occur at levels that are harmful to human health in waters which are existing or potential sources of drinking water.

5.1.8. The concentrations of toxic pollutants in the water column, sediments, or biota shall not adversely affect beneficial uses as a result of the wastes or advanced treated recycled water discharged.

5.1.9. The wastes or advanced treated recycled water discharged shall not contain substances that result in increases in biochemical oxygen demand (BOD) which adversely affect the beneficial uses of the receiving waters.

5.1.10. Waters discharged shall not contain biostimulatory substances in concentrations that promote aquatic growth to the extent that such growth causes nuisance or adversely affects beneficial uses.

5.1.11. The dissolved sulfide concentration of waters in and near sediments shall not be significantly increased above that present under natural conditions as a result of waters discharged.

5.1.12. The wastes or advanced treated recycled water discharged shall not cause the receiving waters to contain any substance in concentrations that adversely affect any designated beneficial use.

5.1.13. The wastes or advanced treated recycled water discharged shall not degrade surface water communities and populations, including vertebrate, invertebrate, and plant species.

5.1.14. The wastes or advanced treated recycled water discharged shall not alter the natural taste, odor, or color of fish, shellfish, or other surface water resources used for human consumption.

5.1.15. The wastes or advanced treated recycled water discharged shall not result in problems due to breeding of mosquitoes, gnats, black flies, midges, or other pests.

5.1.16. The wastes or advanced treated recycled water discharged shall not result in visible floating particulates, foams, or oil and grease in the receiving waters that cause nuisance or adversely affect beneficial uses.

5.1.17. The wastes or advanced treated recycled water discharged shall not cause objectionable aquatic growths or degrade indigenous biota.

5.1.18. The wastes or advanced treated recycled water discharged shall not alter the color of the receiving waters; create a visual contrast with the natural appearance of the water; or cause aesthetically undesirable discoloration of the receiving waters.

5.1.19. The wastes or advanced treated recycled water discharged shall not contain any individual pesticide or combination of pesticides in concentrations that adversely affect beneficial uses of the receiving waters. There shall be no increase in pesticide concentrations found in bottom sediments or aquatic life as a result of the wastes discharged.

5.1.20. The wastes or advanced treated recycled water discharged shall not cause the ammonia water quality objective in the Basin Plan to be exceeded in the receiving waters. Compliance with the ammonia water quality objectives shall be determined by comparing the receiving water ammonia concentration to the ammonia water quality objective in the Basin Plan. The ammonia water quality objective can also be calculated using the pH and temperature of the receiving water at the time of collection of the ammonia sample.

5.1.21. There shall be no chronic toxicity in ambient waters as a result of wastes or advanced treated recycled water discharged.

5.2. Groundwater Limitations – Not Applicable

6. PROVISIONS

6.1. Standard Provisions

6.1.1. The Discharger shall comply with all Standard Provisions included in Attachment D.

6.1.2. **Los Angeles Water Board Standard Provisions**. The Discharger shall comply with the following provisions. If there is any conflict, duplication, or

overlap between provisions specified by this Order, the more stringent provision shall apply:

a. Neither the treatment nor the discharge of pollutants shall create pollution, contamination, or nuisance as defined by section 13050 of the Water Code.

b. Odors, vectors, and other nuisances of sewage or sludge origin beyond the limits of the treatment plant site or the sewage collection system due to improper operation of facilities (such as failure to implement appropriate beast management practices) and/or spills, bypass, or overflow of sewage sludge, as determined by the Los Angeles Water Board, are prohibited.

c. All facilities used for collection, transport, treatment, or disposal of advanced treated recycled water or wastes shall be adequately protected against damage resulting from overflow, washout, or inundation from a storm or flood having a 1-percent chance of occurring in a 24-hour period in an any given year.

d. Collection, treatment, and disposal systems shall be operated in a manner that precludes or impedes public contact with wastewater or advanced treated recycled water.

e. Collected screenings, sludges, and other solids removed from liquid wastes shall be disposed of in a manner approved by the Executive Officer of the Los Angeles Water Board.

f. The provisions of this Order are severable. If any provision of this Order is found invalid, the remainder of this Order shall not be affected.

g. Nothing in this Order shall be construed to preclude the institution of any legal action or relieve the Discharger from any responsibilities, liabilities or penalties established pursuant to any applicable state law or regulation under authority preserved by section 311 of the CWA, related to oil and hazardous substances liability.

h. The Discharger must comply with the lawful requirements of municipalities, counties, drainage districts, and other local agencies regarding discharges of stormwater to storm drain systems or other water courses under their jurisdiction, including applicable requirements in municipal stormwater management programs developed to comply with the NPDES permit(s) issued by the Los Angeles Water Board to local agencies.

i. Discharge of wastes or advanced treated recycled water to any point other than specifically described in this Order is prohibited and constitutes a violation thereof.

j. 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, 403, and 405 of the federal CWA and amendments thereto.

k. These requirements do not exempt the operator of the advanced treated recycled water facility from compliance with any other laws, regulations, or ordinances which may be applicable; they do not legalize this advanced treated recycled water facility; and they leave unaffected any further restraints on the disposal of advanced treated recycled water or wastes at this site which may be contained in other statutes or required by other agencies.

l. The Discharger shall make diligent, proactive efforts to reduce Facility infrastructure vulnerability to current and future impacts resulting from climate change, including but not limited to extreme wet weather events, flooding, storm surges, and projected sea level rise when the facility is located near the ocean or discharges to the ocean.

m. Oil or oily material, chemicals, refuse, or other polluting materials shall not be stored or deposited in areas where they may be picked up by rainfall and carried off the property and/or discharged to surface waters. Any such spill of such materials shall be contained and removed immediately.

n. A copy of these waste discharge specifications shall always be maintained and available to operating personnel at the discharge Facility.

o. If there is any storage of hazardous or toxic materials or hydrocarbons at this Facility and if the Facility is not always manned, a 24-hour emergency response telephone number shall be prominently posted where it can easily be read from the outside.

p. The Discharger shall file with the Los Angeles Water Board a report of waste discharge at least 120 days before making any proposed change in the character, location or volume of the discharge.

q. In the event of any change in name, ownership, or control of these advanced treated recycled water facilities, the Discharger shall notify the Los Angeles Water Board of such change and shall notify the succeeding owner or operator of the existence of this Order by letter, a copy of which shall be forwarded to the Los Angeles Water Board, 30 days prior to taking effect.

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

s. The Discharger shall notify the Executive Officer of the Los Angeles Water Board in writing no later than 6 months prior to planned discharge

of any chemical, other than the products previously reported to the Executive Officer, which may be toxic to aquatic life. Such notification shall include:

i. Name and general composition of the chemical,

ii. Frequency of use,

iii. Quantities to be used,

iv. Proposed discharge concentrations, and

v. USEPA registration number, if applicable.

t. Failure to comply with provisions or requirements of this Order, or violation of other applicable laws or regulations governing discharges from this Facility, may subject the Discharger to administrative or civil liabilities, criminal penalties, and/or other enforcement remedies to ensure compliance. Additionally, certain violations may subject the Discharger to civil or criminal enforcement from appropriate local, state, or federal law enforcement entities.

u. Water Code section 13385(h)(i) requires the Los Angeles Water Board to assess a mandatory minimum penalty of three-thousand dollars ($3,000) for each serious violation. Pursuant to Water Code section 13385(h)(2), a “serious violation” is defined as any waste discharge that violates the effluent limitations contained in the applicable waste discharge requirements for a Group II pollutant by 20 percent or more, or for a Group I pollutant by 40 percent or more. Appendix A of 40 CFR part 123.45 specifies the Group I and II pollutants. Pursuant to Water Code section 13385.1(a)(1), a “serious violation” is also defined as “a failure to file a discharge monitoring report required pursuant to section 13383 for each complete period of 30 days following the deadline for submitting the report, if the report is designed to ensure compliance with limitations contained in waste discharge requirements that contain effluent limitations.”

v. Water Code section 13385(i) requires the Los Angeles Water Board to assess a mandatory minimum penalty of three-thousand dollars ($3,000) for each violation whenever a person violates a waste discharge requirement effluent limitation four or more times in any period of six consecutive months, except that the requirement to assess the mandatory minimum penalty shall not be applicable to the first three non-serious violations within that time period.

w. Pursuant to Water Code section 13385.1(d), for the purposes of section 13385.1 and subdivisions (h), (i), and (j) of section 13385, “effluent limitation” means a numeric restriction or a numerically expressed narrative restriction, on the quantity, discharge rate, concentration, or toxicity units of a pollutant or pollutants that may be discharged from an authorized location. An effluent limitation may be final or interim and

may be expressed as a prohibition. An effluent limitation, for these purposes, does not include a receiving water limitation, a compliance schedule, or a best management practice.

x. Water Code section 13387(e) 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, or who knowingly falsifies, tampers with, or renders inaccurate any monitoring device or method required to be maintained in this order shall be punished by a fine of not more than twenty-five thousand dollars ($25,000), imprisonment pursuant to subdivision (h) of Section 1170 of the Penal Code for 16, 20, or 24 months, or by both that fine and imprisonment. For a subsequent conviction, such a person shall be punished by a fine of not more than twenty-five thousand dollars ($25,000) per day of violation, by imprisonment pursuant to subdivision (h) of Section 1170 of the Penal Code for two, three, or four years, or by both that fine and imprisonment.

y. In the event the Discharger does not comply or will be unable to comply for any reason, with any prohibition, effluent limitation, or receiving water limitation of this Order, the Discharger shall notify the Manager of the Watershed Regulatory Section at the Los Angeles Water Board by telephone at (213) 576-6616 or by fax at (213) 576-6660 within 24 hours of having knowledge of such noncompliance, and shall confirm this notification in writing to the Los Angeles Water Board within five days, unless the Los Angeles Water Board waives confirmation. The written notification shall state the nature, time, duration, and cause of noncompliance, and shall describe the measures being taken to remedy the current noncompliance and, prevent recurrence including, where applicable, a schedule of implementation. The written notification shall also be submitted via email with reference to CI-10317 to losangeles@waterboards.ca.gov. Other noncompliance requires written notification as above at the time of the normal monitoring report.

6.2. MRP Requirements

The Discharger shall comply with the MRP, and future revisions thereto, in Attachment E.

6.3. Special Provisions

6.3.1. Reopener Provisions

a. This Order may be modified, revoked and reissued, or terminated for cause, including, but not limited to:

i. Violation of any term or condition contained in this Order;

ii. Obtaining this Order by misrepresentation, or by failure to disclose fully all relevant facts; or

iii. A change in any condition that requires either a temporary or permanent reduction or elimination of the authorized discharge.

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.

b. This Order may be reopened for modification, or revocation and reissuance, as a result of the detection of a reportable priority pollutant generated as required by any special conditions included in this Order. These special conditions may include, but are not limited to, fish tissue sampling, whole effluent toxicity testing, monitoring of internal waste stream(s), and monitoring for surrogate parameters. Additional requirements may be included in this Order based on the results of monitoring data collected to comply with any special conditions of this Order.

c. This Order may be modified in accordance with the provisions set forth in 40 CFR parts 122 and 124 to include requirements for the implementation of a watershed protection management approach.

d. The Los Angeles Water Board may modify, or revoke and reissue this Order if present or future investigations demonstrate that the discharge(s) governed by this Order will cause, have reasonable potential to cause, or contribute to adverse impacts on beneficial uses or degradation of water quality of the receiving waters.

e. This Order may also be modified, revoked, and reissued or terminated in accordance with the provisions of 40 CFR parts 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, 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.

f. This Order may be modified in accordance with the provisions set forth in 40 CFR parts 122 to 124, to include new minimum levels (MLs).

g. If an applicable toxic effluent standard or prohibition (including any schedule of compliance specified in such effluent standard or prohibition) is promulgated under section 307(a) of the CWA for a toxic pollutant and that standard or prohibition is more stringent than any limitation on the pollutant in this Order, the Los Angeles Water Board may institute proceedings under these regulations to modify or revoke

and reissue the Orders to conform to the toxic effluent standard or prohibition.

h. If more stringent applicable water quality standards are promulgated or approved pursuant to section 303 of the CWA, or amendments thereto, the Los Angeles Water Board will revise and modify this Order in accordance with such standards.

i. This Order may be reopened and modified to revise effluent limitations as a result of future additions or amendments to a statewide water quality control plan or the Los Angeles Region's Basin Plan or the adoption or revision of a total maximum daily load (TMDL).

j. This Order will be reopened and modified to the extent necessary, to be consistent with new or revised policies, new or revised state-wide plans, new laws, or new regulations.

6.3.2. Special Studies, Technical Papers, and Additional Monitoring Requirements

a. Toxicity Reduction Requirements

The Discharger shall prepare and submit a copy of the Discharger's initial investigation Toxicity Reduction Evaluation (TRE) work plan in accordance with MRP section 5.6.

b. Treatment Plant Capacity – Not Applicable

c. UF Filtrate Special Study

The effluent discharged to the San Gabriel River may contain UF filtrate that is not required to be monitored in this Order. To confirm the quality of the UF filtrate flow that is returned to the equalization basin does not impact the Discharger's compliance with the effluent limitations in this Order, the Discharger shall submit a UF Filtrate Special Study Work Plan for Executive Officer approval within 12 months following the effective date of this Order. At a minimum, the special study shall include two sets of UF filtrate samples focusing on the chemicals added upstream of the UF that are not captured at the effluent monitoring location. The final report shall analyze the impacts these chemicals have on the quality of the final discharge from the ARC-AWTF.

6.3.3. Best Management Practices and Pollution Prevention

a. Stormwater Pollution Prevention Plan (SWPPP) – Not Applicable

b. Spill Clean-up Contingency Plan (SCCP)

Within 90 days of the effective date of this Order, the Discharger is required to update and submit the SCCP for the Facility, which describes the activities and protocols to address clean-up of spills, overflows, and bypasses of untreated or partially treated wastewater from the Discharger's collection system or treatment facilities. At a

minimum, the plan shall include sections on spill clean-up and containment measures, nuisance and odor measures, public communication and notification, and monitoring plan and reporting of the monitoring results to the public and regulatory agencies. The Discharger shall review and amend the plan as appropriate after each spill from the Facility or in the service area of the Facility. The Discharger shall include a discussion in the annual summary report of any modifications to the Plan and the application of the Plan to all spills during the year.

c. Pollutant Minimization Program (PMP)

Reporting protocols in MRP section 10.2.4 describe sample results that are to be reported as detected but not quantified (DNQ) or not detected (ND). Definitions for a reported ML and Method Detection Limit (MDL) are provided in Attachment A. These reporting protocols and definitions are used in determining the need to conduct a PMP as follows:

The Discharger shall develop and conduct a PMP as further described below when there is evidence (e.g., sample results reported as DNQ when the effluent limitation is less than the MDL, sample results from analytical methods more sensitive than those methods required by this Order, presence of whole effluent toxicity, health advisories for fish consumption, results of benthic or aquatic organism tissue sampling) that a pollutant is present in the effluent above an effluent limitation and either of the following is true:

i. The concentration of the pollutant is reported as DNQ and the effluent limitation is less than the ML; or,

ii. The concentration of the pollutant is reported as ND and the effluent limitation is less than the MDL, using definitions described in Attachment A and reporting protocols described in the MRP.

The goal of the PMP shall be to reduce all potential sources of a pollutant through pollutant minimization (control) strategies, including pollution prevention measures as appropriate, to maintain the effluent concentration at or below the effluent limitation. Pollution prevention measures may be particularly appropriate for persistent bioaccumulative priority pollutants where there is evidence that beneficial uses are being impacted. The Los Angeles Water Board may consider cost-effectiveness when establishing the requirements of a PMP. The completion and implementation of a Pollution Prevention Plan (PPP), if required pursuant to Water Code section 13263.3(d), shall be considered to fulfill the PMP requirements.

The PMP shall include, but not be limited to, the following actions and submittals acceptable to the Los Angeles Water Board:

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

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

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

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

An annual status report that shall be sent to the Los Angeles Water Board including:

a) All PMP monitoring results for the previous year;

b) A list of potential sources of the reportable priority pollutant(s);

c) A summary of all actions undertaken pursuant to the control strategy; and

d) A description of actions to be taken in the following year.

6.3.4. Construction, Operation and Maintenance Specifications

a. Certified Operator. The ARC-AWTF shall be supervised and operated by persons possessing certificates of appropriate grade pursuant to CCR, title 23, division 3, chapter 26 (CWC sections 13625 – 13633). All treatment plant operators shall also be trained in emergency response.

b. Climate Change Effects Vulnerability Assessment and Mitigation Plan. The Discharger shall consider the impacts of climate change as they affect the operation of the treatment facility due to flooding, wildfire, or other climate-related changes. The Discharger shall develop a Climate Change Effects Vulnerability Assessment and Mitigation Plan (Climate Change Plan) to assess and manage climate change-related effects that may impact the wastewater treatment facility's operation, water supplies, its collection system, and water quality, including any projected changes to the influent water temperature and pollutant concentrations, and beneficial uses. The permittee shall project upgrades to existing assets or new infrastructure projects, and associated costs, necessary to meet desired levels of service. Climate change research also indicates the overarching driver of climate change is increased atmospheric carbon dioxide from human activity. The increased carbon dioxide emissions trigger changes to climatic patterns, which increase the intensity of sea level rise and coastal storm surges, lead to more erratic rainfall and local weather patterns, trigger a gradual warming of freshwater and ocean temperatures, and trigger changes to ocean water chemistry. As such, the Climate Change Plan shall also

identify steps being taken or planned to address greenhouse gas emissions attributable to treatment and effluent discharge processes. The Climate Change Plan is due 12 months after the effective date of this Order.

c. **Routine Maintenance and Operational Testing for Emergency Infrastructure/Equipment**: The Permittee shall perform monthly maintenance and operational testing for all emergency infrastructure and equipment at the facility, including but not limited to any bypass gate/weir in the headworks, alarm systems, backup pumps, and other critical emergency pump station components. The Permittee shall update the Operation and Maintenance Plan to include monthly maintenance and operational testing of emergency infrastructure and equipment, and shall keep the records of all operational testing for emergency systems, repairs, and modifications.

6.3.5. Special Provisions for Publicly-Owned Treatment Works (POTWs) – Not Applicable

6.3.6. Spills or Unauthorized Discharges (more than 50,000 gallons)

The Permittee shall immediately (but no later than two hours) notify the Los Angeles Water Board and County Health or the local health department, if applicable, by telephone or electronic means of an unauthorized discharge of more than fifty thousand (>50,000) gallons of the advanced treated recycled water or other waste of any volume that causes, or probably will cause, a discharge to any waters of the state or odors, vectors, and other nuisances of sewage origin beyond the limits of the treatment plant site. The State Water Resources Control Board, Division of Drinking Water (DDW) must be contacted if a drinking water source is threatened by the spill. If the environment is endangered by the spill, the California State Department of Fish and Wildlife must be contacted. Written confirmation must be provided electronically (e.g., email or fax) to all agencies within three (3) business days from the date of notification. The phone number for reporting spills to the Los Angeles Water Board is (213) 576-6657. The phone numbers for after hours and weekend reporting of spills to the Los Angeles Water Board are (213) 305-2284 and (213) 305-2253.

Information provided shall include the date and time the spill began and ended, the location of the spill, if the spill entered a storm drain or receiving water, the estimated volume of the spill or flow if the spill is ongoing, the estimated time of repair, the cause of the spill, the agencies involved with repair and clean-up, and corrective actions taken or plans for corrective actions.

6.3.7. Compliance Schedule

a. The interim limit in Section 4.1.2 of this Order and the following compliance schedule are authorized under Section 1.e. of the State

Water Board's Resolution 2008-0025 – *Policy for Compliance Schedules in National Pollutant Discharge Elimination System Permits* (Compliance Schedule Policy).

b. The Discharger shall submit written progress reports to the Los Angeles Water Board no later than 14 days following each interim milestone date including its compliance status with the interim requirements, a description of efforts taken by the Discharger toward achieving compliance with the final effluent limitations for temperature since the previous progress report, and the future activities planned.

c. In order to monitor compliance with the interim and final effluent limitations for temperature, the Discharger shall monitor the influent, effluent, and receiving water for temperature at the frequencies required in Tables E-2 and E-3. Each result shall be reported in the monthly report to track progress in achieving compliance with the final effluent limitations.

d. The Permittee may be subject to enforcement action for failure to complete the tasks by the given milestone dates, as specified in Table 7.

Table 7. Compliance Schedule & Milestone Dates

Task	Completion Date
Submit and begin implementation of the PPP for temperature	March 15, 2024
Coordinate with Los Angeles County Sanitation Districts (LACSD) and finalize a Technical Work Plan	June 1, 2024
Submit Progress Report on implementation of the Technical Work Plan	December 31, 2024
Coordinate with LACSD to complete implementation of the Technical Work Plan	November 30, 2025
Select preferred project and begin potential regulatory approval	November 30, 2026
Begin preliminary design	November 30, 2026
Complete preliminary design	November 30, 2027
Complete environmental review	November 30, 2028
Design preferred project	November 30, 2029
Issue notice to proceed for project work	November 30, 2030
Complete preferred project	November 30, 2031

7. COMPLIANCE DETERMINATION

Compliance with the effluent limitations contained in section 4 of this Order will be determined as specified below:

7.1. General

Compliance with effluent limitations for priority pollutants shall be determined using sample reporting protocols defined in the MRP and Attachment A of this Order. For purposes of reporting and administrative enforcement by the Regional and State Water Boards, the Discharger shall be deemed out of compliance with effluent limitations if the concentration of the priority pollutant in the monitoring sample is greater than the effluent limitation and greater than or equal to the Reporting Level (RL).

7.2. Multiple Sample Data

When determining compliance with a measure of central tendency (arithmetic mean, geometric mean, median, etc.) of multiple sample analyses and the data set contains one or more reported determinations of DNQ or ND, the Discharger shall compute the median in place of the arithmetic mean in accordance with the following procedure:

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

7.2.2. 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.

7.3. Annual Average Effluent Limitation

If the annual average of monthly discharges over a calendar year exceeds the annual average effluent limitation for a given parameter, a potential violation will be flagged, and the Permittee will be considered out of compliance for each month of that year for that parameter. However, a potential violation of the annual average effluent limitation will be considered one violation for the purpose of assessing State mandatory minimum penalties. If no sample (daily discharge) is collected over a calendar year, no compliance determination can be made for that year with respect to effluent violation determination, but compliance determination can be made for that month with respect to reporting violation determination.

7.4. Average Monthly Effluent Limitation (AMEL)

If the average (or when applicable, the median determined by subsection 7.2 above for multiple sample data) of daily discharges over a calendar month exceeds the AMEL for a given parameter, this will represent a single violation for the purpose of calculating mandatory minimum penalties, though the Discharger may be considered out of compliance for each day of that month for that parameter (e.g., resulting in 31 days of noncompliance in a 31-day month) in cases where discretionary administrative civil liabilities are appropriate. If only a single sample is taken during the calendar month and the analytical result for that sample exceeds AMEL, the Discharger may be considered out of compliance for that calendar month. The Discharger will only be considered out of compliance for days when the discharge occurs. For any one calendar month during which no sample (daily discharge) is taken, no compliance determination can be made for that calendar month with respect to AMEL.

If the analytical result of a single sample, monitored monthly, quarterly, semiannually, or annually, does not exceed the AMEL for a given parameter, the Discharger will have demonstrated compliance with the AMEL for each day of that month for that parameter.

If the analytical result of any single sample, monitored monthly, quarterly, semiannually, or annually, exceeds AMEL for any parameter, the Discharger may collect up to four additional samples within the same calendar month. All analytical results shall be reported in the monitoring report for that month. The concentration of pollutant (an arithmetic mean or a median) in these samples estimated from the “Multiple Sample Data Reduction” section above, will be used for compliance determination.

In the event of noncompliance with an AMEL, the sampling frequency for that parameter shall be increased to weekly and shall continue at this level until compliance with the AMEL has been demonstrated.

7.5. Average Weekly Effluent Limitation (AWEL)

If the average of daily discharges over a calendar week exceeds the AWEL for a given parameter, an alleged violation will be flagged and the Discharger will be considered out of compliance for each day of that week for that parameter, resulting in 7 days of noncompliance. The average of daily discharges over the calendar week that exceeds the AWEL for a parameter will be considered out of compliance for that week only. If only a single sample is taken during the calendar week and the analytical result for that sample exceeds the AWEL, the Discharger will be considered out of compliance for that calendar week. For any one calendar week during which no sample (daily discharge) is taken, no compliance determination can be made for that calendar week with respect to the AWEL.

A calendar week will begin on Sunday and end on Saturday. Partial calendar weeks at the end of calendar month will be carried forward to the next month in order to calculate and report a consecutive seven-day average value on Saturday.

7.6. Maximum Daily Effluent Limitation (MDEL)

If the initial grab sample exceeds the MDEL in a day, then the Discharger may initiate accelerated testing, consisting of a minimum of two additional grab samples during the calendar day. The average (or median when any data is not detected (ND) or detected but not quantified (DNQ), see section 7.2 of the WDRs) of all grab samples collected in one calendar day shall be used to determine compliance with the MDEL. When the median is used to determine compliance with the concentration-based MDEL, compliance with the mass-based MDEL shall be determined as the product of these three values: the maximum concentration detected (expressed in mg/L), the peak flow on that calendar day (expressed in MGD), and the 8.34 conversion factor.

If a daily discharge on a calendar day exceeds the MDEL for a given parameter, an alleged violation will be flagged, and the Discharger will be considered out of compliance for that day for that parameter. If no sample (daily discharge) is taken over a calendar day, no compliance determination can be made for that day with respect to effluent violation determination, but compliance determination can be made for that day with respect to reporting violation determination.

7.7. Instantaneous Minimum Effluent Limitation

If the analytical result of a single grab sample is lower than the instantaneous minimum effluent limitation for a parameter, a potential violation will be flagged, and the Discharger will be considered out of compliance for that parameter for that single sample. Noncompliance for each sample will be considered separately (e.g., the results of two grab samples taken within a calendar day that both are lower than the instantaneous minimum effluent limitation would result in two instances of noncompliance with the instantaneous minimum effluent limitation).

7.8. Instantaneous Maximum Effluent Limitation

If the analytical result of a single grab sample is higher than the instantaneous maximum effluent limitation for a parameter, a potential violation will be flagged, and the Discharger will be considered out of compliance for that parameter for that single sample. Noncompliance for each sample will be considered separately (e.g., the results of two grab samples taken within a calendar day that both exceed the instantaneous maximum effluent limitation would result in two instances of non-compliance with the instantaneous maximum effluent limitation).

7.9. Median Monthly Effluent Limitation (MMEL)

If the median of daily discharges over a calendar month exceeds the MMEL for a given parameter, an alleged violation will be flagged and the Discharger will be considered out of compliance for each day of that month for that parameter (e.g., resulting in 31 days of noncompliance in a 31-day month). However, an alleged violation of the MMEL will be considered one violation for the purpose of assessing State mandatory minimum penalties. If no sample (daily discharge) is taken over a calendar month, no compliance determination can be made for that

month with respect to effluent violation determination, but compliance determination can be made for that month with respect to reporting violation determination.

7.10. Chronic Toxicity

The discharge is subject to determination of “Pass” or “Fail” and “Percent Effect” from a chronic toxicity test using the TST statistical t-test approach described in *National Pollutant Discharge Elimination System Test of Significant Toxicity Implementation Document* (EPA 833-R-10-003, 2010), Appendix A, Figure A-1, Table A-1, and Appendix B, Table B-1 and TST procedures described in the *State Policy for Water Quality Control: Toxicity Provisions* (Toxicity Provisions). Attainment of the water quality objective is demonstrated by conducting chronic aquatic toxicity testing as described in Section III.B.2. of the Toxicity Provisions and rejecting the null hypothesis in accordance with the TST statistical approach described in Section III.B.3. of the Toxicity Provisions. The null hypothesis (Ho) for the TST statistical approach is: Mean discharge IWC response ≤0.75 × Mean control response. A test result that rejects this null hypothesis is reported as “Pass.” A test result that does not reject this null hypothesis is reported as “Fail.” The relative “Percent Effect” at the discharge IWC is defined and reported as: ((Mean control response – Mean discharge IWC response) ÷ Mean control response) × 100. This is a t-test, a statistical analysis comparing two sets of replicate observations – in the case of whole effluent toxicity (WET), only two test concentrations (i.e., a control and IWC). The purpose of this statistical test is to determine if the means of the two sets of observations are different (i.e., if the IWC or receiving water concentration differs from the control (the test result is “Pass” or “Fail”)). The Welch’s t-test employed by the TST statistical approach is an adaptation of Student’s t-test and is used with two samples having unequal variances.

The MDEL for chronic toxicity is exceeded and a violation will be flagged when a chronic toxicity test, analyzed at the IWC for the reproduction endpoint using the TST statistical approach, results in “Fail” and the “Percent Effect” of the survival endpoint is ≥50%.

The MMEL for chronic toxicity is exceeded and a violation will be flagged when the median of no more than three independent chronic toxicity tests, initiated within the same calendar month and analyzed using the TST statistical approach, results in “Fail” for any endpoint.

If a chronic aquatic toxicity routine monitoring test results in a “Fail” at the IWC, the Permittee shall complete a maximum of two MMEL compliance tests. The MMEL compliance tests shall be initiated within the same calendar month that the first routine monitoring test was initiated that resulted in the “Fail” at the IWC. If the first chronic MMEL compliance test results in a “Fail” at the IWC, then the second MMEL compliance test is not necessary because the “Fail” results from the first two tests would constitute a violation of the chronic toxicity MMEL.

The chronic toxicity MDEL and MMEL are set at the IWC for the discharge (100% effluent) and expressed in units of the TST statistical approach ("Pass" or "Fail", "Percent Effect"). All NPDES effluent compliance monitoring for the chronic toxicity MDEL and MMEL shall be reported using only the 100% effluent concentration and negative control, expressed in units of the TST, using the *Pimephales promelas*, which was determined to be the most sensitive species for the ARC-AWTF discharge. The TST hypothesis (Ho) (see above) is statistically analyzed using the IWC and a negative control. Effluent toxicity tests shall be run using a multi-concentration test design when required by *Short-term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to Freshwater Organisms* (USEPA 2002, EPA-821-R-02-013). However, if the USEPA approves the Alternative Test Procedure, the Discharger may use a two-concentration test design. The Los Angeles Water Board's review of reported toxicity test results will not include review of concentration-response patterns as appropriate (see Fact Sheet discussion at 4.3.6.). As described in the bioassay laboratory audit correspondence from the State Water Resources Control Board dated August 7, 2014, and from the USEPA dated December 24, 2013, the percent minimum significant difference (PMSD) criteria only apply to compliance reporting for the no observable effect concentration (NOEC) and the sublethal statistical endpoints of the NOEC, and therefore are not used to interpret TST results. Standard Operating Procedures used by the toxicity testing laboratory to identify and report valid, invalid, anomalous, or inconclusive effluent (and receiving water) toxicity test measurement results from the TST statistical approach must be consistent with *Short-term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to Freshwater Organisms* (USEPA 2002, EPA-821-R-02-013). The Los Angeles Water Board will make a final determination as to whether a toxicity test result is valid, and may consult with the Discharger, the USEPA, the State Water Board's Quality Assurance Officer, or the State Water Board's Environmental Laboratory Accreditation Program (ELAP) as needed. The Board may consider the results of any toxicity identification evaluation (TIE)/TRE studies in an enforcement action.

7.11. Percent Removal

The average monthly percent removal is the removal efficiency expressed in percentage across a treatment plant for a given pollutant parameter, as determined from the 30-day average values of pollutant concentrations (C in mg/L) of influent and effluent samples collected at about the same time using the following equation:

$$Percent\ Removal\ (\%) = \left[1 - \left(\frac{C_{Effluent}}{C_{Influent}}\right)\right] \times 100\%$$

When preferred, the Discharger may substitute mass loadings and mass emissions for the concentrations.

7.12. Mass and Concentration Limitations

Compliance with mass and concentration effluent limitations for the same parameter shall be determined separately with their respective limitations. When the concentration of a constituent in an effluent sample is determined to be ND or DNQ, the corresponding mass emission rate determined from that sample concentration shall also be reported as ND or DNQ.

7.13. Compliance with Single Constituent Effluent Limitations

Permittees may be considered out of compliance with the effluent limitation if the concentration of the pollutant (see section 7.2 “Multiple Sample Data Reduction” above) in the monitoring sample is greater than the effluent limitation and greater than or equal to the RL.

7.14. Compliance with Effluent Limitations Expressed as a Sum of Several Constituents

Permittees are out of compliance with an effluent limitation which applies to the sum of a group of chemicals (e.g., Polychlorinated Biphenyls [PCBs]) if the sum of the individual pollutant concentrations is greater than the effluent limitation. Individual pollutants of the group will be considered to have a concentration of zero if the constituent is reported as ND or DNQ.

7.15. Compliance with 2,3,7,8 -TCDD and its Equivalents

Compliance with the dioxin effluent limitation shall be determined based on 2,3,7,8-TCDD alone. However, TCDD equivalents shall be monitored and calculated using the following formula, where the MLs and toxicity equivalency factors (TEFs) are as provided in the table below. The Discharger shall report all measured values of individual congeners, including data qualifiers. When calculating TCDD equivalents, the Discharger shall set congener concentrations below the minimum levels to zero. USEPA method 1613 may be used to analyze dioxin and furan congeners.

$$Dioxin\ Concentration = \sum_{i}^{17}(TEQ_i) = \sum_{i}^{17}(C_i)(TEF_i)$$

where:
C_i = individual concentration of a dioxin or furan congener
TEF_i = individual TEF for a congener

MLs and TEFs

Congeners	MLs (pg/L)	TEFs
2,3,7,8-TetraCDD	10	1.0
1,2,3,7,8-PentaCDD	50	1.0
1,2,3,4,7,8-HexaCDD	50	0.1
1,2,3,6,7,8-HexaCDD	50	0.1

Congeners	MLs (pg/L)	TEFs
1,2,3,7,8,9-HexaCDD	50	0.1
1,2,3,4,6,7,8-HeptaCDD	50	0.01
OctaCDD	100	0.0001
2,3,7,8-TetraCDF	10	0.1
1,2,3,7,8-PentaCDF	50	0.05
2,3,4,7,8-PentaCDF	50	0.5
1,2,3,4,7,8-HexaCDF	50	0.1
1,2,3,6,7,8-HexaCDF	50	0.1
1,2,3,7,8,9-HexaCDF	50	0.1
2,3,4,6,7,8-HexaCDF	50	0.1
1,2,3,4,6,7,8-HeptaCDF	50	0.01
1,2,3,4,7,8,9-HeptaCDF	50	0.01
OctaCDF	100	0.0001

7.16. Compliance with Gross Beta/photon Emitters

The monthly average effluent limitation for gross beta/photon is equal to 4 millirem/year with a screening level of 50 picoCuries per liter (pCi/L). Due to naturally occurring Potassium-40, the results of the Potassium-40 may be subtracted from the total gross beta activity to determine if the screening level is exceeded. The Potassium-40 beta particle activity must be calculated by multiplying elemental potassium concentration (in mg/L) by a factor of 0.82 to determine activity from Potassium-40. The Potassium-40 must be analyzed from the same or equivalent sample used for the gross beta analysis.

If the gross beta particle activity minus the naturally occurring Potassium-40 is less than or equal to 50 pCi/L, the facility is in compliance and the value shall be reported as <4 millirem/year. If the gross beta particle activity minus the naturally occurring Potassium-40 beta particle activity exceeds the screening level, the Discharger must have the samples further analyzed for the individual nuclides. The calculation for the sum of the fractions is presented below.

The maximum contaminant level (MCL) for gross beta/photon emitters is equal 4 millirem per year. A millirem is a dose of energy to the body or any internal organ. USEPA regulates 179 man-made nuclides, and each of them has a concentration of radiation measured in pCi/L, which produces the 4 millirem dose. These concentrations are listed on table, *Derived Concentrations of (pCi/L) of Beta and Photon Emitters in Drinking Water*, which shall be used to determine compliance.

Derived Concentrations (pCi/l) of Beta and Photon Emitters in Drinking Water

Yielding a Dose of 4 mrem/yr to the Total Body or to any Critical Organ as defined in NBS Handbook 69

Nuclide	pCi/l	Nuclide	pCi/l	Nuclide	pCi/l	Nuclide	pCi/l	Nuclide	pCi/l	Nuclide	pCi/l
H-3	20,000	Ni-65	300	Nb-95	300	Sb-124	60	Nd-147	200	Os-191	600
Be-7	6,000	Cu-64	900	Nb-97	3,000	Sb-125	300	Nd-149	900	Os-191m	9,000
C-14	2,000	Zn-65	300	Mo-99	600	Te-125m	600	Pm-147	600	Os-193	200
F-18	2,000	Zn-69	6,000	Tc-96	300	Te-127	900	Pm-149	100	Ir-190	600
Na-22	400	Zn-69m	200	Tc-96m	30,000	Te-127m	200	Sm-151	1,000	Ir-192	100
Na-24	600	Ga-72	100	Tc-97	6,000	Te-129	2,000	Sm-153	200	Ir-194	90
Si-31	3,000	Ge-71	6,000	Tc-97m	1,000	Te-129m	90	Eu-152	200	Pt-191	300
P-32	30	As-73	1,000	Tc-99	900	Te-131m	200	Eu-154	60	Pt-193	3,000
S-35 inorg	500	As-74	100	Tc-99m	20,000	Te-132	90	Eu-155	600	Pt-193m	3,000
Cl-36	700	As-76	60	Ru-97	1,000	I-126	3	Gd-153	600	Pt-197	300
Cl-38	1,000	As-77	200	Ru-103	200	I-129	1	Gd-159	200	Pt-197m	3,000
K-42	900	Se-75	900	Ru-105	200	I-131	3	Tb-160	100	Au-196	600
Ca-45	10	Br-82	100	Ru-106	30	I-132	90	Dy-165	1,000	Au-198	100
Ca-47	80	Rb-86	600	Rh-103m	30,000	I-133	10	Dy-166	100	Au-199	600
Sc-46	100	Rb-87	300	Rh-105	300	I-134	100	Ho-166	90	Hg-197	900
Sc-47	300	Sr-85 m	20,000	Pd-103	900	I-135	30	Er-169	300	Hg-197m	600
Sc-48	80	Sr-85	900	Pd-109	300	Cs-131	20,000	Er-171	300	Hg-203	60
V-48	90	Sr-89	20	Ag-105	300	Cs-134	80	Tm-170	100	Tl-200	1,000
Cr-51	6,000	Sr-90	8	Ag-110m	90	Cs-134m	20,000	Tm-171	1,000	Tl-201	900
Mn-52	90	Sr-91	200	Ag-111	100	Cs-135	900	Yb-175	300	Tl-202	300
Mn-54	300	Sr-92	200	Cd-109	600	Cs-136	800	Lu-177	300	Tl-204	300
Mn-56	300	Y-90	60	Cd-115	90	Cs-137	200	Hf-181	200	Pb-203	1,000
Fe-55	2,000	Y-91	90	Cd-115m	90	Ba-131	600	Ta-182	100	Bi-206	100
Fe-59	200	Y-91m	9,000	In-113m	3,000	Ba-140	90	W-181	1,000	Bi-207	200
Co-57	1,000	Y-92	200	In-114m	60	La-140	60	W-185	300	Pa-230	600
Co-58	300	Y-93	90	In-115	300	Ce-141	300	W-187	200	Pa-233	300
Co-58m	9000	Zr-93	2,000	In-115m	1,000	Ce-143	100	Re-186	300	Np-239	300
Co-60	100	Zr-95	200	Sn-113	300	Ce-144	30	Re-187	9,000	Pu-241	300
Ni-59	300	Zr-97	60	Sn-125	60	Pr-142	90	Re-188	200	Bk-249	2,000
Ni-63	50	Nb-93m	1,000	Sb-122	90	Pr-143	100	Os-185	200		

The sum of the fraction method is used because each photon emitter targets a different organ of the body, which results in a different magnitude of risk. The sum of the beta and photon emitters shall not exceed 4 millirem/year (40 CFR section 141.66(d)(2).

Each nuclide has a different concentration that produces the 4 millirem dose because different radionuclides have different energy levels. Some nuclides need to be in a higher concentration to give the same 4 millirem dose.

The laboratory shall measure the nuclide concentration in the water and compare this result to the concentration allowed for that particular nuclide (see table below). The comparison results in a fraction. This is shown in calculation below:

$$\frac{Fraction\ of\ the\ Maximum\ 4\ millirem/year\ exposure\ limit = pCi/L\ (from\ laboratory\ results)}{pCi/L\ equivalent\ from\ 4\ millirem\ of\ exposure\ (from\ conversion\ table)}$$

Each fraction must then be converted to a dose equivalent of 4 millirem/year by multiplying the fraction by 4. The results for each emitter must be summed to determine compliance.

A sample calculation is presented in the table below:

	X	Y	X/Y	4(X/Y)
Emitter	Lab Analysis (pCi/L)	Conversion from table (pCi/4millirem)	Calculate Fraction	Calculate Total (millirem)
Cs-134m	5,023	20,000	0.25115	1.0
Cs-137	30	200	0.150	0.6
Sr-90	4	8	0.5	2.0
I-131	2	3	0.7	2.8
Sum of the Fractions	--	--	1.60115	6.4

In the example above, the system would be considered in violation of the gross beta/photon effluent limitation because the "sum-of-the-fractions" is 6.4 millirem, which means that the sum of the annual dose equivalent to the total body, or to any internal organ, exceeds 4 millirem/year.

7.17. Mass Emission Rate

The mass emission rate shall be obtained from the following calculation for any calendar day:

$$Mass\ Emission\ Rate\ (lb/day)\ =\ \frac{8.34}{N}\sum_{i=1}^{N} Q_i C_i$$

$$Mass\ Emission\ Rate\ (kg/day)\ =\ \frac{3.79}{N}\sum_{i=1}^{N} Q_i C_i$$

in which 'N' is the number of samples analyzed in any calendar day. 'Q_i' and 'C_i' are the flow rate (MGD) and the constituent concentration (mg/L), respectively, which are associated with each of the 'N' grab samples, which may be taken in any calendar day. If a composite sample is taken, 'C_i' is the concentration measured in the composite sample and 'Q_i' is the average flow rate occurring during the period over which samples are composited.

The daily concentration of all constituents shall be determined from the flow-weighted average of the same constituents in the combined waste streams as follows:

$$Daily\ Concentration = \frac{1}{Q_t}\sum_{i=1}^{N} Q_i C_i$$

in which 'N' is the number of component waste streams. 'Q_i' and 'C_i' are the flow rate (MGD) and the constituent concentration (mg/L), respectively, which are associated with each of the 'N' waste streams. 'Q_t' is the total flow rate of the combined waste streams.

7.18. Bacterial Standards and Analysis

7.18.1. The geometric mean used for determining compliance with bacterial standards is calculated with the following equation:

$$Geometric\ Mean = (C_1 \times C_2 \times \ldots C_n)^{1/n}$$

where n is the number of days samples were collected during the period and C is the concentration of bacteria (MPN/100 mL or CFU/100 mL) found on each day of sampling.

7.18.2. For bacterial analyses, sample dilutions should be performed so the expected range of values is bracketed (for example, with multiple tube fermentation method or membrane filtration method, 2 to 16,000 per 100 mL for total and fecal coliform, at a minimum, and 1 to 1000 per 100 mL for *Enterococcus*). The detection methods used for each analysis shall be reported with the results of the analyses.

7.18.3. Detection methods used for total coliform shall be those presented in Table 1A of 40 CFR part 136, unless alternate methods have been approved by USEPA pursuant to 40 CFR part 136, or improved methods have been determined by the Executive Officer and/or USEPA.

7.18.4. Detection methods used for *Enterococcus* shall be those presented in Table 1A of 40 CFR part 136 or in the USEPA publication EPA 600/4-85/076, "Test Methods for *Escherichia coli* and *Enterococci* in Water By Membrane Filter Procedure" or any improved method determined by the Executive Officer and/or USEPA to be appropriate.

7.19. Single Operational Upset (SOU)

An SOU that leads to simultaneous violations of more than one pollutant parameter shall be treated as a single violation and limits the Permittee's liability in accordance with the following conditions:

7.19.1. An SOU is broadly defined as a single unusual event that temporarily disrupts the usually satisfactory operation of a system in such a way that it results in violation of multiple pollutant parameters.

7.19.2. A Permittee may assert SOU to limit liability only for those violations which the Permittee submitted notice of the upset as required in Provision 5.5.2(b) of Attachment D – Standard Provisions.

7.19.3. For violations other than violations of Water Code section 13385 subdivisions (h) and (i), determination of compliance and civil liability (including any more specific definition of SOU, the requirements for permittees to assert the SOU limitation of liability, and the manner of

counting violations) shall be in accordance with USEPA Memorandum "Issuance of Guidance Interpreting Single Operational Upset" (September 27, 1989).

7.19.4. For purpose of Water Code section 13385 (h) and (i), determination of compliance and civil liability (including any more specific definition of SOU, the requirements for permittees to assert the SOU limitation of liability, and the manner of counting violations) shall be in accordance with Water Code section 13385 (f)(2).

ATTACHMENT A – DEFINITIONS

Arithmetic Mean (μ)
Also called the average, is the sum of measured values divided by the number of samples. For ambient water concentrations, the arithmetic mean is calculated as follows:

$$Arithmetic\ Mean\ (\mu) = \frac{\sum x}{n}$$

Where ∑x is the sum of the measured ambient water concentrations, and n is the number of samples.

Average Monthly Effluent Limitation (AMEL)
The highest allowable average of daily discharges over a calendar month, calculated as the sum of all daily discharges measured during a calendar month divided by the number of daily discharges measured during that month.

Average Weekly Effluent Limitation (AWEL)
The highest allowable average of daily discharges over a calendar week (Sunday through Saturday), calculated as the sum of all daily discharges measured during a calendar week divided by the number of daily discharges measured during that week.

Bioaccumulative
Those substances taken up by an organism from its surrounding medium through gill membranes, epithelial tissue, or from food and subsequently concentrated and retained in the body of the organism.

Carcinogenic
Substances that are known to cause cancer in living organisms.

Coefficient of Variation (CV)
A measure of data variability equal to the estimated standard deviation divided by the arithmetic mean of the observed values.

Daily Discharge
Daily Discharge is defined as either: (1) the total mass of the constituent discharged over the calendar day (12:00 am through 11:59 pm) or any 24-hour period that reasonably represents a calendar day for purposes of sampling (as specified in the Order), for a constituent with limitations expressed in units of mass or; (2) the unweighted arithmetic mean measurement of the constituent over the day for a constituent with limitations expressed in other units of measurement (e.g., concentration).

The daily discharge may be determined by the analytical results of a composite sample taken over the course of one day (a calendar day or other 24-hour period defined as a day) or by the arithmetic mean of analytical results from one or more grab samples taken over the course of the day.

For composite sampling, if 1 day is defined as a 24-hour period other than a calendar day, the analytical result for the 24-hour period will be considered as the result for the calendar day in which the 24-hour period ends.

Detected, but Not Quantified (DNQ)
Sample results less than the Reporting Level (RL), but greater than or equal to the laboratory's Method Detection Limit (MDL). Sample results reported as DNQ are estimated concentrations.

Dilution Credit
The amount of dilution granted to a discharge in the calculation of a water quality-based effluent limitation, based on the allowance of a specified mixing zone. It is calculated from the dilution ratio or determined through conducting a mixing zone study or modeling of the discharge and receiving water.

Effluent Concentration Allowance (ECA)
A value derived from the water quality criterion/objective, dilution credit, and ambient background concentration that is used, in conjunction with the coefficient of variation for the effluent monitoring data, to calculate a long-term average (LTA) discharge concentration. The ECA has the same meaning as wasteload allocation (WLA) as used in United States Environmental Protection Agency (USEPA) guidance (*Technical Support Document For Water Quality-based Toxics Control*, March 1991, second printing, EPA/505/2-90-001).

Enclosed Bays
Indentations along the coast that enclose an area of oceanic water within distinct headlands or harbor works. Enclosed bays include all bays where the narrowest distance between the headlands or outermost harbor works is less than 75 percent of the greatest dimension of the enclosed portion of the bay. Enclosed bays include, but are not limited to, Humboldt Bay, Bodega Harbor, Tomales Bay, Drake's Estero, San Francisco Bay, Morro Bay, Los Angeles-Long Beach Harbor, Upper and Lower Newport Bay, Mission Bay, and San Diego Bay. Enclosed bays do not include inland surface waters or ocean waters.

Estimated Chemical Concentration
The estimated chemical concentration that results from the confirmed detection of the substance by the analytical method below the minimum level (ML) value.

Estuaries
Waters, including coastal lagoons, located at the mouths of streams that serve as areas of mixing for fresh and ocean waters. Coastal lagoons and mouths of streams that are temporarily separated from the ocean by sandbars shall be considered estuaries. Estuarine waters shall be considered to extend from a bay or the open ocean to a point upstream where there is no significant mixing of fresh water and seawater. Estuarine waters include, but are not limited to, the Sacramento-San Joaquin Delta, as defined in Water Code section 12220, Suisun Bay, Carquinez Strait downstream to the Carquinez Bridge, and appropriate areas of the Smith, Mad, Eel, Noyo, Russian, Klamath, San Diego, and Otay rivers. Estuaries do not include inland surface waters or ocean waters.

Inland Surface Waters
All surface waters of the state that do not include the ocean, enclosed bays, or estuaries.

Instantaneous Maximum Effluent Limitation
The highest allowable value for any single grab sample or aliquot (i.e., each grab sample or aliquot is independently compared to the instantaneous maximum limitation).

Instantaneous Minimum Effluent Limitation
The lowest allowable value for any single grab sample or aliquot (i.e., each grab sample or aliquot is independently compared to the instantaneous minimum limitation).

Maximum Daily Effluent Limitation (MDEL)
The highest allowable daily discharge of a pollutant, over a calendar day (or 24-hour period). For pollutants with limitations expressed in units of mass, the daily discharge is calculated as the total mass of the pollutant discharged over the day. For pollutants with limitations expressed in other units of measurement, the daily discharge is calculated as the arithmetic mean measurement of the pollutant over the day.

Maximum Daily Flow
The maximum instantaneous flow of the day.

Median
The middle measurement in a set of data. The median of a set of data is found by first arranging the measurements in order of magnitude (either increasing or decreasing order). If the number of measurements (n) is odd, then the median = $X_{(n+1)/2}$. If n is even, then the median = $[X_{n/2} + X_{(n/2+1)}]/2$ (i.e., the midpoint between the n/2 and n/2+1).

Median Monthly Effluent Limitation (MMEL)
For the purposes of chronic aquatic toxicity, MMEL is an effluent limitation based on a maximum of three independent toxicity tests, analyzed using the Test of Significant Toxicity (TST).

Method Detection Limit (MDL)
The minimum measured concentration of a substance that can be reported with 99 percent confidence that the measured concentration is distinguishable from method blank results, as defined in 40 CFR part 136, Attachment B.

Minimum Level (ML)
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 all the method specified sample weights, volumes, and processing steps have been followed.

Mixing Zone
A limited volume of receiving water that is allocated for mixing with a wastewater discharge where water quality criteria can be exceeded without causing adverse effects to the overall water body.

Not Detected (ND)
Sample results which are less than the laboratory's MDL.

Polychlorinated Biphenyls (PCBs) as Aroclors
The sum of chlorinated biphenyls whose analytical characteristics resemble those of Aroclor-1016, Aroclor-1221, Aroclor-1232, Aroclor-1242, Aroclor-1248, Aroclor-1254, and Aroclor-1260.

PCBs as Congeners
The sum of the following 41 individually quantified PCBs congeners or mixtures of isomers of a single congeners in a co-elution: PCB-18, 28, 37, 44, 49, 52, 66, 70, 74, 77, 81, 87, 99, 101, 105, 110, 114, 118, 119, 123, 126, 128, 138, 149, 151, 153, 156, 157, 158, 167, 168, 169, 170, 177, 180, 183, 187, 189, 194, 201, and 206.

Persistent Pollutants
Persistent pollutants are substances for which degradation or decomposition in the environment is nonexistent or very slow.

Pollutant Minimization Program (PMP)
Waste minimization and pollution prevention actions that include, but are not limited to, product substitution, waste stream recycling, alternative waste management methods, and education of the public and businesses. 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. Pollution prevention measures may be particularly appropriate for persistent bioaccumulative priority pollutants where there is evidence that beneficial uses are being impacted. The Los Angeles Water Board may consider cost effectiveness when establishing the requirements of a PMP. The completion and implementation of a Pollution Prevention Plan, if required pursuant to Water Code section 13263.3(d), shall be considered to fulfill the PMP requirements.

Pollution Prevention
Any action that causes a net reduction in the use or generation of a hazardous substance or other pollutant that is discharged into water and includes, but is not limited to, input change, operational improvement, production process change, and product reformulation (as defined in Water Code section 13263.3). Pollution prevention does not include actions that merely shift a pollutant in wastewater from one environmental medium to another environmental medium, unless clear environmental benefits of such an approach are identified to the satisfaction of the California State Water Resources Control Board (State Water Board) or Los Angeles Water Board.

Reporting Level (RL)
The ML (and its associated analytical method) chosen by the Discharger for reporting and compliance determination from the MLs included in this Order, including an additional factor if applicable as discussed herein. The MLs included in this Order correspond to approved analytical methods for reporting a sample result that are selected by the Los Angeles Water Board either from Appendix 4 of the *Policy for the*

Implementation of Toxics Standards for Inland Surface Waters, Enclosed Bays, and Estuaries of California, (State Implementation Policy or SIP) in accordance with section 2.4.2 of the SIP or established in accordance with section 2.4.3 of the SIP. The ML is based on the proper application of method-based analytical procedures for sample preparation and the absence of any matrix interferences. Other factors may be applied to the ML depending on the specific sample preparation steps employed. For example, the treatment typically applied in cases where there are matrix-effects is to dilute the sample or sample aliquot by a factor of ten. In such cases, this additional factor must be applied to the ML in the computation of the RL.

Source of Drinking Water
Any water designated as municipal or domestic supply (MUN) in a Los Angeles Water Board Basin Plan.

Standard Deviation (σ)
A measure of variability that is calculated as follows:

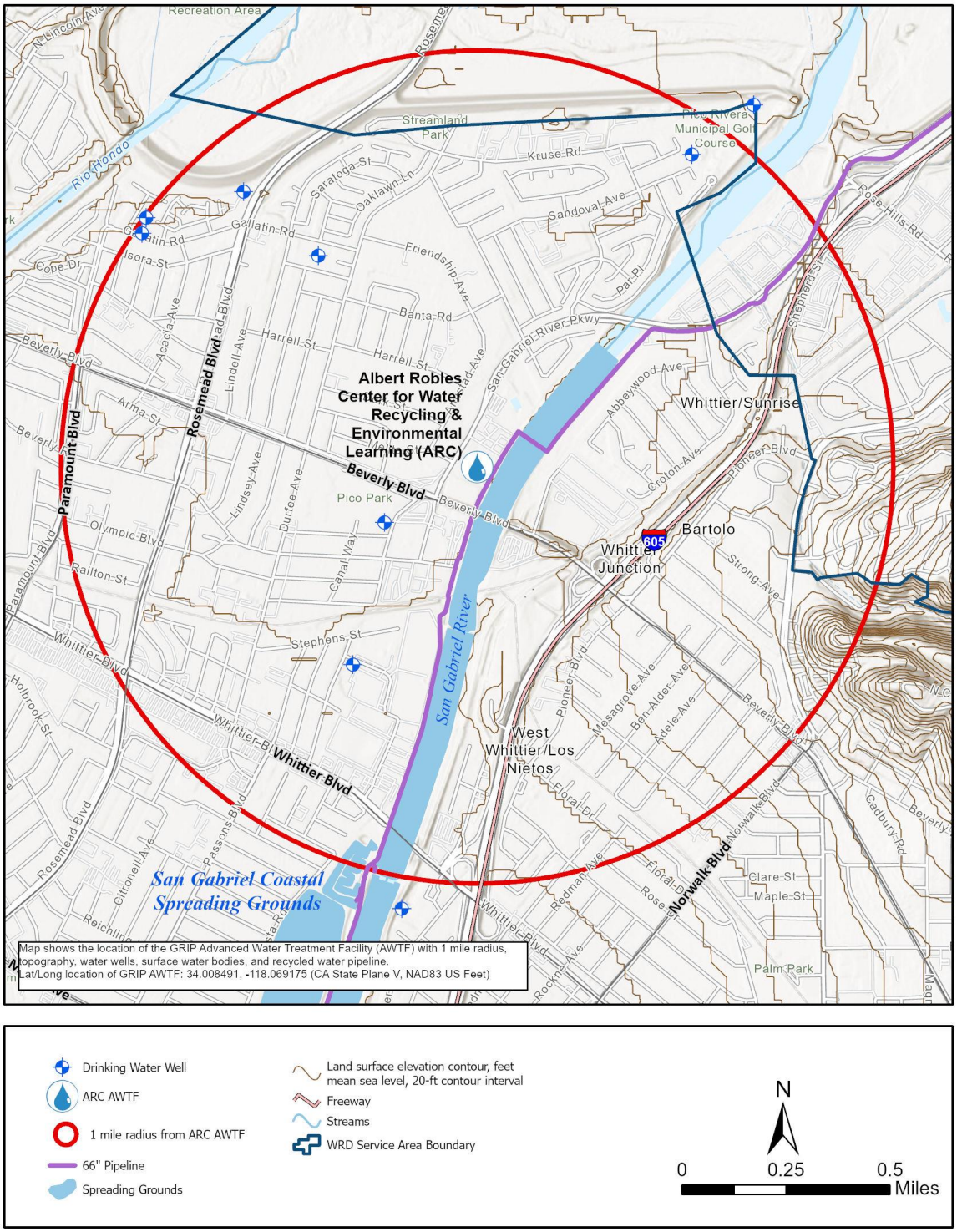
$$\sigma = \sqrt{\frac{\sum(x-\mu)^2}{n-1}}$$

Where:
x is the observed value;
μ is the arithmetic mean of the observed value; and
n is the number of samples.

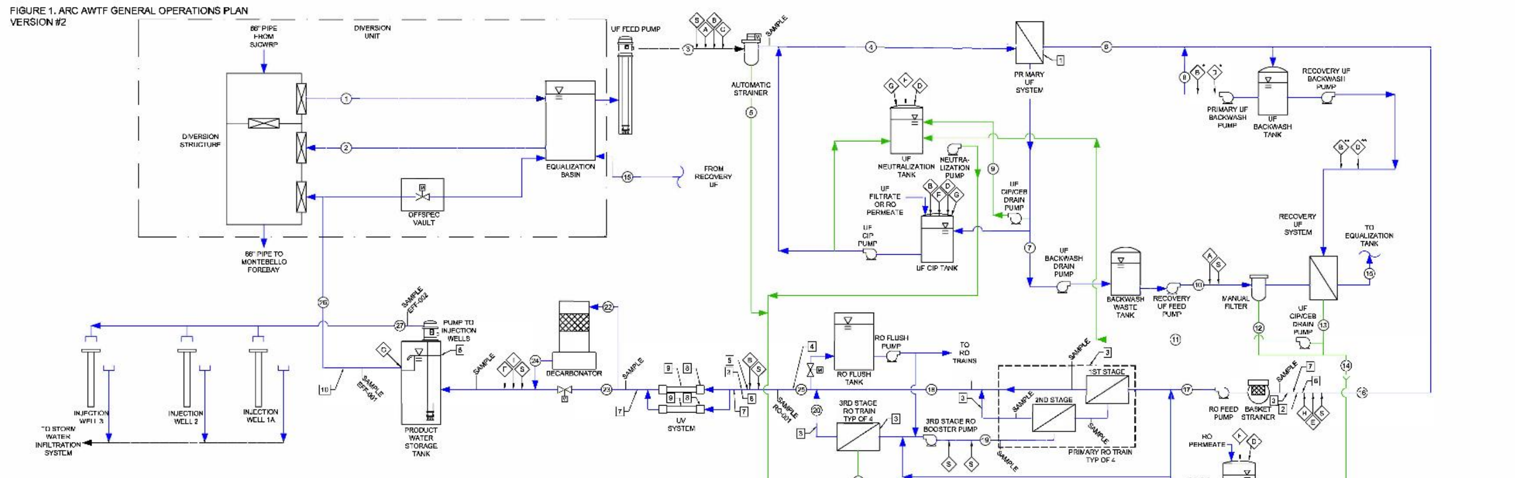
Total Trihalomethanes (TTHMs)
The sum of concentrations of the trihalomethane compounds: bromodichloromethane, bromoform, chloroform, and dibromochloromethane.

Toxicity Reduction Evaluation (TRE)
A study conducted in a step-wise process designed to identify the causative agents of effluent or ambient toxicity, isolate the sources of toxicity, evaluate the effectiveness of toxicity control options, and then confirm the reduction in toxicity. The first steps of the TRE consist of the collection of data relevant to the toxicity, including additional toxicity testing, and an evaluation of facility operations and maintenance practices, and best management practices. A toxicity identification evaluation (TIE) may be required as part of the TRE, if appropriate. (A TIE is a set of procedures to identify the specific chemical(s) responsible for toxicity. These procedures are performed in three phases (characterization, identification, and confirmation) using aquatic organism toxicity tests.

ATTACHMENT B – MAP OF ALBERT ROBLES CENTER FOR WATER RECYCLING & ENVIRONMENTAL LEARNING-ADVANCED WATER TREATMENT FACILITY (ARC-AWTF)



ATTACHMENT C – ALBERT ROBLES CENTER FOR WATER RECYCLING & ENVIRONMENTAL LEARNING-ADVANCED WATER TREATMENT FACILITY (ARC-AWTF) PROCESS FLOW DIAGRAM



LEGENDS

○	FLOW STREAM NUMBERS (SEE FLOW TABLE FOR VALUE)
◇	CHEMICAL FEED (SEE CHEMICAL FEED TABLE BELOW)
□	CRITICAL CONTROL MONITORING POINT
EFF-001	MONITORING STATION LOCATION 001
EFF-002	MONITORING STATION LOCATION 002
RO-001	RO-001 Monitoring Station Location

CHEMICAL FEED TABLE*

	CHEMICALS	CONCENTR., %	SPECIFIC GRAVITY	PRIMARY UF			RECOVERY UF		RO			UVAOP			POST TREATMENT			TOTAL	TOTAL
				DOSING RATE, PPM	USAGE, LBS / DAY	USAGE, GPD	USAGE, LBS / DAY	USAGE, GPD	DOSING RATE, PPM	USAGE, LBS / DAY	USAGE GPD	DOSING, PPM	USAGE LBS / DAY	USAGE, GPD	DOSING, PPM	USAGE, LBS / DAY	USAGE GPD	USAGE LBS / DAY	USAGE, GPD
A	COAGULANT (FERRIC) IF REQUIRED	40.0%	1.41															0	0
B	SODIUM HYPOCHLORITE	12.5%	1.2	4	4420	441.6	124	12.4				4	3949	394.6				8493	848.6
C	AMMONIA	20.0%	0.9	1	669	88.1												669	88.1
D	CITRIC ACID	50.0%	1.4		5	0.4	5	0.4										10	0.8
E	SULFURIC ACID	93.0%	1.84						98	4420	914.3							4420	914.3
F	SODIUM HYDROXIDE	25.0%	1.3				62	5.7							3	1481	137.0	1543	143.0
G	SODIUM BISULFITE	40.0%	1.3	0.12	44	4.0									4	1234	111.0	1276	115.0
H	SCALE INHIBITOR	100.0%	1.15						4.5	589	62.5							599	62.5
I	CALCIUM HYROXIDE	45.0%	1.34												44	12069	1080.0	12069	1080.0
	STTP, LB/100gal	100.0%																108	N/A
R	SPARE INJECTOR																		

*CHEMICAL USAGE CALCULATED FOR 14.8 MGD PRODUCT WATER.

CRITICAL CONTROL MONITORING POINTS

1	PRESSURE DECAY - UF, EACH TRAIN
2	TOC, AMMONIA, TURBIDITY - RO FEED
3	CONDUCTIVITY
4	TOC, AMMONIA, TURBIDITY - RO PERMEATE
5	UV TRANSMITTANCE
6	pH
7	FREE CHLORINE RESIDUAL
8	UV DOSAGE
9	ELECTRICAL ENERGY OUTPUT (EEO)
10	CHLORINE RESIDUAL

FLOW TABLE (MGD)

FLOW STREAM	1	2	3	4	5	6	7	8	9	10	11	12	13	14
STREAM NAME	EQ BASIN INFLUENT	EQ BASIN BYPASS	AWTF INFLUENT	PRIMARY UF FEED	STRAINER WASTE	PRIMARY UF FILTRATE	PRIMARY UF WASTE	PRIMARY UF BACKWASH	PRIMARY UF CEB WASTE	RECOVERY UF FEED	RECOVERY UF CEB WASTE	STRAINER WASTE	RECOVERY UF WASTE	COMBINED WASTE
PHASE 1 DESIGN FLOW	0 TO 120	0 TO 120	16.64	16.63	0.01	16.21	0.659	0.24	0.004	0.659	0.002	0.001	0.050	0.051
PHASE 2 DESIGN FLOW	0 TO 120	0 TO 120	33.26	33.26	0.02	32.41	1.32	0.48	0.008	1.32	0.004	0.002	0.101	0.102

FLOW STREAM	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29
STREAM NAME	RECOVERY UF FILTRATE	COMBINED FILTRATE	RO FEED	PRIMARY RO PERMEATE	PRIMARY RO CONC.	3RD STAGE RO PERMEATE	3RD STAGE RO CONC.	DECARB INFLUENT	DECARB BYPASS	DECARB EFFLUENT	UVAOP INFLUENT	PRODUCT WATER TO MFSG	PRODUCT WATER TO INJ WELLS	BRINE	BRINE
PHASE 1 DESIGN FLOW	0.609	15.97	15.97	13.59	2.38	1.21	1.17	5.57	9.23	5.57	14.80	0 TO 14.80	0 TO 4.5	1.3 TO 2.9	1.2 TO 1.4
PHASE 2 DESIGN FLOW	1.22	31.94	31.93	27.16	4.76	2.41	2.35	11.14	16.46	11.14	29.60	0 TO 29.60	0 TO 16	2.6 TO 3.8	2.3 TO 2.9

ATTACHMENT D – STANDARD PROVISIONS

1. STANDARD PROVISIONS – PERMIT COMPLIANCE

1.1. Duty to Comply

1.1.1. The Discharger must comply with all the terms, requirements, and conditions of this Order. Any noncompliance constitutes a violation of the Clean Water Act (CWA) and the California Water Code and is grounds for enforcement action; permit termination, revocation and reissuance, or modification; denial of a permit renewal application; or a combination thereof. [Title 40 of the Code of Federal Regulations (40 CFR) § 122.41(a); California Water Code (Water Code), §§ 13261, 13263, 13264, 13265, 13268, 13000, 13001, 13304, 13350, 13385.]

1.1.2. The Discharger shall comply with effluent standards or prohibitions established under Section 307(a) of the CWA for toxic pollutants within the time provided in the regulations that establish these standards or prohibitions, even if this Order has not yet been modified to incorporate the requirement. (40 CFR § 122.41(a)(1).)

1.2. Need to Halt or Reduce Activity Not a Defense

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 conditions of this Order. (40 CFR § 122.41(c).)

1.3. Duty to Mitigate

The Discharger shall take all reasonable steps to minimize or prevent any discharge in violation of this Order that has a reasonable likelihood of adversely affecting human health or the environment. (40 CFR § 122.41(d).)

1.4. Proper Operation and Maintenance

The Discharger shall at all times properly operate and maintain all facilities and systems of treatment and control (and related appurtenances) which are installed or used by the Discharger to achieve compliance with the conditions of this Order. Proper operation and maintenance also include adequate laboratory controls and appropriate quality assurance procedures. This provision requires the operation of backup or auxiliary facilities or similar systems that are installed by a Discharger only when necessary to achieve compliance with the conditions of this Order. (40 CFR § 122.41(e).)

1.5. Property Rights

1.5.1. This Order does not convey any property rights of any sort or any exclusive privileges. (40 CFR § 122.41(g).)

1.5.2. The issuance of this Order does not authorize any injury to persons or property or invasion of other private rights, or any infringement of state or local law or regulations. (40 CFR § 122.5(c).)

1.6. Inspection and Entry

The Discharger shall allow the California Regional Water Quality Control Board, Los Angeles Region (Los Angeles Water Board), the California State Water Resources Control Board (State Water Board), United States Environmental Protection Agency (USEPA), and/or their authorized representatives (including an authorized contractor acting as their representative), upon the presentation of credentials and other documents, as may be required by law, to (33 U.S.C. § 1318(a)(B); 40 CFR § 122.41(i); Water Code, §§ 13267, 13383):

1.6.1. Enter upon the Discharger's premises where a regulated facility or activity is located or conducted, or where records are kept under the conditions of this Order (33 U.S.C. § 1318(a)(B)(i); 40 CFR § 122.41(i)(1); Water Code, §§ 13267, 13383);

1.6.2. Have access to and copy, at reasonable times, any records that must be kept under the conditions of this Order (33 U.S.C. § 1318(a)(B)(ii); 40 CFR § 122.41(i)(2); Water Code, §§ 13267, 13383);

1.6.3. Inspect and photograph, at reasonable times, any facilities, equipment (including monitoring and control equipment), practices, or operations regulated or required under this Order (33 U.S.C. § 1318(a)(B)(ii); 40 CFR § 122.41(i)(3); Water Code, §§ 13267, 13383); and

1.6.4. Sample or monitor, at reasonable times, for the purposes of assuring Order compliance or as otherwise authorized by the CWA or the Water Code, any substances or parameters at any location. (33 U.S.C. § 1318(a)(B); 40 CFR § 122.41(i)(4); Water Code, §§ 13267, 13383.)

1.7. Bypass

1.7.1. Definitions

a. "Bypass" means the intentional diversion of waste streams from any portion of a treatment facility. (40 CFR § 122.41(m)(1)(i).)

b. "Severe property damage" means substantial physical damage to property, damage to the treatment facilities, which 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. (40 CFR § 122.41(m)(1)(ii).)

1.7.2. Bypass not exceeding limitations. The Discharger may allow any bypass to occur which does not cause exceedances of effluent limitations, but only if it is for essential maintenance to assure efficient operation. These bypasses are not subject to the provisions listed in Standard Provisions –

Permit Compliance 1.7.3, 1.7.4, and 1.7.5 below. (40 CFR § 122.41(m)(2).)

1.7.3. Prohibition of bypass. Bypass is prohibited, and the Los Angeles Water Board may take enforcement action against a Discharger for bypass, unless (40 CFR § 122.41(m)(4)(i)):

a. Bypass was unavoidable to prevent loss of life, personal injury, or severe property damage (40 CFR § 122.41(m)(4)(i)(A));

b. There were no feasible alternatives to the bypass, such as the use of auxiliary treatment facilities, retention of untreated wastes, or maintenance during normal periods of equipment downtime. 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 occurred during normal periods of equipment downtime or preventive maintenance (40 CFR § 122.41(m)(4)(i)(B)); and

c. The Discharger submitted notice to the Los Angeles Water Board as required under Standard Provisions – Permit Compliance 1.7.5 below. (40 CFR § 122.41(m)(4)(i)(C).)

1.7.4. The Los Angeles Water Board may approve an anticipated bypass, after considering its adverse effects, if the Los Angeles Water Board determines that it will meet the three conditions listed in Standard Provisions – Permit Compliance 1.7.3 above. (40 CFR § 122.41(m)(4)(ii).)

1.7.5. Notice

a. **Anticipated bypass**. If the Discharger knows in advance of the need for a bypass, it shall submit prior notice, if possible, at least 10 days before the date of the bypass. As of December 21, 2025, all notices submitted in compliance with this section must be submitted electronically by the Discharger to the Los Angeles Water Board or initial recipient, as defined in 40 CFR § 127.2(b), in compliance with this section and 40 CFR § 3 (including, in all cases, subpart D to part 3), 122.22 and part 127. Part 127 is not intended to undo existing requirements for electronic reporting. Prior to this date, and independent of part 127, the Discharger may be required to report electronically if specified by a particular Order or if required to do so by State law. (40 CFR § 122.41(m)(3)(i).)

b. **Unanticipated bypass**. The Discharger shall submit a notice of an unanticipated bypass as required in Standard Provisions – Reporting 5.5 below (24-hour notice). As of December 21, 2025, all notices submitted in compliance with this section must be submitted electronically by the Discharger to the Los Angeles Water Board or initial recipient, as defined in 40 CFR § 127.2(b), in compliance with this

section and 40 CFR § 3 (including, in all cases, subpart D to part 3), 122.22 and part 127. Part 127 is not intended to undo existing requirements for electronic reporting. Prior to this date, and independent of part 127, the Discharger may be required to report electronically if specified by a particular Order or if required to do so by State law. (40 CFR § 122.41(m)(3)(ii).)

1.8. Upset

Upset means an exceptional incident in which there is unintentional and temporary noncompliance with technology-based 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 operation. (40 CFR § 122.41(n)(1).)

1.8.1. **Effect of an upset.** An upset constitutes an affirmative defense to an action brought for noncompliance with such technology-based permit effluent limitations if the requirements of Standard Provisions – Permit Compliance 1.8.2 below are met. No determination made during administrative review of claims that noncompliance was caused by upset, and before an action for noncompliance, is final administrative action subject to judicial review. (40 CFR § 122.41(n)(2).)

1.8.2. **Conditions necessary for a demonstration of upset.** A Discharger who wishes to establish the affirmative defense of upset shall demonstrate, through properly signed, contemporaneous operating logs or other relevant evidence that (40 CFR § 122.41(n)(3)):

a. An upset occurred, and that the Discharger can identify the cause(s) of the upset (40 CFR § 122.41(n)(3)(i));

b. The permitted facility was, at the time, being properly operated (40 CFR § 122.41(n)(3)(ii));

c. The Discharger submitted notice of the upset as required in Standard Provisions – Reporting 5.5.2.b below (24-hour notice) (40 CFR § 122.41(n)(3)(iii)); and

d. The Discharger complied with any remedial measures required under Standard Provisions – Permit Compliance 1.3 above. (40 CFR § 122.41(n)(3)(iv).)

1.8.3. **Burden of proof.** In any enforcement proceeding, the Discharger seeking to establish the occurrence of an upset has the burden of proof. (40 CFR § 122.41(n)(4).)

2. STANDARD PROVISIONS – PERMIT ACTION

2.1. General

This Order may be modified, revoked and reissued, or terminated for cause. The filing of a request by the Discharger for modification, revocation and reissuance, or termination, or a notification of planned changes or anticipated noncompliance does not stay any Order condition. (40 CFR § 122.41(f).)

2.2. Duty to Reapply

If the Discharger wishes to continue an activity regulated by this Order after the expiration date of this Order, the Discharger must apply for and obtain a new permit. (40 CFR § 122.41(b).)

2.3. Transfers

This Order is not transferable to any person except after notice to the Los Angeles Water Board. The Los Angeles Water Board may require modification or revocation and reissuance of the Order to change the name of the Discharger and incorporate such other requirements as may be necessary under the CWA and the Water Code. (40 CFR §§ 122.41(l)(3), 122.61.)

3. STANDARD PROVISIONS – MONITORING

3.1. Samples and measurements taken for the purpose of monitoring shall be representative of the monitored activity. (40 CFR § 122.41(j)(1).)

3.2. Monitoring must be conducted according to test procedures approved under 40 CFR part 136 for the analyses of pollutants unless another method is required under 40 CFR chapter 1, subchapter N. Monitoring must be conducted according to sufficiently sensitive test methods approved under 40 CFR part 136 for the analysis of pollutants or pollutant parameters or as required under 40 CFR chapter 1, subchapter N. For the purposes of this paragraph, a method is sufficiently sensitive when:

3.2.1. The method minimum level (ML) is at or below the level of the most stringent effluent limitation established in the permit for the measured pollutant or pollutant parameter, and either the method ML is at or below the level of the most stringent applicable water quality criterion for the measured pollutant or pollutant parameter or the method ML is above the applicable water quality criterion but the amount of the pollutant or pollutant parameter in the facility's discharge is high enough that the method detects and quantifies the level of the pollutant or pollutant parameter in the discharge; or

3.2.2. The method has the lowest ML of the analytical methods approved under 40 CFR part 136 when approved by the Los Angeles Water Board and the State Water Board, or required under 40 CFR chapter 1, subchapter N for the measured pollutant or pollutant parameter. In the case of pollutants or

pollutant parameters for which there are no approved methods under 40 CFR part 136 or otherwise required under 40 CFR chapter 1, subchapter N, monitoring must be conducted according to a test procedure specified in this Order for such pollutants or pollutant parameters. (40 CFR §§ 122.21l(3), 122.41(j)(4), 122.44(i)(1)(iv).)

4. STANDARD PROVISIONS – RECORDS

4.1. The Discharger shall retain records of all monitoring information, including all calibration and maintenance records and all original strip chart recordings for continuous monitoring instrumentation, copies of all reports required by this Order, and records of all data used to complete the application for this Order, for a period of at least three (3) years from the date of the sample, measurement, report or application. This period may be extended by request of the Los Angeles Water Board Executive Officer at any time. (40 CFR § 122.41(j)(2).)

4.2. Records of monitoring information shall include:

4.2.1. The date, exact place, and time of sampling or measurements (40 CFR § 122.41(j)(3)(i));

4.2.2. The individual(s) who performed the sampling or measurements (40 CFR § 122.41(j)(3)(ii));

4.2.3. The date(s) analyses were performed (40 CFR § 122.41(j)(3)(iii));

4.2.4. The individual(s) who performed the analyses (40 CFR § 122.41(j)(3)(iv));

4.2.5. The analytical techniques or methods used (40 CFR § 122.41(j)(3)(v)); and

4.2.6. The results of such analyses. (40 CFR § 122.41(j)(3)(vi).)

4.3. Claims of confidentiality for the following information will be denied (40 CFR § 122.7(b)):

4.3.1. The name and address of any permit applicant or Discharger (40 CFR § 122.7(b)(1)); and

4.3.2. Permit applications and attachments, permits and effluent data. (40 CFR § 122.7(b)(2).)

5. STANDARD PROVISIONS – REPORTING

5.1. Duty to Provide Information

The Discharger shall furnish to the Los Angeles Water Board, State Water Board, or USEPA within a reasonable time, any information which the Los Angeles Water Board, State Water Board, or USEPA may request to determine whether cause exists for modifying, revoking and reissuing, or terminating this Order or to determine compliance with this Order. Upon request, the Discharger shall also furnish to the Los Angeles Water Board, State Water Board, or USEPA

copies of records required to be kept by this Order. (40 CFR § 122.41(h); Water Code, §§ 13267, 13383.)

5.2. Signatory and Certification Requirements

5.2.1. All applications, reports, or information submitted to the Los Angeles Water Board, State Water Board, and/or USEPA shall be signed and certified in accordance with Standard Provisions – Reporting 5.2.2, 5.2.3, 5.2.4, 5.2.5, and 5.2.6 below. (40 CFR § 122.41(k).)

5.2.2. All permit applications shall be signed by either a principal executive officer or ranking elected official. For purposes of this provision, a principal executive officer of a federal agency includes: (i) the chief executive officer of the agency, or (ii) a senior executive officer having responsibility for the overall operations of a principal geographic unit of the agency (e.g., Regional Administrators of USEPA). (40 CFR § 122.22(a)(3).)

5.2.3. All reports required by this Order and other information requested by the Los Angeles Water Board, State Water Board, or USEPA shall be signed by a person described in Standard Provisions – Reporting 5.2.2 above, or by a duly authorized representative of that person. A person is a duly authorized representative only if:

a. The authorization is made in writing by a person described in Standard Provisions – Reporting 5.2.2 above (40 CFR § 122.22(b)(1));

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, operator of a well or a well field, superintendent, position of equivalent responsibility, or an individual or position having overall responsibility for environmental matters for the company. (A duly authorized representative may thus be either a named individual or any individual occupying a named position.) (40 CFR § 122.22(b)(2)); and

c. The written authorization is submitted to the Los Angeles Water Board and State Water Board. (40 CFR § 122.22(b)(3).)

5.2.4. If an authorization under Standard Provisions – Reporting 5.2.3 above is no longer accurate because a different individual or position has responsibility for the overall operation of the facility, a new authorization satisfying the requirements of Standard Provisions – Reporting 5.2.3 above must be submitted to the Los Angeles Water Board and State Water Board prior to or together with any reports, information, or applications, to be signed by an authorized representative. (40 CFR § 122.22l.)

5.2.5. Any person signing a document under Standard Provisions – Reporting 5.2.2 or 5.2.3 above 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, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations." (40 CFR § 122.22(d).)

5.2.6. Any person providing the electronic signature for documents described in Standard Provisions – 5.2.1, 5.2.2, or 5.2.3 that are submitted electronically shall meet all relevant requirements of Standard Provisions – Reporting 5.2, and shall ensure that all relevant requirements of 40 CFR part 3 (Cross-Media Electronic Reporting) and 40 CFR part 127 [National Pollutant Discharge Elimination System (NPDES) Electronic Reporting Requirements] are met for that submission. (40 CFR § 122.22I.)

5.3. Monitoring Reports

5.3.1. Monitoring results shall be reported at the intervals specified in the Monitoring and Reporting Program (MRP) (Attachment E) in this Order. (40 CFR § 122.41(l)(4).)

5.3.2. Monitoring results must be reported on a Discharge Monitoring Report (DMR) form or forms provided or specified by the Los Angeles Water Board or State Water Board. All reports and forms must be submitted electronically to the initial recipient defined in Standard Provisions – Reporting 5.10 and comply with 40 CFR part 3, 40 CFR section 122.22, and 40 CFR part 127. (40 CFR § 122.41(l)(4)(i).)

5.3.3. If the Discharger monitors any pollutant more frequently than required by this Order using test procedures approved under 40 CFR part 136, or another method required for an industry-specific waste stream under 40 CFR chapter 1, subchapter N, the results of such monitoring shall be included in the calculation and reporting of the data submitted in the DMR or reporting form specified by the Los Angeles Water Board or State Water Board. (40 CFR § 122.41(l)(4)(ii).)

5.3.4. Calculations for all limitations, which require averaging of measurements, shall utilize an arithmetic mean unless otherwise specified in this Order. (40 CFR § 122.41(l)(4)(iii).)

5.4. Compliance Schedules

Reports of compliance or noncompliance with, or any progress reports on, interim and final requirements contained in any compliance schedule of this

Order, shall be submitted no later than 14 days following each schedule date. (40 CFR § 122.41(l)(5).)

5.5. Twenty-Four Hour Reporting

5.5.1. The Discharger shall report any noncompliance which may endanger health or the environment to the Manager of the Watershed Regulatory Section of the Los Angeles Water Board at (213) 576-6616 and jeong-hee.lim@waterboards.ca.gov. Any information shall be provided orally within 24 hours from the time the Discharger becomes aware of the circumstances. A report shall also be provided within five (5) days of the time the Discharger becomes aware of the circumstances. The report shall contain a description of the noncompliance and its cause; the period of noncompliance, including exact dates and times, and if the noncompliance has not been corrected, the anticipated time it is expected to continue; and steps taken or planned to reduce, eliminate, and prevent reoccurrence of the noncompliance.

For noncompliance events related to combined sewer overflows, sanitary sewer overflows, or bypass events, these reports must include the data described above (with the exception of time of discovery) as well as the type of event (i.e., combined sewer overflow, sanitary sewer overflow, or bypass event), type of overflow structure (e.g., manhole, combined sewer overflow outfall), discharge volume untreated by the treatment works treating domestic sewage, types of human health and environmental impacts of the event, and whether the noncompliance was related to wet weather.

As of December 21, 2025, all reports related to combined sewer overflows, sanitary sewer overflows, or bypass events must be submitted electronically to the initial recipient defined in Standard Provisions – Reporting 5.10. The reports shall comply with 40 CFR part 3, 40 CFR section 122.22, and 40 CFR part 127. The Los Angeles Water Board may also require the Discharger to electronically submit reports not related to combined sewer overflows, sanitary sewer overflows, or bypass events under this section. (40 CFR § 122.41(l)(6)(i).)

5.5.2. The following shall be included as information that must be reported within 24 hours:

a. Any unanticipated bypass that exceeds any effluent limitation in this Order. (40 CFR § 122.41(l)(6)(ii)(A).)

b. Any upset that exceeds any effluent limitation in this Order. (40 CFR § 122.41(l)(6)(ii)(B).)

5.5.3. The Los Angeles Water Board may waive the above required written report on a case-by-case basis if an oral report has been received within 24 hours. (40 CFR § 122.41(l)(6)(iii).)

5.6. Planned Changes

The Discharger shall give notice to the Los Angeles Water Board as soon as possible of any planned physical alterations or additions to the permitted facility. Notice is required under this provision only when (40 CFR § 122.41(l)(1)):

5.6.1. The alteration or addition to a permitted facility may meet one of the criteria for determining whether a facility is a new source in section 122.29(b) (40 CFR § 122.41(l)(1)(i));

5.6.2. The alteration or addition could significantly change the nature or increase the quantity of pollutants discharged. This notification applies to pollutants that are not subject to the effluent limitations in this Order. (40 CFR § 122.41(l)(1)(ii).); or

5.6.3. The alteration or addition results in a significant change in the Permittee's sludge use or disposal practices, and such alteration, addition, or change may justify the application of permit conditions that are different from or absent in the existing permit, including notification of additional use or disposal sites not reported during the permit application process or not reported pursuant to an approved land application plan. (40 CFR § 122.41(l)(1)(iii))

5.7. Anticipated Noncompliance

The Discharger shall give advance notice to the Los Angeles Water Board of any planned changes in the permitted facility or activity that may result in noncompliance with this Order's requirements. (40 CFR § 122.41(l)(2).)

5.8. Other Noncompliance

The Discharger shall report all instances of noncompliance not reported under Standard Provisions – Reporting 5.3, 5.4, and 5.5 above at the time monitoring reports are submitted. The reports shall contain the information listed in Standard Provision – Reporting 5.5 above. For noncompliance events related to combined sewer overflows, sanitary sewer overflows, or bypass events, these reports shall contain the information described in Standard Provision – Reporting 5.5 and the applicable required data in appendix A to 40 CFR part 127. The Los Angeles Water Board may also require the Discharger to electronically submit reports not related to combined sewer overflows, sanitary sewer overflows, or bypass events under this section. (40 CFR § 122.41(l)(7).)

5.9. Other Information

When the Discharger becomes aware that it failed to submit any relevant facts in a permit application or submitted incorrect information in a permit application or in any report to the Los Angeles Water Board, State Water Board, or USEPA, the Discharger shall promptly submit such facts or information. (40 CFR § 122.41(l)(8).)

5.10. Initial Recipient for Electronic Reporting Data

The owner, operator, or the duly authorized representative is required to electronically submit NPDES information specified in appendix A to 40 CFR part 127 to the initial recipient defined in 40 CFR section 127.2(b). USEPA will identify and publish the list of initial recipients on its website and in the Federal Register, by state and by NPDES data group [see 40 CFR section 127.2(c)]. USEPA will update and maintain this listing. (40 CFR § 122.41(l)(9).)

6. STANDARD PROVISIONS – ENFORCEMENT

6.1. The Los Angeles Water Board is authorized to enforce the terms of this permit under several provisions of the Water Code, including, but not limited to, sections 13268, 13385, 13386, and 13387.

6.2. The CWA provides that any person who violates section 301, 302, 306, 307, 308, 318 or 405 of the CWA, or any permit condition or limitation implementing any such sections in a permit issued under section 402, or any requirement imposed in a pretreatment program approved under sections 402(a)(3) or 402(b)(8) of the CWA, is subject to a civil penalty not to exceed $25,000 per day for each violation. The CWA provides that any person who negligently violates sections 301, 302, 306, 307, 308, 318, or 405 of the CWA, or any condition or limitation implementing any of such sections in a permit issued under section 402 of the CWA, or any requirement imposed in a pretreatment program approved under section 402(a)(3) or 402(b)(8) of the CWA, is subject to criminal penalties of $2,500 to $25,000 per day of violation, or imprisonment of not more than one year, or both. In the case of a second or subsequent conviction for a negligent violation, a person shall be subject to criminal penalties of not more than $50,000 per day of violation, or by imprisonment of not more than two years, or both. Any person who knowingly violates such conditions or limitations is subject to criminal penalties of $5,000 to $50,000 per day of violation, or imprisonment for not more than three years, or both. In the case of a second or subsequent conviction for a knowing violation, a person shall be subject to criminal penalties of not more than $100,000 per day of violation, or imprisonment of not more than 6 years, or both. Any person who knowingly violates section 301, 302, 303, 306, 307, 308, 318 or 405 of the CWA, or any permit condition or limitation implementing any of such sections in a permit issued under section 402 of the CWA, and who knows at that time that he thereby places another person in imminent danger of death or serious bodily injury, shall, upon conviction, be subject to a fine of not more than $250,000 or imprisonment of not more than 15 years, or both. In the case of a second or subsequent conviction for a knowing endangerment violation, a person shall be subject to a fine of not more than $500,000 or by imprisonment of not more than 30 years, or both. An organization, as defined in section 309(c)(3)(B)(iii) of the CWA, shall, upon conviction of violating the imminent danger provision, be subject to a fine of not more than $1,000,000 and can be fined up to $2,000,000 for second or subsequent convictions (40 CFR § 122.41(a)(2); Water Code section 13385 and 13387).

6.3. Any person may be assessed an administrative penalty by the Administrator of USEPA, the Los Angeles Water Board, or State Water Board for violating section 301, 302, 306, 307, 308, 318 or 405 of this CWA, or any permit condition or limitation implementing any of such sections in a permit issued under section 402 of the CWA. Administrative penalties for Class I violations are not to exceed $10,000 per violation, with the maximum amount of any Class I penalty assessed not to exceed $25,000. Penalties for Class II violations are not to exceed $10,000 per day for each day during which the violation continues, with the maximum amount of any Class II penalty not to exceed $125,000. (40 CFR § 122.41(a)(3))

6.4. The CWA provides that any person who falsifies, tampers with, or knowingly renders inaccurate any monitoring device or method required to be maintained under this permit shall, upon conviction, be punished by a fine of not more than $10,000, or by imprisonment for not more than two years, or both. If a conviction of a person is for a violation committed after a first conviction of such person under this paragraph, punishment is a fine of not more than $20,000 per day of violation, or by imprisonment of not more than four years, or both. (40 CFR § 122.41(j)(5)).

6.5. 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 permit, including monitoring reports or reports of compliance or non-compliance shall, upon conviction, be punished by a fine of not more than $10,000 per violation, or by imprisonment for not more than six months per violation, or by both. (40 CFR § 122.41(k)(2)).

7. ADDITIONAL PROVISIONS – NOTIFICATION LEVELS

7.1. Publicly Owned Treatment Works (POTWs) – Not Applicable

ATTACHMENT E – MONITORING AND REPORTING PROGRAM

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ATTACHMENT E – MONITORING AND REPORTING PROGRAM (MRP)

Section 308(a) of the federal Clean Water Act (CWA) and sections 122.41(h), (j)-(l), 122.44(i), and 122.48 of title 40 of the Code of Federal Regulations (40 CFR) require that all National Pollutant Discharge Elimination System (NPDES) permits specify monitoring and reporting requirements. Water Code section 13383 also authorizes the California Regional Water Quality Control Board, Los Angeles Region (Los Angeles Water Board) to establish monitoring, reporting, and recordkeeping requirements. This MRP establishes monitoring, reporting, and recordkeeping requirements that implement the federal and California laws and/or regulations.

1. GENERAL MONITORING PROVISIONS

1.1. All samples shall be representative of the waste or advanced treated recycled water discharge under conditions of peak load. Results of monthly, quarterly, semiannual, and annual analyses shall be reported by the due date specified in Table E-8 of the MRP.

1.2. Pollutants, except those analyzed in the field, shall be analyzed using the analytical methods described in 40 CFR parts 136.3, 136.4, and 136.5; or where no methods are specified for a given pollutant, by methods approved by the Los Angeles Water Board or the California State Water Resources Control Board (State Water Board).

1.3. **Laboratory Certification**. Laboratories analyzing samples shall be certified by the State Water Board, Division of Drinking Water (DDW) Environmental Laboratory Accreditation Program (ELAP) in accordance with Water Code 13176 and must include quality assurance/quality control (QA/QC) data in their reports. A copy of the laboratory certification shall be provided in the Annual Report due to the Los Angeles Water Board each time a new certification and/or renewal of the certification is obtained from ELAP.

1.4. Water/wastewater samples must be analyzed within allowable holding time limits as specified in 40 CFR § 136.3. All QA/QC analyses must be run on the same dates that samples are analyzed. The Discharger shall retain the QA/QC documentation in its files and make it available for inspection and/or submit them when requested by the Los Angeles Water Board. Proper chain of custody procedures must be followed, and a copy of that documentation shall be submitted with the monthly report.

1.5. The Discharger shall calibrate and perform maintenance procedures on all monitoring instruments and ensure accuracy of measurements, or shall ensure that both equipment activities will be conducted.

1.6. For any analyses performed for which no procedure is specified in the United States Environmental Protection Agency (USEPA) guidelines, or in the MRP, the constituent or parameter analyzed, and the method or procedure used must be specified in the monitoring report.

1.7. Each monitoring report must affirm in writing that "with the exception of field tests, all analyses were conducted at a laboratory certified for such analyses, under the ELAP through the State Water Resources Control Board, Division of Drinking Water; or, were approved by the Executive Officer in accordance with current USEPA guideline procedures or as specified in this Monitoring and Reporting Program."

1.8. The monitoring report shall specify the USEPA analytical method used, the Method Detection Limit (MDL), and the Reporting Level (RL) [the applicable minimum level (ML) or reported Minimum Level (RML)] for each pollutant. The MLs are those published by the State Water Board in the *Policy for the Implementation of Toxics Standards for Inland Surface Waters, Enclosed Bays, and Estuaries of California*, (State Implementation Policy or SIP), February 9, 2005, Appendix 4. The ML 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 interference. When all specific analytical steps are followed and after appropriate application of method specific factors, the ML also represents the lowest standard in the calibration curve for that specific analytical technique. When there is deviation from the method analytical procedures, such as dilution or concentration of samples, other factors may be applied to the ML depending on the sample preparation. The resulting value is the reported ML.

1.9. The Discharger shall select the analytical method that provides an ML lower than the Order limit established for a given parameter, unless the Discharger can demonstrate that a particular ML is not attainable, in accordance with procedures set forth in 40 CFR part 136, and obtains approval for a higher ML from the Executive Officer, as provided for in section 1.11 below. If the effluent limitation is lower than all the MLs in Appendix 4 of the SIP, the Discharger must select the method with the lowest ML for compliance purposes. The Discharger shall include in the Annual Summary Report a list of the analytical methods employed for each test.

1.10. The Discharger shall instruct its laboratories to establish calibration standards so that the ML (or its equivalent if there is differential treatment of samples relative to calibration standards) is the lowest calibration standard. At no time is the Discharger to use analytical data derived from extrapolation beyond the lowest point of the calibration curve. In accordance with section 1.11 below, the Discharger's laboratory may employ a calibration standard lower than the ML in Appendix 4 of the SIP.

1.11. In accordance with section 2.4.3 of the SIP, the Los Angeles Water Board Executive Officer, in consultation with the State Water Board's Quality Assurance Program Manager, may establish an ML that is not contained in Appendix 4 of the SIP to be included in the Discharger's Order in any of the following situations:

1.11.1. When the pollutant under consideration is not included in Appendix 4 of the SIP;

1.11.2. When the Discharger and the Los Angeles Water Board agree to include in the Order a test method that is more sensitive than those specified in 40 CFR part 136;

1.11.3. When the Discharger agrees to use an ML that is lower than those listed in Appendix 4 of the SIP;

1.11.4. When the Discharger demonstrates that the calibration standard matrix is sufficiently different from that used to establish the ML in Appendix 4 of the SIP and proposes an appropriate ML for the matrix; or,

1.11.5. When the Discharger uses a method, for which quantification practices are not consistent with the definition of the ML. Examples of such methods are USEPA-approved method 1613 for dioxins, and furans, method 1624 for volatile organic substances, and method 1625 for semi-volatile organic substances. In such cases, the Discharger, the Los Angeles Water Board, and the State Water Board shall agree on a lowest quantifiable limit and that limit will substitute for the ML for reporting and compliance determination purposes.

If there is any conflict between foregoing provisions and the SIP, the provisions stated in the SIP (section 2.4) shall prevail.

1.12. If the Discharger samples and performs analyses (other than for process/operational control, startup, research, or equipment testing) on any influent, effluent, or receiving water constituent more frequently than required by this MRP using approved analytical methods, the results of those analyses shall be included in the report. These results shall be reflected in the calculation of the average used in demonstrating compliance with limitations set forth in this Order.

1.13. The Discharger shall develop and maintain a record of all spills or bypasses of tertiary-treated or inadequately treated effluent from the ARC-AWTF and its conveyance pipelines according to the requirements in the waste discharge requirements (WDRs) section of this Order. This record shall be made available to the Los Angeles Water Board upon request and a spill summary shall be included in the annual summary report.

1.14. For all bacteriological analyses, sample dilutions should be performed so the expected range of values is bracketed (for example, with multiple tube fermentation method or membrane filtration method, 2 to 16,000 per 100 mL for total and fecal coliform, at a minimum, and 1 to 1000 per 100 mL for *Enterococcus*). The detection methods used for each analysis shall be reported with the results of the analyses.

1.14.1. Detection methods used for total coliforms shall be those presented in Table 1A of 40 CFR part 136 unless alternate methods have been approved in advance by the USEPA pursuant to 40 CFR part 136.

1.14.2. Detection methods used for *Escherichia coli* (*E. coli*) shall be those presented in Table 1A of 40 CFR part 136 or in the USEPA publication EPA 600/4-85/076, "Test Methods for *Escherichia coli* and *Enterococci* in Water By Membrane Filter Procedure," or any improved method determined by the Los Angeles Water Board to be appropriate.

1.15. The Discharger shall ensure that the results of the Discharge Monitoring Report-Quality Assurance (DMR-QA) Study or the most recent Water Pollution Performance Evaluation Study are submitted annually to the State Water Board at the following address:

State Water Resources Control Board
Quality Assurance Program Officer
Office of Information Management and Analysis
1001 I Street, Sacramento, CA 95814

2. MONITORING LOCATIONS

The Discharger shall establish the following monitoring locations to demonstrate compliance with the effluent limitations, discharge specifications, and other requirements in this Order:

Table E-1. Monitoring Station Locations

Discharge Point Name	Monitoring Location Name	Monitoring Location Description
---	INF-001	The tertiary-treated effluent from San Jose Creek (SJC) Water Reclamation Plant (WRP) (East and/or West) is the influent source water of the Albert Robles Center for Water Recycling & Environmental Learning-Advanced Water Treatment Facility (ARC-AWTF or Facility). The calculated flow-weighted concentrations of the effluent reported for EFF-001, EFF-001A, and EFF-001B from the SJC WRP NPDES Permit No. CA0053911 is the influent concentration that shall be reported for the ARC-AWTF. Latitude: 34.00838°, Longitude: -118.06891°

Discharge Point Name	Monitoring Location Name	Monitoring Location Description
001, 001A and 001B	RO-001	The effluent sampling station, specifically for turbidity monitoring, shall be located downstream of any in-plant return flows, upstream of the ultraviolet (UV) advanced oxidation process (AOP) and downstream of the reverse osmosis (RO) facilities, and where representative samples of the ARC-AWTF discharge can be obtained. Latitude: 34.00834°, Longitude: -118.06969°
001, 001A and 001B	EFF-001	The effluent sampling station shall be located downstream of any in-plant return flows and the final disinfection process, upstream of the diversion structure where it blends with the SJC WRP's tertiary treated effluent, and where representative samples of the ARC-AWTF discharge can be obtained. Latitude: 34.00850°, Longitude: -118.06904°
---	RSW-001	The upstream receiving water monitoring station is located in the San Gabriel River, approximately 200 feet downstream of the Whittier Narrows (WN) WRP Discharge Point 001. This station also serves as the immediate downstream receiving water station for the WN WRP NPDES permit (CA0053716) and is also referred to as RSW-002 (R-A) of WN WRP NPDES permit. Latitude: 34.02236°, Longitude: -118.05483°
001A	RSW-002	This downstream receiving water station is located in Reach 2 of the San Gabriel River at the headworks of the San Gabriel River Spreading Grounds. This station also serves as one of the downstream receiving water stations for the SJC WRP (CA0053911) and is also referred to as RSW-006 (R12) in the SJC WRP NPDES permit. Latitude: 33.99386°, Longitude: -118.07344°

Discharge Point Name	Monitoring Location Name	Monitoring Location Description
001B	RSW-003	This downstream receiving water station is located at the San Gabriel River bank, approximately 1,475 feet upstream of Slauson Avenue. This station also serves as one of the downstream receiving water stations for the SJC WRP (CA0053911) and is also referred to as RSW-007 (R13) in the SJC WRP NPDES permit. Latitude: 33.96947°, Longitude: -118.08877°
001	RSW-004	This downstream receiving water station is located in Reach 2 of the San Gabriel River as defined in the Water Quality Control Plan for the Los Angeles Region (Basin Plan), approximately 940 feet upstream of the division between Reach 1 and Reach 2. This station also serves as one of the downstream receiving water stations for the SJC WRP (CA0053911) and is also referred to as RSW-005 (R2) in the SJC WRP NPDES permit. Latitude: 33.92952°, Longitude: -118.10780°
---	RSW-004D	This is the total maximum daily load (TMDL) dry and wet-weather flow monitoring location located in Reach 3 of San Gabriel River, upstream of the Whittier Narrows Dam, at United States Geological Survey (USGS) Gauging Station #11087020. This gauging station is operated and maintained by the USGS. Latitude: 34.03437°, Longitude: -118.03841°

The North latitude and West longitude information in Table E-1 are approximate for administrative purposes. The monitoring locations are shown in the map in Figure E-1.

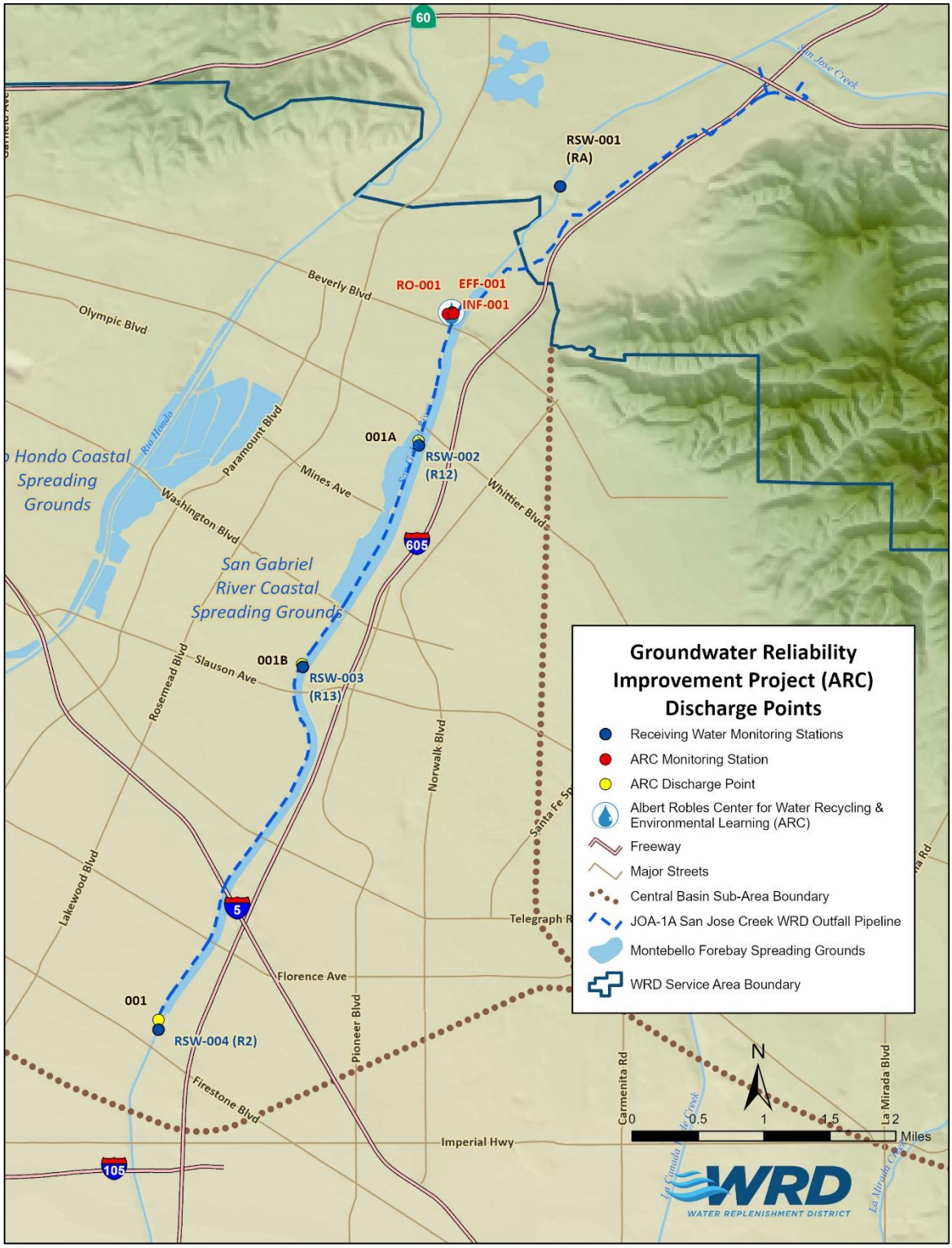

Figure E-1. ARC-AWTF Receiving Water Monitoring Stations

3. INFLUENT MONITORING REQUIREMENTS

Influent monitoring is required to:

- Determine compliance with NPDES permit conditions.
- Assess treatment plant performance.
- Assess effectiveness of the Pretreatment Program.

3.1. Monitoring Location INF-001

The Discharger shall monitor influent to the Facility at INF-001 as follows in Table E-2. Monitoring requirements listed in Table E-2 may duplicate existing requirements under NPDES Permit No. CA0053911 for the SJC WRP. The tertiary-treated effluent from the SJC WRP is the influent water to the ARC-AWTF. Therefore, the data reported to comply with the effluent monitoring requirements for EFF-001, EFF-001A, and EFF-001B in the SJC WRP NPDES permit will be accepted as equivalent to the influent monitoring requirements of the ARC-AWTF for the parameters listed below.

Table E-2. Influent Monitoring

Parameter	Unit	Sample Type	Minimum Sampling Frequency	Note
Flow	million gallons per day (MGD)	recorder	continuous	a
pH	pH unit	calculated	weekly	b
Temperature	°F	calculated	weekly	b
Ammonia (as N)	mg/L	calculated	quarterly	b
Copper	µg/L	calculated	quarterly	b & g
Lead	µg/L	calculated	quarterly	b & g
Mercury	µg/L	calculated	semiannually	b, c, & g
Selenium	µg/L	calculated	quarterly	b & g
Cyanide	µg/L	calculated	quarterly	b
Polychlorinated Biphenyls (PCBs) as Aroclors	pg/L	calculated	annually	b & d

Parameter	Unit	Sample Type	Minimum Sampling Frequency	Note
PCBs as Congeners	pg/L	calculated	annually	b & d
Tetrachlorodibenzodioxin (TCDD) Equivalents	pg/L	calculated	semiannually	b, e, & g
Remaining USEPA priority pollutants excluding asbestos	µg/L	calculated	semiannually	b, e, & f

Footnotes for Table E-2

a. Total daily flow and instantaneous peak daily flow (24-hour basis) shall be reported. The actual monitored flow shall be reported (not the maximum flow, i.e., design capacity).

b. Pollutants shall be analyzed using the analytical methods described in 40 CFR § 136; where no methods are specified for a given pollutant, by methods approved by the Los Angeles Water Board or State Water Board. For any pollutant whose effluent limitation is lower than all the MLs specified in Attachment 4 of the SIP, the analytical method with the lowest ML must be selected.

c. USEPA Method 1631E, per 40 CFR part 136, with a quantification level lower than 0.5 nanograms per liter (ng/L), shall be used to analyze total mercury, unless another 40 CFR 136 method is sufficiently sensitive.

d. PCBs as aroclors shall be analyzed using USEPA method 608.3. PCBs as congeners shall be analyzed using method 1668c. USEPA recommends that until the USEPA proposed method 1668c is incorporated into 40 CFR 136, permittees should use for discharge monitoring reports/State monitoring reports: (1) USEPA method 608.3 for monitoring data, reported as aroclor results, that will be used for determining compliance with water quality based on effluent limitations (WQBELs) (if applicable) and (2) USEPA proposed method 1668c for monitoring data, reported as 41 congener results, that will be used for informational purposes.

e. The 40 CFR Part 136 method for phthalate esters, including bis (2-ethylhexyl) phthalate, and TCDD equivalents requires samples to be collected in glass sample containers to avoid interference, which can lead to artifacts and/or elevated baselines in gas chromatograms. Sample collection must be done using glass sample containers for all phthalate esters, including bis (2-ethylhexyl) phthalate, and TCDD equivalents unless analytical methods for these pollutants in 40 CFR Part 136 specify that other means of sample collection are approved. Grab sample type is recommended, but an automatic sampler (composite sample) can be used to collect samples for all phthalate esters, including bis(2-ethylhexyl) phthalate, and TCDD equivalents as long as the sample bottles are glassware.

f. The list of priority pollutants is provided in Appendix A of 40 CFR part 136. Metals shall be expressed as total recoverable.

g. Expressed as total recoverable.

End of Footnotes for Table E-2

4. EFFLUENT MONITORING REQUIREMENTS

Effluent monitoring is required to:

- Determine compliance with NPDES permit conditions and water quality standards.
- Assess and improve plant performance and identify operational problems.
- Provide information on wastewater characteristics and flows for use in interpreting water quality and biological data.
- Determine reasonable potential analysis for toxic pollutants.
- Determine waste load allocation compliance and TMDL effectiveness.

4.1. Monitoring Location EFF-001

The Discharger shall monitor the discharge of advanced-treated effluent at EFF-001 as shown in Table E-3. If more than one analytical test method is listed for a given parameter, the Discharger must select a method with a minimum level (ML) that is below the effluent limitation. If no analytical test method has an ML that is below the effluent limitation, then the method with the lowest ML must be used. Monitoring required under waste discharge requirements and water reclamation requirements Order No. R4-2018-0129 may be submitted in lieu of conducting duplicative monitoring as long as the monitoring requirements in this MRP are satisfied and samples are analyzed using sufficiently sensitive methods approved in 40 CFR 136 or if there is no method in 40 CFR 136, using a method approved by the Los Angeles Water Board and State Water Board.

Table E-3. Effluent Monitoring

Parameter	Unit	Sample Type	Minimum Sampling Frequency	Note
Total flow	MGD	recorder	continuous	a
Turbidity	Nephelometric Turbidity Units (NTU)	recorder	continuous	a & b
Total residual chlorine	mg/L	recorder	continuous	c
Total residual chlorine	mg/L	grab	daily	b & d

Parameter	Unit	Sample Type	Minimum Sampling Frequency	Note
Total coliform	Most probable number (MPN) or colony forming unit (CFU)/100 milliliters (mL)	grab	daily	b, e, & f
E. coli	MPN or CFU/100 mL	grab	monthly	b & f
Temperature	°F	grab	weekly	b & g
pH	pH units	grab	weekly	b & g
Settleable solids	mL/liter (L)	grab	semiannually	b
Total suspended solids (TSS)	mg/L	24-hour composite	semiannually	b
5-day biochemical oxygen demand at 20 degrees Celsius ($BOD_5$20°C)	mg/L	24-hour composite	semiannually	b
Oil and grease (O&G)	mg/L	grab	semiannually	b
Dissolved oxygen (DO)	mg/L	grab	quarterly	b
Total dissolved solids (TDS)	mg/L	24-hour composite	quarterly	b
Sulfate	mg/L	24-hour composite	quarterly	b
Chloride	mg/L	24-hour composite	quarterly	b
Boron	mg/L	24-hour composite	quarterly	b
Ammonia (as N)	mg/L	24-hour composite	quarterly	b & g
Nitrite (as N)	mg/L	24-hour composite	quarterly	b & g

Parameter	Unit	Sample Type	Minimum Sampling Frequency	Note
Nitrate (as N)	mg/L	24-hour composite	quarterly	b & g
Nitrate + Nitrite (as N)	mg/L	24-hour composite	quarterly	b
Organic nitrogen	mg/L	calculated	quarterly	b & g
Total Kjeldahl nitrogen (TKN)	mg/L	24-hour composite	quarterly	b & g
Total nitrogen	mg/L	calculated	quarterly	b
Total Phosphorus	mg/L	24-hour composite	quarterly	b
Orthophosphate (as P)	mg/L	24-hour composite	quarterly	b
Surfactants [methylene blue active substances (MBAS)]	mg/L	24-hour composite	semiannually	b
Surfactants [cobalt thiocyanate active substances (CTAS)]	mg/L	24-hour composite	semiannually	b
Total hardness ($CaCO_3$)	mg/L	24-hour composite	semiannually	b
Chronic toxicity *Pimephales promelas* Survival and growth endpoints	Pass or Fail, % Effect [Test of significant toxicity (TST)]	24-hour composite	monthly	b, h, m
Radioactivity (Including gross alpha, gross beta, combined radium-226 and radium-228, tritium, strontium-90, and uranium)	picoCuries (pCi/L)	24-hour composite	semiannually	b & i
Copper	µg/L	24-hour composite	monthly	b & o

Parameter	Unit	Sample Type	Minimum Sampling Frequency	Note
Lead	µg/L	24-hour composite	monthly	b & o
Cyanide	µg/L	grab	monthly	b
Total Chromium	µg/L	grab	semiannually	b & o
Chromium III	µg/L	calculated	semiannually	b & o
Chromium VI	µg/L	grab	semiannually	b & o
Mercury	µg/L	24-hour composite	monthly	b, j, & o
Selenium	µg/L	24-hour composite	monthly	b & o
Thallium	µg/L	24-hour composite	monthly	b & o
TCDD equivalents	pg/L	24-hour composite	semiannually	b & k
Perchlorate	µg/L	grab	annually	b & l
1,4-Dioxane	µg/L	grab	annually	b & l
1,2,3-Trichloropropane	µg/L	grab	annually	b & l
Iron	mg/L	24-hour composite	annually	b
Fluoride	mg/L	24-hour composite	annually	b
Total trihalomethanes	µg/L	calculated sum	semiannually	b
PCBs as aroclors	µg/L	24-hour composite	annually	b & m

Parameter	Unit	Sample Type	Minimum Sampling Frequency	Note
PCBs as congeners	pg/L	24-hour composite	annually	b & m
Per- and Poly-fluoroalkyl substances (PFAS)	ng/L	grab	quarterly	p
Remaining USEPA priority pollutants excluding asbestos	µg/L	24-hour composite; grab for VOCs	semiannually	b & n

Footnotes for Table E-3

a. Where continuous monitoring of a constituent is required, the following shall be reported:
   - Total flow – Total daily, average daily, and peak daily flow (24-hour basis).
   - Turbidity – Maximum daily value, total amount of time each day the turbidity exceeded 0.2 NTU, flow proportioned average daily value. A grab sample shall be collected to determine compliance with the 0.5 NTU limit. A flow-weighted 24-hour composite sample may be collected for turbidity in place of the recorder to determine the flow-proportioned average daily value.

b. Pollutants shall be analyzed using the analytical methods described in 40 CFR § 136; where no methods are specified for a given pollutant, by methods approved by the Los Angeles Water Board or State Water Resources Control Board. For any pollutant whose effluent limitation is lower than all the MLs specified in Attachment 4 of the SIP, the analytical method with the lowest ML must be selected.

c. Total residual chlorine shall be recorded continuously. The recorded data shall be maintained by the Permittee for at least five years. The Permittee shall extract the maximum daily peak, minimum daily peak, and average daily values from the recorded media and shall be made available upon request of the Los Angeles Water Board. The continuous monitoring data are not intended to be used for compliance determination purposes.

d. Daily grab samples shall be collected during peak flow at monitoring location EFF-001 Monday through Friday only, except for holidays. Analytical results of daily grab samples will be used to determine compliance with total residual chlorine effluent limitation at EFF-001. Furthermore, additional monitoring requirements specified in MRP section 4.2. shall be followed.

e. Daily grab samples for total coliform shall be collected at monitoring location EFF-001, Monday through Friday only, except for holidays.

f. *E. coli* testing shall be conducted only if total coliform testing is positive. If the total coliform analysis results in no detection, a result of less than (<) the reporting limit for total coliform will be reported for *E. coli*.

g. Nitrate nitrogen, nitrite nitrogen, ammonia nitrogen, organic nitrogen, TKN, pH, and temperature sampling shall be conducted on the same day or as close to concurrently as possible.

h. The Discharger shall conduct whole effluent toxicity monitoring using the *Pimephales promelas* as the test species, as outlined in section 5 of this MRP. For the *Pimephales promelas* survival and growth endpoints, the median monthly effluent limitation (MMEL) summary result shall be reported as “Pass” or “Fail” and the maximum daily single result shall be reported as “Pass” or “Fail” and “% Effect.”

i. Analyze these radiochemicals by the following USEPA methods: method 900.0 for gross alpha and gross beta, method 903.0 or 903.1 for radium-226, method 904.0 for radium-228, method 906.0 for tritium, method 905.0 for strontium-90, and method 908.0 for uranium. Analysis for combined radium-226 & 228 shall be conducted only if gross alpha results for the same sample exceed 15 pCi/L or beta greater than 50 pCi/L. If radium-226 & 228 exceeds the stipulated criteria, analyze for tritium, strontium-90 and uranium. Although there is currently no ELAP accreditation available for some of the radiochemical methods described above using wastewater, the Discharger shall use an ELAP-accredited laboratory once ELAP accreditation becomes available for the method.

j. USEPA Method 1631E, per 40 CFR part 136, with a quantification level lower than 0.5 ng/L, shall be used to analyze total mercury. If an alternative method with an equivalent or more sensitive method detection limit is approved in 40 CFR part 136, the Discharger may use that method in lieu of USEPA Method 1631E.

k. The 40 CFR part 136 method for phthalate esters including bis (2-ethylhexyl) phthalate and TCDD equivalents requires samples to be collected in glass sample containers to avoid interference, which can lead to artifacts and/or elevated baselines in gas chromatograms. Sample collection must be done using glass sample containers for all phthalate esters including bis(2-ethylhexyl) phthalate and TCDD equivalents unless analytical methods for these pollutants in 40 CFR part 136 specify that other means of sample collection are approved. Grab sample type is recommended, but an automatic sampler (composite sample) can be used to collect samples for all phthalate esters including bis (2-ethylhexyl) phthalate and TCDD equivalents as long as the sample bottles are glassware.

l. Emerging chemicals include 1,4-dioxane (USEPA 8270M test method), perchlorate (USEPA 314 test method, or USEPA method 331 if a detection limit of less than 6 µg/L is achieved), and 1,2,3-trichloropropane (USEPA 504.1, 8260B test method, or USEPA 524.2 in SIM mode).

m. PCBs as aroclors shall be analyzed using USEPA method 608.3. PCBs as congeners shall be analyzed using method 1668c. USEPA recommends that until the USEPA proposed method 1668c is incorporated into 40 CFR 136, permittees should

use for discharge monitoring reports/State monitoring reports: (1) USEPA method 608.3 for monitoring data, reported as aroclor results, that will be used for determining compliance with WQBELs (if applicable) and (2) USEPA proposed method 1668c for monitoring data, reported as 41 congener results, that will be used for informational purposes.

n. The list of priority pollutants is provided in Appendix A of 40 CFR part 423. Metals shall be expressed as total recoverable.

o. Expressed as total recoverable.

p. The Department of Defense's Quality System Manual (DOD QSM version 5.1 or higher) or other ELAP-accredited methodologies for the analysis of PFAS in wastewaters shall be used to meet the required reporting limit of 50 ng/L. The ELAP accredited method for each group of compounds will specify which specific analytes can be measured. All analytes that can be measured using the selected ELAP-accredited method shall be analyzed.

End of Footnotes for Table E-3

4.2. Total Residual Chlorine Additional Monitoring

4.2.1. Continuous monitoring of total residual chlorine at the current location shall serve as an internal trigger for the increased grab sampling at EFF-001 if either of the following occurs, except as noted in item 4.2.3 in this section:

a. Total residual chlorine concentration excursions of up to 0.3 mg/L lasting greater than 15 minutes; or

b. Total residual chlorine concentration peaks in excess of 0.3 mg/L lasting greater than 1 minute.

4.2.2. Additional grab samples need not be collected if it can be demonstrated that a stoichiometrically appropriate amount of dechlorination chemical has been added to effectively dechlorinate the effluent to 0.1 mg/L or less for peaks in excess of 0.3 mg/L lasting more than 1 minute, but not for more than five minutes.

5. CHRONIC WHOLE EFFLUENT TOXICITY TESTING REQUIREMENTS

5.1. Discharge IWC for Chronic Toxicity

The aquatic chronic toxicity IWC for this discharge is 100 percent effluent.

5.2. Sample Volume and Holding Time

The total sample volume shall be determined by the specific toxicity test method used. Sufficient sample volume shall be collected to perform the required toxicity test. For the receiving water, sufficient sample volume shall also be collected during accelerated monitoring for subsequent toxicity identification evaluation (TIE) studies, if necessary, at each sampling event. All toxicity tests shall be conducted as soon as possible following sample collection. No more than 36 hours shall elapse before the conclusion of sample collection and test initiation.

5.3. Chronic Freshwater Species and Test Methods

If effluent samples are collected from outfalls discharging to receiving waters with salinity <1 parts per thousand (ppt), the Permittee shall conduct the chronic toxicity tests on effluent samples at the in-stream waste concentration for the discharge in accordance with species and test methods in *Short-term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to Freshwater Organisms* (EPA/821/R02/013, 2002; Table IA, 40 CFR part 136). In no case shall these species be substituted with another test species unless written authorization from the Los Angeles Water Board Executive Officer is received.

5.3.1. A static renewal toxicity test with the fathead minnow, *Pimephales promelas* (Larval Survival and Growth Test Method 1000.0).

5.3.2. A static renewal toxicity test with the daphnid, *Ceriodaphnia dubia* (Survival and Reproduction Test Method 1002.0).

5.3.3. A static toxicity test with the green alga, *Selenastrum capricornutum* (also named *Raphidocelis subcapitata*) (Growth Test Method 1003.0).

5.4. Species Sensitivity Screening

The Permittee shall begin a species sensitivity screening for chronic aquatic toxicity prior to Order reissuance, but no later than 18 months prior to the expiration date of this Order. For continuous dischargers, a species sensitivity screening includes four sets of tests completed in the span of one year, with one set collected in each of the four quarters. In each of the four sets, the Discharger shall collect a single effluent sample to initiate and concurrently conduct three toxicity tests using the fish, an invertebrate, and the alga species previously referenced. This sample shall also be analyzed for the parameters required on a monthly frequency for the discharge during that given month. As allowed under the test method for the *Ceriodaphnia dubia* and the *Pimephales promelas*, a second and third sample may be collected for use as test solution renewal water as the seven-day toxicity test progresses. However, that same sample shall be used to renew both the *Ceriodaphnia dubia* and the *Pimephales promelas* toxicity test. For non-continuous dischargers, a set of testing shall be conducted in each quarter in which there is expected to be at least 15 days of discharge. For non-continuous dischargers that discharge in only one quarter of the year in which there is expected to be at least 15 days of discharge, two sets of testing shall be conducted within the same quarter.

If the results of all 12 valid tests conducted during the species sensitivity screening is “Pass,” then the species that exhibited the highest percent effect in any single test shall be used for routine monitoring during the following Order cycle. Likewise, if the results of all 12 valid tests conducted during the species sensitivity screening is “Fail,” then the species that exhibited the highest percent effect in any single test shall be used for routine monitoring during the following Order cycle. If the result of only one of the 12 valid tests conducted during the

species sensitivity screening is “Fail,” then the species used in that test shall be used for routine monitoring during the following Order cycle. If there are multiple valid tests conducted during the species sensitivity screening that result in “Fail,” the species that resulted in a “Fail” the most often during the species sensitivity screening shall be used in routine monitoring during the following Order cycle. If two species had the same number of tests that result in “Fail,” the species that exhibited the highest percent effect in any single test that resulted in a “Fail” shall be used during routine monitoring during the following Order cycle. During the calendar month, toxicity tests used to determine the most sensitive test species shall be reported as effluent compliance monitoring results for the chronic toxicity MDEL and MMEL.

5.5. Quality Assurance and Additional Requirements

Quality assurance measures, instructions, and other recommendations and requirements are found in the test methods manual previously referenced. Additional requirements are specified below.

5.5.1. The discharge is subject to determination of “Pass” or “Fail” and “Percent Effect” from a chronic toxicity test using the TST statistical t-test approach described in the *National Pollutant Discharge Elimination System Test of Significant Toxicity Implementation Document* (EPA 833-R-10-003, 2010), Appendix A, Figure A-1, Table A-1 and Appendix B, Table B-1 and TST procedures described in the *State Policy for Water Quality Control: Toxicity Provisions*. Attainment of the water quality objective is demonstrated by conducting chronic aquatic toxicity testing as described in Section III.B.2 of the Toxicity Provisions and rejecting the null hypothesis in accordance with the TST statistical approach described in Section III.B.3. of the Toxicity Provisions. The null hypothesis (Ho) for the TST approach is: Mean discharge IWC response ≤ 0.75 × Mean control response. A test result that rejects this null hypothesis is reported as “Pass.” A test result that does not reject this null hypothesis is reported as “Fail.” The relative “Percent Effect” at the discharge IWC is defined and reported as: [(Mean control response - Mean discharge IWC response) ÷ Mean control response] × 100. This is a t-test (formally Student’s t-Test), a statistical analysis comparing two sets of replicate observations - in the case of whole effluent toxicity (WET), only two test concentrations (i.e., a control and IWC). The purpose of this statistical test is to determine if the means of the two sets of observations are different [i.e., if the IWC or receiving water concentration differs from the control (the test result is “Pass” or “Fail”)]. The Welch’s t-test employed by the TST statistical approach is an adaptation of Student’s t-test and is used with two samples having unequal variances.

5.5.2 To comply with the MMEL for chronic toxicity, up to three independent toxicity tests shall be conducted during a calendar month. If the initial toxicity test, conducted in the beginning of the month, results in “Fail” at the IWC, then the Discharger shall initiate up to two additional chronic

aquatic toxicity tests in the remainder of the month to determine compliance with the MMEL. If the second test conducted in the month is also a "Fail," then that constitutes a violation of the MMEL. However, if the second and third tests result in a "Pass" then the discharge is in compliance with the MMEL.

5.5.3. If the effluent toxicity test does not meet all test acceptability criteria (TAC) and all required test conditions specified in the referenced test methods manual [*Short-term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to Freshwater Organisms* (USEPA 2002, EPA-821-R-02-013, see Table E-4 for TAC below)], then the Discharger must re-sample and re-test within 14 days. Deviations from the recommended test conditions, specified in the referenced test method *Short-term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to Freshwater Organisms* (USEPA 2002, EPA-821-R-02-013), must be evaluated on a case-by-case basis to determine the validity of the test results. The Discharger shall consider the degree of the deviation and the potential or observed impact of the deviation on the test results in consultation with Los Angeles Water Board staff before rejecting or accepting a test result as valid, and shall report the results of the validity determination with supporting evidence for that decision in their monthly report.

Table E-4. USEPA Test Methods and Test Acceptability Criteria

Species & USEPA Test Method Number	**Test Acceptability Criteria**
Fathead Minnow, *Pimephales promelas*, Larval Survival and Growth Test Method 1000.0. (Table 1 of Test Method, referenced above)	80% or greater survival in controls; average dry weight per surviving organism in control chambers equals or exceeds 0.25 milligrams (mg). (required)
Daphnid, *Ceriodaphnia dubia*, Survival and Reproduction Test Method 1002.0. (Table 3 of Test Method, referenced above)	80% or greater survival of all control organisms and an average of 15 or more young per surviving female in the control solutions. 60% of the surviving control females must produce three broods. (required)
Green Alga, *Selenastrum capricornutum*, Growth Toxicity Test Method 1003.0. (Table 3 of Test Method, referenced above)	Mean cell density as least $1x10^6$ cells/mL in the controls; and variability [coefficient of variability percent (CV%)] among control replicates less than or equal to 20%. (required)

5.5.4. Dilution water and control water, including brine controls, shall be laboratory water prepared and used as specified in the test methods

manual. If dilution water and control water is different from test organism culture water, then a second control using culture water shall also be used.

5.5.5. When preparing samples for toxicity testing, in addition to the required monitoring for conductivity, etc., it is recommended that total alkalinity and total hardness be measured in the undiluted effluent, receiving water, dilution water, and culture water (following the WET methods manual), as well as the major geochemical ions. Details on the impacts geochemical ions may have on toxicity testing can be found in the following:

- *Mount, David R., et al. "Chronic toxicity of major ion salts and their mixtures to Ceriodaphnia dubia." Environmental toxicology and chemistry 38.4 (2019): 769-783*.
- *Acute Toxicity of Major Geochemical Ions to Fathead Minnows (Pimephales Promelas): Part A—Observed Relationships for Individual Salts and Salt Mixtures." Environmental toxicology and chemistry 41.9 (2022): 2078-2094.*

5.5.6. Monthly reference toxicant testing is sufficient. All reference toxicant test results shall be reviewed and reported using the effect concentration at 25% (EC25), where EC25 is a point estimate of the toxicant concentration that would cause an observable adverse effect (e.g., death, immobilization, or serious incapacitation) in 25 percent of the test organisms.

5.5.7. The Discharger shall perform toxicity tests on final effluent samples. Chlorine and ammonia shall not be removed from the effluent sample prior to toxicity testing, unless explicitly authorized under this section of the MRP and the rationale is explained in the Fact Sheet (Attachment F).

5.6. Preparation of an Initial Investigation Toxicity Reduction Evaluation (TRE) Work Plan

The Discharger shall prepare and submit a copy of the Discharger's initial investigation TRE work plan to the Executive Officer of the Los Angeles Water Board for approval within 90 days of the effective date of this Order. If the Executive Officer does not disapprove the work plan within 60 days, the work plan shall become effective. The Discharger shall use USEPA manual EPA/833B-99/002 (municipal) as guidance, or the most current version, or USEPA manual *Generalized Methodology for Conducting Industrial Toxicity Reduction Evaluations* (EPA/600/2-88/070, April 1989). At a minimum, the TRE Work Plan must contain the provisions in Attachment G. This work plan shall describe the steps that the Discharger intends to follow if toxicity is detected. At a minimum, the work plan shall include:

5.6.1. A description of the investigation and evaluation techniques that will be used to identify potential causes and sources of toxicity, effluent variability, and treatment system efficiency.

5.6.2. A description of the Facility's methods of maximizing in-house treatment efficiency and good housekeeping practices, and a list of all chemicals used in the operation of the Facility.

5.6.3. If a TIE is necessary, an indication of the person who would conduct the TIEs (i.e., an in-house expert or an outside contractor).

5.7. TRE Process

A TRE is required when toxicity is persistent in the effluent: if the Discharger has any combination of two or more MDEL or MMEL violations within a single calendar month or within two successive calendar months. In addition, if other information indicates toxicity (e.g., results of additional monitoring, results of monitoring at a higher concentration than the IWC, fish kills, intermittent recurring toxicity), the Executive Officer of the Los Angeles Water Board may require a TRE. The Discharger shall conduct a TRE in accordance with a TRE Work Plan as approved by Los Angeles Water Board. Routine monitoring shall continue during the TRE process and TST results ("Pass" or "Fail", "Percent Effect") for chronic toxicity tests shall be reported as effluent compliance monitoring results for the chronic toxicity MDEL and MMEL. If the most sensitive species is *Ceriodaphnia dubia*, during the TRE process, the major ions (Na^+, K^+, Ca^{2+}, Mg^{2+}, Cl^-, SO_4^{2-} , and HCO_3^- /CO_3^{2-}), shall be analyzed for in the effluent IWC, dilution water, and culture water used for toxicity testing. Those results shall be reported in the corresponding monitoring report.

5.7.1. **Preparation and Implementation of Detailed TRE Work Plan**. The Discharger shall immediately initiate a TRE using, according to the type of treatment facility, USEPA manual *Toxicity Reduction Evaluation Guidance for Municipal Wastewater Treatment Plants* (EPA/833/B-99/002, 1999) or USEPA manual *Generalized Methodology for Conducting Industrial Toxicity Reduction Evaluations* (EPA/600/2- 88/070, April 1989) and, within 30 days, submit to the Executive Officer a Detailed TRE Work Plan, which shall follow the TRE Work Plan revised as appropriate for this toxicity event. The Detailed TRE Work Plan shall include the following information, and comply with additional conditions set by the Executive Officer:

a. Further actions by the Discharger to investigate, identify, and correct the causes of toxicity.

b. Actions the Discharger will take to mitigate the effects of the discharge and prevent the recurrence of toxicity.

c. A schedule for these actions, progress reports, and the final report.

5.7.2. **TIE Implementation**. The Discharger may initiate a TIE as part of a TRE to identify the causes of toxicity using the same species and test method, and as guidance, USEPA manuals: *Methods for Aquatic Toxicity Identification Evaluations: Phase I Toxicity Characterization Procedures* (EPA/600/6-91/003, 1991); *Chronic TIE Manual: Toxicity Identification*

Evaluation: Characterization of Chronically Toxic Effluents, Phase I (EPA/600/6-91/005F, 1992); *Methods for Aquatic Toxicity Identification Evaluations, Phase II Toxicity Identification Procedures for Samples Exhibiting Acute and Chronic Toxicity* (EPA/600/R-92/080, 1993); *Methods for Aquatic Toxicity Identification Evaluations, Phase III Toxicity Confirmation Procedures for Samples Exhibiting Acute and Chronic Toxicity* (EPA/600/R-92/081, 1993); and *Marine Toxicity Identification Evaluation (TIE): Phase I Guidance Document* (EPA/600/R-96-054, 1996).

5.7.3. The Discharger shall consider source control, pollution prevention, and stormwater control when conducting a TRE. As toxic substances are identified or characterized, the Discharger shall continue the TRE by determining the sources and evaluating alternative strategies for reducing or eliminating the substances from the discharge. All reasonable steps shall be taken to reduce toxicity to levels consistent with toxicity evaluation parameters.

5.7.4. The Discharger shall continue to conduct routine effluent monitoring and MMEL compliance monitoring while the TIE and/or TRE process is taking place. Additional TRE work plans are not required once a TRE has begun.

5.7.5. The Los Angeles Water Board recognizes that toxicity may be episodic and identification of causes and reduction of sources of toxicity may not be successful in all cases. However, the TRE shall be carried out in accordance with the Executive Officer-approved TRE Work Plan.

5.7.6. The Board may consider the results of any TIE/TRE studies in an enforcement action.

5.8. Reporting

The Self-Monitoring Report (SMR) shall include a full laboratory report for each toxicity test. This report shall be prepared using the format and content of the test methods manual chapter, “Report Preparation,” including:

5.8.1. The valid toxicity test results for the TST statistical approach, reported as “Pass” or “Fail” and “Percent Effect” at the chronic toxicity IWC for the discharge, using *Pimephales promelas*. All toxicity test results (whether identified as valid or otherwise) conducted during the calendar month shall be reported on the SMR due date specified in Table E-8.

5.8.2. A summary of water quality measurements for each toxicity test (e.g., pH, DO, temperature, conductivity, total hardness, salinity, chlorine, ammonia).

5.8.3. The statistical analysis used in *National Pollutant Discharge Elimination System Test of Significant Toxicity Implementation Document* (EPA 833-R-10-003, 2010) Appendix A, Figure A-1, Table A-1, and Appendix B, Table B-1.

5.8.4. TRE/TIE results. The Executive Officer shall be notified no later than 30 days from completion of each aspect of TRE/TIE analyses. Prior to the completion of the final TIE/TRE report, the Discharger shall provide status updates in the monthly monitoring reports indicating which TIE/TRE steps are underway and which steps have been completed.

5.8.5. Statistical program [e.g., TST calculator, Comprehensive Environmental Toxicity Information System (CETIS), etc.] output results, including graphical plots, for each toxicity test.

5.8.6. Tabular data and graphical plots clearly showing the laboratory's performance for each reference toxicant solution for the previous 20 tests and the laboratory's performance for the control mean, control standard deviation, and control coefficient of variation for each solution analyzed during the previous 12-month period.

5.8.7. Any additional QA/QC documentation or any additional chronic toxicity-related information, upon request from the Los Angeles Water Board Assistant Executive Officer or Executive Officer.

5.9. Ammonia Removal

5.9.1. Except with prior approval from the Executive Officer of the Los Angeles Water Board, ammonia shall not be removed from bioassay samples. The Discharger must demonstrate the effluent toxicity is caused by ammonia because of increasing test pH when conducting the toxicity test. It is important to distinguish the potential toxic effects of ammonia from other pH sensitive chemicals, such as certain heavy metals, sulfide, and cyanide. The following steps may be used to demonstrate that the toxicity is caused by ammonia, and not other toxicants, before the Executive Officer would allow for control of pH in the test.

a. There is consistent toxicity in the effluent and the maximum pH in the toxicity test is in the range to cause toxicity due to increased pH.

b. Chronic ammonia concentrations in the effluent are greater than 4 mg/L total ammonia.

c. Conduct graduated pH tests as specified in the TIE methods. For example, mortality should be higher at pH 8 and lower at pH 6.

d. Treat the effluent with a zeolite column to remove ammonia. Mortality in the zeolite-treated effluent should be lower than the non-zeolite treated effluent. Then add ammonia back to the zeolite-treated samples to confirm toxicity is due to ammonia.

5.9.2. When it has been demonstrated to the satisfaction of the Los Angeles Water Board Executive Officer that toxicity is due to ammonia because of increasing test pH, pH may be controlled using appropriate procedures which do not significantly alter the nature of the effluent.

5.10. Chlorine Removal

Except with prior approval from the Executive Officer of the Los Angeles Water Board, chlorine shall not be removed from bioassay samples. However, chlorine may be removed from the facility's effluent bioassay samples in the laboratory when the recycled water demand is high and there is no effluent water available for sampling over the weir after the dechlorination process.

6. LAND DISCHARGE MONITORING REQUIREMENTS (NOT APPLICABLE)

7. RECYCLING MONITORING REQUIREMENTS (NOT APPLICABLE)

8. RECEIVING WATER MONITORING REQUIREMENTS

8.1. Surface Water Monitoring

Monitoring requirements listed below may duplicate the existing requirements under NPDES Permit No. CA0053911 for the SJC WRP and NPDES Permit No. CA0053716 for the Whitter Narrows WRP. ARC-AWTF's receiving water monitoring stations RSW-002, RSW-003, and RSW-004 are identical to the SJC WRP's receiving water monitoring stations RSW-006 (R12), RSW-007 (R13), and RSW-005 (R2), respectively. ARC-AWTF's receiving water monitoring station RSW-001 is also the same receiving water monitoring station for the WN WRP's RSW-002 (RA). To avoid duplication of sampling and monitoring activities, the receiving water monitoring activities for ARC-AWTF are not required if the activities performed under SJC WRP's NPDES Permit No. CA0053911 and Whittier Narrow WRP's NPDES Permit No. CA0053716 satisfy the requirements of this Order. The Permittee shall ensure that the receiving water monitoring required by this Order is completed and reported in the monitoring reports submitted in compliance with this Order. whether conducted by the Permittee or the Joint Outfall System.

8.1.1. Monitoring Location RSW-002, RSW-003, and RSW-004: The Discharger shall monitor San Gabriel River at RSW-002, RSW-003, and RSW-004 as follows in Table E-5.

Table E-5. Receiving Water Monitoring Requirements at RSW-002, RSW-003, and RSW-004

Parameter	Units	Sample Type	Minimum Sampling Frequency	Notes
Total flow	cubic feet per second (cfs)	flow meter/ recorder	monthly	--
Turbidity	NTU	grab	monthly	a

Parameter	Units	Sample Type	Minimum Sampling Frequency	Notes
Total residual chlorine	mg/L	grab	monthly	a
E. coli	MPN or CFU/100 mL	grab	monthly	a
Temperature	^{o}F	grab	monthly	a & b
pH	pH units	grab	monthly	a & b
Settleable Solids	mL/L	grab	monthly	a
TSS	mg/L	grab	monthly	a
$BOD_5$20^{o}C	mg/L	grab	monthly	a
O&G	mg/L	grab	quarterly	a
DO	mg/L	grab	monthly	a
Conductivity	micromhos per centimeter (µmhos/cm)	grab	monthly	a
TDS	mg/L	grab	monthly	a
Sulfate	mg/L	grab	monthly	a
Chloride	mg/L	grab	monthly	a
Boron	mg/L	grab	monthly	a
Ammonia (as N)	mg/L	grab	monthly	a & b
Nitrate + nitrite (as N)	mg/L	grab	monthly	a
Nitrate	mg/L	grab	monthly	a & b
Nitrite (as N)	mg/L	grab	monthly	a & b
Organic nitrogen	mg/L	calculated	monthly	a & b
TKN	mg/L	grab	monthly	a & b
Total nitrogen	mg/L	calculated	monthly	a

Parameter	Units	Sample Type	Minimum Sampling Frequency	Notes
Total Phosphorus	mg/L	grab	monthly	a
Orthophosphate (as P)	mg/L	grab	monthly	a
Surfactants (MBAS)	mg/L	grab	quarterly	a
Surfactants (CTAS)	mg/L	grab	quarterly	a
Total hardness ($CaCO_3$)	mg/L	grab	monthly	a
Chronic toxicity Pimephales *promelas* Survival and Growth endpoints	Pass or Fail (TST), % Effect	grab	quarterly	a, c, & g
Copper	µg/L	grab	quarterly	a & f
Lead	µg/L	grab	monthly	a & f
Total Chromium	µg/L	grab	semiannually	a
Chromium III	µg/L	calculated	semiannually	a
Chromium VI	µg/L	grab	semiannually	a
Mercury	µg/L	grab	quarterly	a, d, & f
Selenium	µg/L	grab	monthly	a & f
MTBE	µg/L	grab	annually	a & e
Perchlorate	µg/L	grab	annually	a & e
1,2,3-Trichloropropane	µg/L	grab	annually	a & e
1,4-Dioxane	µg/L	grab	annually	a & e
Methoxychlor	µg/L	grab	semiannually	a
Chlorpyrifos	µg/L	grab	semiannually	a & g
Diazinon	µg/L	grab	semiannually	a & g
TCDD Equivalents	pg/L	grab	semiannually	a

Parameter	Units	Sample Type	Minimum Sampling Frequency	Notes
Fluoride	mg/L	grab	semiannually	a
Barium	mg/L	grab	semiannually	a
PCBs as aroclors	µg/L	grab	annually	a & h
PCBs as congeners	pg/L	grab	annually	a & h
Remaining USEPA priority pollutants excluding asbestos	µg/L	grab	semiannually	a & i

Footnotes for Table E-5

a. Pollutants shall be analyzed using the analytical methods described in 40 CFR § 136; where no methods are specified for a given pollutant, by methods approved by the Los Angeles Water Board or State Water Resources Control Board. For any pollutant whose effluent limitation is lower than all the MLs specified in Attachment 4 of the SIP, the analytical method with the lowest ML must be selected.

b. Nitrate nitrogen, nitrite nitrogen, ammonia nitrogen, organic nitrogen, TKN, pH, and temperature sampling shall be conducted on the same day or as close to concurrently as possible.

c. The Discharger shall conduct toxicity testing using *Pimephales promelas* as the test species, as outlined in Section 5 of this MRP. For the *Pimephales promelas* survival and growth endpoints, the MMEL summary result shall be reported as “Pass” or “Fail”, and the maximum daily single result shall be reported as “Pass or Fail” with a “% Effect.” Receiving water and effluent toxicity testing shall be performed on the same day or as close to concurrently as possible.

d. USEPA Method 1631E, per 40 CFR part 136, with a quantification level lower than 0.5 ng/L, shall be used to analyze total mercury, unless another 40 CFR 136 method is sufficiently sensitive.

e. Emerging chemicals include 1,4-dioxane (USEPA test method 8270M), perchlorate (USEPA test method 314, or 331 if a detection limit of less than 6 µg/L is achieved), 1,2,3-trichloropropane (USEPA test method 504.1, 8260B, or 524.2 in SIM mode), and methyl tert-butyl ether (USEPA test method 8260B, or 624 if a detection level of less than 5 µg/L is achieved, and if the laboratory received ELAP certification to conduct USEPA method 624).

f. Expressed as total recoverable.

g. Chlorpyrifos and diazinon may be analyzed using USEPA method 8141A or EPA 525.2. Chlorpyrifos, diazinon, and chronic effluent toxicity shall be sampled on the same day or as close to concurrently as possible.

h. PCBs as aroclors shall be analyzed using USEPA method 608.3. PCBs as congeners shall be analyzed using method 1668c. USEPA recommends that until the USEPA proposed method 1668c is incorporated into 40 CFR 136, permittees should use for discharge monitoring reports/State monitoring reports: (1) USEPA method 608.3 for monitoring data, reported as aroclor results, that will be used for determining compliance with WQBELs (if applicable) and (2) USEPA proposed method 1668c for monitoring data, reported as 41 congener results, that will be used for informational purposes.

i. The list of priority pollutants is provided in Appendix A of 40 CFR Part 423. Metals shall be expressed as total recoverable.

End of Footnotes for Table E-5

8.1.2. Receiving Water Monitoring Requirements at RSW-001**:** The Discharger shall monitor San Gabriel River at RSW-001 as follows in Table E-6.

Table E-6. Receiving Water Monitoring Requirements at RSW-001

Parameter	Units	Sample Type	Minimum Sampling Frequency	Notes
Total flow	cfs	calculation	monthly	a
Turbidity	NTU	grab	monthly	b
Total residual chlorine	mg/L	grab	monthly	b
E. coli	MPN or CFU/100mL	grab	monthly	b
Temperature	°F	grab	monthly	b & c
pH	pH units	grab	monthly	b & c
Settleable Solids	mL/L	grab	monthly	b
TSS	mg/L	grab	monthly	b
$BOD_5$20°C	mg/L	grab	monthly	b
O&G	mg/L	grab	monthly	b
DO	mg/L	grab	monthly	b
Conductivity	µmho/cm	grab	monthly	b
TDS	mg/L	grab	monthly	b
Sulfate	mg/L	grab	monthly	b
Chloride	mg/L	grab	monthly	b

Parameter	Units	Sample Type	Minimum Sampling Frequency	Notes
Boron	mg/L	grab	monthly	b
Ammonia (as N)	mg/L	grab	monthly	b & c
Nitrate (as N)	mg/L	grab	monthly	b & c
Nitrite (as N)	mg/L	grab	monthly	b & c
Organic nitrogen	mg/L	calculated	monthly	b & c
TKN	mg/L	grab	monthly	b & c
Total nitrogen	mg/L	calculated	monthly	b
Total Phosphorus	mg/L	grab	monthly	b
Orthophosphate (as P)	mg/L	grab	monthly	b
Surfactants (MBAS)	mg/L	grab	monthly	b
Surfactants (CTAS)	mg/L	grab	monthly	b
Total hardness ($CaCO_3$)	mg/L	grab	monthly	b
Chronic toxicity *Pimephales promelas* Survival and growth endpoints	Pass or Fail (TST), % Effect	grab	quarterly	b, d & g
Cadmium	µg/L	grab	monthly	b & h
Copper	µg/L	grab	monthly	b & h
Lead	µg/L	grab	monthly	b & h
Mercury	µg/L	grab	quarterly	b, e, & h
Zinc	µg/L	grab	monthly	b & h
Antimony	µg/L	grab	quarterly	b & h
Arsenic	µg/L	grab	quarterly	b & h
Beryllium	µg/L	grab	quarterly	b & h
Total Chromium	µg/L	grab	quarterly	b & h
Chromium (III)	µg/L	calculated	quarterly	b & h
Chromium (VI)	µg/L	grab	quarterly	b & h

Parameter	Units	Sample Type	Minimum Sampling Frequency	Notes
Nickel	µg/L	grab	quarterly	b & h
Selenium	µg/L	grab	quarterly	b & h
Silver	µg/L	grab	quarterly	b & h
Thallium	µg/L	grab	quarterly	b & h
Cyanide	µg/L	grab	quarterly	b
MTBE	µg/L	grab	annually	b & f
Perchlorate	µg/L	grab	annually	b & f
1,2,3-Trichloropropane	µg/L	grab	annually	b & f
1,4-Dioxane	µg/L	grab	annually	b & f
Diazinon	µg/L	grab	quarterly	b & g
TCDD equivalents	µg/L	grab	quarterly	b
Iron	µg/L	grab	semiannually	b
Fluoride	mg/L	grab	semiannually	b
Barium	µg/L	grab	quarterly	b
Methoxychlor	µg/L	grab	quarterly	b
PCBs as aroclors	µg/L	grab	annually	b & i
PCBs as congeners	µg/L	grab	annually	b & i
Remaining USEPA priority pollutants excluding asbestos	µg/L	grab	semiannually	b & j

Footnotes for Table E-6

a. Flow at receiving water stations RSW-001 cannot be measured or estimated because of soft bottom nature of the channel. Therefore, total flow is not required to be reported.

b. Pollutants shall be analyzed using the analytical methods described in 40 CFR § 136; where no methods are specified for a given pollutant, by methods approved by the Los Angeles Water Board or State Water Resources Control Board. For any pollutant whose effluent limitation is lower than all the MLs specified in Attachment 4 of the SIP, the analytical method with the lowest ML must be selected.

c. Nitrate nitrogen, nitrite nitrogen, ammonia nitrogen, organic nitrogen, TKN, pH, and temperature sampling shall be conducted on the same day or as close to concurrently as possible.

d. The Discharger shall conduct toxicity testing using *Pimephales promelas* as the test species, as outlined in Section 5 of this MRP. For the *Pimephales promelas* survival and growth endpoint, the MMEL summary result shall be reported as "Pass" or "Fail", and the maximum daily single result shall be reported as "Pass or Fail" with a "% Effect." Receiving water and effluent toxicity testing shall be performed on the same day as close to concurrently as possible.

e. USEPA Method 1631E, per 40 CFR part 136, with a quantification level lower than 0.5 ng/L, shall be used to analyze total mercury, unless another 40 CFR 136 method is sufficiently sensitive.

f. Emerging chemicals include 1,4-dioxane (USEPA test method 8270M), perchlorate (USEPA test method 314, or 331 if a detection limit of less than 6 µg/L is achieved), 1,2,3-trichloropropane (USEPA test method 504.1, 8260B, or 524.2 in SIM mode), and methyl tert-butyl ether (USEPA test method 8260B, or 624 if a detection level of less than 5 µg/L is achieved, and if the laboratory received ELAP certification to conduct USEPA method 624).

g. Diazinon may be analyzed using USEPA method 8141A or EPA 525.2. Chlorpyrifos, diazinon, and chronic effluent toxicity shall be sampled on the same day or as close to concurrently as possible.

h. Expressed as total recoverable.

i. PCBs as aroclors shall be analyzed using USEPA method 608.3. PCBs as congeners shall be analyzed using method 1668c. USEPA recommends that until the USEPA proposed method 1668c is incorporated into 40 CFR 136, permittees should use for discharge monitoring reports/State monitoring reports: (1) USEPA method 608.3 for monitoring data, reported as aroclor results, that will be used for determining compliance with WQBELs (if applicable) and (2) USEPA proposed method 1668c for monitoring data, reported as 41 congener results, that will be used for informational purposes.

j. The list of priority pollutants is provided in Appendix A to 40 CFR Part 423. Metals shall be expressed as total recoverable.

End of footnotes for Table E-6

8.1.3. Receiving water samples shall not be collected during or within 48 hours following the flow of rainwater runoff into the San Gabriel River. Sampling may be rescheduled at receiving water stations if weather and/or flow conditions would endanger personnel collecting receiving water samples. The monthly monitoring report shall note such occasions.

8.2. Ammonia Receiving Water Monitoring Requirements

8.2.1. To ensure that downstream receiving waters are always protected, the Discharger shall ensure that the ammonia concentrations are monitored at RSW-002, RSW-003, and RSW-004, approximately 100 – 400 feet from

the discharge outfalls. The purpose of the monitoring locations is to ensure that ammonia water quality objectives are met in the receiving water, even immediately downstream of the discharge when there has been little time for uptake or volatilization of ammonia in the receiving water. Concurrent sampling of ammonia, pH, and temperature is required at these monitoring locations. The Discharger shall compare the ammonia results to Basin Plan ammonia water quality objectives, based on the real-time pH and temperature data collected at the time of ammonia sampling.

8.2.2. The Discharger shall ensure that San Gabriel River at RSW-002, RSW-003, and RSW- 004 are monitored for ammonia according to the requirements in Table E-5 if there is discharge from the facility upstream of these monitoring locations.

8.3. TMDL Stream Flow Monitoring RSW-004D

The Discharger shall report the maximum daily flow at San Gabriel River located at USGS station 11087020 (RSW-004D). This information is necessary to determine the wet-weather condition of the river as defined by San Gabriel Metals TMDL. If the gauging station is not operational, an estimated maximum daily flow may be submitted.

Table E-7. TMDL Stream Flow Monitoring Requirements

Parameter	Units	Sample Type	Minimum Sampling Frequency
Maximum Daily Flow	cfs	flow meter/recorder	daily

9. OTHER MONITORING REQUIREMENTS

9.1. Watershed Monitoring – Not Applicable

9.2. Monitoring of Volumetric Data for Wastewater and Recycled Water

The State Water Board adopted the “Water Quality Control Policy for Recycled Water” (Recycled Water Policy) on December 11, 2018 and the Recycled Water Policy became effective on April 8, 2019. The Recycled Water Policy requires wastewater and recycled water dischargers to annually report monthly volumes of influent, wastewater produced, and effluent, including treatment level and discharge type. As applicable, dischargers are additionally required to annually report recycled water use by volume and category of reuse. The State Water Board issued a Water Code Section 13267 and 13383 Order, Order WQ 2019-0037-EXEC, on July 24, 2019 to amend MRPs for all NPDES permits, WDRs, Water Reclamation Requirements, Master Water Recycling Requirements, and General WDRs. Annual reports are due by April 30 of each year, and the report must be submitted to GeoTracker under Global ID No. WDR100039623. This Order implements the Recycled Water Policy by incorporating the volumetric monitoring reporting requirements in accordance with Section 3 of the Recycled

Water Policy.
(https://www.waterboards.ca.gov/board_decisions/adopted_orders/resolutions/2018/121118_7_final_amendment_oal.pdf). The State Water Board's Order WQ 2019-0037- EXEC will no longer be applicable to the Discharger upon the effective date of this Order.

9.2.1. **Influent**: The Discharger shall monitor the monthly total volume of influent conveyed to and treated by the ARC-AWTF.

9.2.2. **Production**: The Discharger shall monitor the monthly volume of water treated, specifying level of treatment.

9.2.3. **Discharge**: The Discharger shall monitor the monthly volume of treated wastewater discharged to specific water bodies as categorized in section 3.2.3 of the Recycled Water Policy. The level of treatment shall also be specified.

9.2.4. **Reuse**: The Discharger shall monitor the monthly volume of recycled water distributed, and annual volume of treated water distributed for beneficial use in compliance with California Code of Regulations, title 22 in each of the use categories specified in Section 3.2.4 of the Recycled Water Policy.

10. REPORTING REQUIREMENTS

10.1. General Monitoring and Reporting Requirements

10.1.1. The Permittee shall comply with all Standard Provisions (Attachment D) related to monitoring, reporting, and recordkeeping.

10.1.2. If there is no discharge during any reporting period, the report shall so state.

10.1.3. Each monitoring report shall contain a separate section titled *Summary of Non-Compliance* which discusses the compliance record and the corrective actions taken or planned that may be needed to bring the discharge into full compliance with waste discharge requirements. This section shall clearly list all non-compliance with discharge requirements, all excursions of effluent limitations, and other noncompliance issues, including, but not limited to a report of any unresolved odor complaints that demonstrate noncompliance with odor prohibitions (section 6.1.2.b), and the resolution of any noncompliance.

10.1.4. The Permittee shall inform the Los Angeles Water Board well in advance of any proposed construction activity that could potentially affect compliance with applicable requirements.

10.2. Self-Monitoring Reports (SMRs)

10.2.1. The Permittee shall electronically submit SMRs using the State Water Board's California Integrated Water Quality System (CIWQS) Program website (http://www.waterboards.ca.gov/ciwqs/index.html). The

CIWQS website will provide additional information for SMR submittal in the event there will be a planned service interruption for electronic submittal.

10.2.2. The Permittee shall report in the SMR the results for all monitoring specified in this MRP under sections 3 through 9. The Permittee shall submit monthly, quarterly, semiannual, and annual SMRs including the results of all required monitoring using USEPA-approved test methods or other test methods specified in this Order. SMRs are to include all new monitoring results obtained since the last SMR was submitted. If the Permittee samples and performs analyses (other than for process/operational control, startup, research, or equipment testing) on any influent, effluent, or receiving water constituent more frequently than required by this MRP using approved analytical methods, the results of this monitoring shall be included in the report. These results shall be reflected in the calculation of the average used in demonstrating compliance with limitations set forth in this Order.

10.2.3. Monitoring periods and reporting for all required monitoring shall be completed according to the following schedule:

Table E-8. Monitoring Periods and Reporting Schedule

Sampling Frequency	Monitoring Period Begins On	Monitoring Period	SMR Due Date
Continuous	Order effective date	All	Submit with monthly SMR
Daily	Order effective date	(Midnight through 11:59 PM) or any 24-hour period that reasonably represents a calendar day for purposes of sampling.	Submit with monthly SMR
Weekly	Sunday following Order effective date or on Order effective date if on a Sunday	Sunday through Saturday	Submit with monthly SMR
Monthly	First day of calendar month following Order effective date or on Order effective date if that date is first day of the month	1st day of calendar month through last day of calendar month	By the 30th day of the third month after the month of sampling

Sampling Frequency	Monitoring Period Begins On	Monitoring Period	SMR Due Date
Quarterly	Closest of January 1, April 1, July 1, or October 1 following (or on) Order effective date	January 1 through March 31 April 1 through June 30 July 1 through September 30 October 1 through December 31	June 30 September 30 December 30 March 31
Semiannually	Closest of January 1 or July 1 following (or on) Order effective date	January 1 through June 30 July 1 through December 31	September 30 March 31
Annually	January 1 following (or on) Order effective date	January 1 through December 31	April 30
Annually (Volumetric Reporting)	Order effective date	January 1 through December 31	April 30

10.2.4. **Reporting Protocols.** The Permittee shall report with each sample result the applicable RL and the current MDL, as determined by the procedure in 40 CFR part 136. The Permittee shall report the results of analytical determinations for the presence of chemical constituents in a sample using the following reporting protocols:

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

b. Sample results less than the RL, but greater than or equal to the laboratory's MDL, shall be reported as "Detected, but Not Quantified," or DNQ. The estimated chemical concentration of the sample shall also be reported. For the purposes of data collection, the laboratory shall write the estimated chemical concentration next to DNQ. The laboratory may, if such information is available, include numerical estimates of the data quality for the reported result. Numerical estimates of data quality may be percent accuracy (± a percentage of the reported value), numerical ranges (low to high), or any other means considered appropriate by the laboratory.

c. Sample results less than the laboratory's MDL shall be reported as "Not Detected," or "ND".

d. Permittees are to instruct laboratories to establish calibration standards so that the ML value (or its equivalent if there is

differential treatment of samples relative to calibration standards) is the lowest calibration standard. At no time is the Permittee to use analytical data derived from extrapolation beyond the lowest point of the calibration curve.

10.2.5. **Compliance Determination**. Compliance with effluent limitations for priority pollutants shall be determined using sample reporting protocols defined above and Section 7 of this Order. For purposes of reporting and administrative enforcement by the Los Angeles Water Board and State Water Board, the Permittee shall be deemed out of compliance with effluent limitations if the concentration of the priority pollutant in the monitoring sample is greater than the effluent limitation and greater than or equal to the RL.

10.2.6. **Multiple Sample Data**. When determining compliance with an average monthly effluent limitation (AMEL), average weekly effluent limitation (AWEL), or MDEL for priority pollutants and more than one sample result is available, the Permittee shall compute the arithmetic mean unless the data set contains one or more reported determinations of DNQ or ND. In those cases, the Permittee shall compute the median in place of the arithmetic mean in accordance with the following procedure:

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

b. 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.

10.2.7. The Permittee shall submit SMRs in accordance with the following requirements:

a. The Permittee shall arrange all reported data in a tabular format. The data shall be summarized to clearly illustrate whether the facility is operating in compliance with interim and/or final effluent limitations. The Permittee is not required to duplicate the submittal of data that is entered in a tabular format within CIWQS. When electronic submittal of data is required and CIWQS does not provide for entry into a tabular format within the system, the Permittee shall electronically submit the data in a tabular format as an attachment.

b. The Permittee shall attach a cover letter to the SMR. The information contained in the cover letter shall clearly identify violations of the WDRs; discuss corrective actions taken or planned; and the proposed time schedule for corrective actions. Identified violations must include a description of the requirement that was violated and a description of the violation.

10.3. Discharge Monitoring Reports (DMRs)

DMRs are USEPA reporting requirements. The Discharger shall electronically certify and submit DMRs together with SMRs using Electronic Self-Monitoring Reports module eSMR 2.5 or any upgraded version. Electronic DMR submittal shall be in addition to electronic SMR submittal. Information about electronic DMR submittal is available at the DMR website at: http://www.waterboards.ca.gov/water_issues/programs/discharge_monitoring.

10.4. Other Reports

10.4.1. The Permittee shall report the results of any special studies, chronic toxicity testing, TRE/TIE, Pollutant Minimization Program (PMP), Pollution Prevention Plan, and temperature compliance schedule task documents required by the Special Provisions in section 6.3. The Permittee shall submit reports in compliance with SMR reporting requirements described in subsection 10.2. above.

10.4.2. Annual Summary Report

By April 30 of each year, the Permittee shall submit an annual report containing a discussion of the previous year's influent/effluent analytical results and receiving water monitoring data. The annual report shall contain an overview of any plans for upgrades to the treatment plant's collection system, the treatment processes, or the outfall system. The Permittee shall submit annual reports to the Los Angeles Water Board in accordance with the requirements described in subsection 10.2.7 above.

Each annual monitoring report shall contain a separate section titled *Reasonable Potential Analysis* which discusses whether reasonable potential was triggered for pollutants which do not have a final effluent limitation in the NPDES permit. This section shall contain the following statement: "The analytical results for this sampling period did/ did not trigger reasonable potential." If reasonable potential was triggered, then the following information shall also be provided:

a. A list of the pollutant(s) that triggered reasonable potential.

b. The Basin Plan or California Toxics Rule (CTR) criteria that was exceeded for each given pollutant.

c. The concentration of the pollutant(s).

d. The test method used to analyze the sample.

e. The date and time of sample collection.

10.4.3. The Permittee shall submit to the Los Angeles Water Board, together with the first monitoring report required by this Order, a list of all chemicals and proprietary additives which could affect this advanced treated recycled water or waste discharge, including quantities of each. Any subsequent changes in types and/or quantities shall be reported promptly.

10.4.4. The Los Angeles Water Board requires the Permittee to file with the Los Angeles Water Board, within 90 days after the effective date of this Order, a technical report on preventive (failsafe) and contingency (cleanup) plans for controlling accidental discharges, and for minimizing the effect of such events. 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 unit outage, and failure of process equipment, tanks, and pipes shall be considered.

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

c. Describe facilities and procedures needed for effective preventive and contingency plans.

d. Predict the effectiveness of the proposed facilities and procedures and provide an implementation schedule contingent interim and final dates when they will be constructed, implemented, or operational.

This technical report can be combined with the Spill Clean-up Contingency Plan specified in section 6.3.3.b.

10.4.5. Climate Change Effects Vulnerability Assessment and Mitigation Plan

The Permittee shall consider the impact of climate change as it affects the operation of the treatment facility due to flooding, wildfires, or other climate-related changes. The Permittee shall develop a Climate Change Effects Vulnerability Assessment and Mitigation Plan (Climate Change Plan) to assess and manage climate change-related effects that may impact the wastewater treatment facility's operation, water supplies, its collection system, and water quality, including any projected changes to the influent water temperature and pollutant concentrations, and beneficial uses. The permittee shall also identify new or increased threats to the sewer system resulting from climate change that may impact desired levels of service in the next 50 years. The permittee shall project upgrades to existing assets or new infrastructure projects, and associated costs, necessary to meet

desired levels of service. Climate change research also indicates the overarching driver of climate change is increased atmospheric carbon dioxide from human activity. The increased carbon dioxide emissions trigger changes to climatic patterns, which increase the intensity of sea level rise and coastal storm surges, lead to more erratic rainfall and local weather patterns, trigger a gradual warming of freshwater and ocean temperatures, and trigger changes to ocean water chemistry. As such, the Climate Change Plan shall also identify steps being taken or planned to address greenhouse gas emissions attributable to wastewater treatment plants, solids handling, and effluent discharge processes. For facilities that discharge to the ocean including desalination plants, the Climate Change Plan shall also include the impacts from sea level rise. The Climate Change Plan is due 12 months after the effective date of this Order.

10.4.6. Annual Volumetric Reporting of Wastewater and Recycled Water

The Discharger shall electronically submit annual volumetric reports to the State Water Board by April 30 each year covering data collected during the previous calendar year using the State Water Board's GeoTracker website (geotracker.waterboards.ca.gov) under a site-specific global identification number WDR100039623. The annual volumetric report shall include information specified in section 9.2, above. To demonstrate compliance with this reporting requirement, a report upload confirmation from the GeoTracker data system or other indication of completed submittals shall be included in the annual summary report.

10.4.7. State Water Board Resolution 2009-0011, *Adoption of a Policy for Water Quality Control for Recycled Water* (Revised January 22, 2013, effective April 25, 2013.), directs the Los Angeles Water Board to encourage recycling. Consistent with the Policy, the Permittee shall submit a feasibility investigation as described in section 4.3 of the Order as part of the submittal of the Report of Waste Discharge (ROWD) for the next order cycle.

10.4.8. UF Filtrate Special Study

The effluent discharged to the San Gabriel River may contain UF filtrate that is not required to be monitored in this Order. To confirm the quality of the UF filtrate flow that is returned to the equalization basin does not impact the Discharger's compliance with the effluent limitations in this Order, the Discharger shall submit a UF Filtrate Special Study Work Plan for Executive Officer approval within 12 months following the effective date of this Order. The special study shall include results of two sets monitoring of the secondary UF filtrate regarding the chemicals added upstream of the secondary UF, as well

as analysis of the impacts of these chemicals on the quality of the final discharge of ARC-AWTF.

ATTACHMENT F – FACT SHEET

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ATTACHMENT F – FACT SHEET

As described in section 2.2 of this Order, the California Regional Water Quality Control Board, Los Angeles Region (Los Angeles Water Board) incorporates this Fact Sheet as findings of the Los Angeles Water Board supporting the issuance of this Order. This Fact Sheet includes the legal requirements and technical rationale that serve as the basis for the requirements of this Order.

This Order has been prepared under a standardized format to accommodate a broad range of discharge requirements for Dischargers in California. Only those sections or subsections of this Order that are specifically identified as “not applicable” have been determined not to apply to this Discharger. Sections or subsections of this Order not specifically identified as “not applicable” are fully applicable to this Discharger.

1. DISCHARGER INFORMATION

The following table summarizes administrative information related to the Albert Robles Center for Water Recycling & Environmental Learning-Advanced Water Treatment Facility (ARC-AWTF or Facility).

Table F-1. Facility Information

Waste Discharger Identification (WDID)	4B190140003
Discharger	Water Replenishment District of Southern California
Name of Facility	ARC-AWTF
Facility Address	4320 San Gabriel River Parkway Pico Rivera, California 90660 Los Angeles County
Facility Contact, Title and Phone	Rob Beste, Assistant General Manager, (562) 275-4300
Authorized Person to Sign and Submit Reports	Rob Beste, Assistant General Manager, (562) 275-4300
Mailing Address	4040 Paramount Boulevard, Lakewood, California 90712
Billing Address	4040 Paramount Boulevard, Lakewood, California 90712
Type of Facility	AWTF
Major or Minor Facility	Major
Threat to Water Quality	2
Complexity	A

Pretreatment Program	Not Applicable
Recycling Requirements	Producer/User
Facility Permitted Flow	14.8 million gallons per day (MGD)
Facility Design Flow	14.8 MGD
Watershed	San Gabriel River
Receiving Water	San Gabriel River
Receiving Water Type	Inland surface water

1.1. The Water Replenishment District of Southern California (hereinafter Discharger or Permittee) owns the ARC–AWTF, which is operated by PERC Water Corporation. For the purposes of this Order, references to the "Discharger" or "Permittee" in applicable federal and state laws, regulations, plans, or policy are held to be equivalent to references to the Permittee herein.

1.2. The Facility discharges advanced-treated water produced from the tertiary-treated effluent from the San Jose Creek (SJC) Water Reclamation Plant (WRP) to the San Gabriel River, a water of the United States. The Discharger was previously regulated by Order Number R4-2017-0187, National Pollutant Discharge Elimination System (NPDES) Permit Number CA0064645, adopted by the Los Angeles Water Board on October 5, 2017. This Order expired on November 30, 2022.

1.3. Regulations at title 40 of the Code of Federal Regulations (40 CFR) section 122.46 limit the duration of NPDES permits to a fixed term not to exceed five years. However, pursuant to 40 CFR section 122.6(d) and California Code of Regulations, title 23, section 2235.4, the terms and conditions of an expired permit are automatically continued pending reissuance of the permit if the Discharger complies with all federal NPDES requirements for continuation of expired permits. The Discharger filed a report of waste discharge (ROWD) and applied for reissuance of its Waste Discharge Requirements (WDRs) and NPDES permit for the ARC-AWTF on June 2, 2022. On August 18 and 22, 2022, the Los Angeles Water Board received supplemental information in response to the Los Angeles Water Board's Incomplete ROWD letter dated July 13, 2022. The application was deemed complete on August 24, 2022. A site visit was conducted on June 20 and July 5, 2023, to observe operations and collect additional data to develop permit limitations and conditions. The terms and conditions of the previous Order have been automatically continued and remain in effect until new WDRs and NPDES permit are adopted pursuant to this Order. Attachment B provides a map of the area around the Facility and Attachment C provides a flow schematic of the Facility.

2. FACILITY DESCRIPTION

2.1. Description of Advanced Treatment

The influent to the ARC-AWTF is tertiary treated effluent from SJC WRP, East and West facilities. Depending on the availability of the tertiary-treated effluent and operational conditions, the influent to the ARC-AWTF may consist entirely of the SJC WRP East tertiary-treated effluent, SJC WRP West tertiary-treated effluent, or the combined tertiary-treated effluent from the San Jose Creek WRP East and West.

The influent to the ARC-AWTF flows through a 66-inch pipeline that is located just east of the ARC-AWTF site. A diversion structure containing three motorized 66-inch slide gates connects to the 66-inch line to divert the flow to the ARC-AWTF equalization basin when the AWTF is in operation or to the Montebello Forebay Spreading Grounds (MFSG, regulated under separate WDRs Order No. R4-2018-0128).

Treatment at the ARC-AWTF consists of ultrafiltration (UF), reverse osmosis (RO), ultraviolet (UV) advanced oxidation processes (AOP), chlorination, and dechlorination. The UF feed pumps transfer the tertiary-treated effluent from the equalization basin to the UF treatment train. Secondary UF filtrate is recovered from the UF backwash water for the purpose of achieving a higher plant recovery rate and is returned to the equalization tank. The UF process removes particulates ahead of the RO to increase system reliability and to prevent RO membrane fouling. The UF treatment process is capable of consistently producing a high-quality filtrate from the tertiary-treated effluent feed supply, and exceeding standard prerequisites (in terms of turbidity and silt density index) for the subsequent RO process. Following primary UF treatment, flow is pumped through the RO system, which removes dissolved inorganic and organic components in the UF filtrate. To control scaling and to protect the RO membranes, pretreatment consisting of chemical dosing with threshold inhibitor and sulfuric acid for pH control are provided. A clean in place (CIP) system and flushing water system for the RO membranes are also essential to maintaining RO performance. RO concentrate is discharged to the brine and waste tank for ultimate brine disposal in the sanitary sewer. The UV AOP at the ARC-AWTF consists of UV irradiation with chlorine addition upstream of the UV trains. UV AOP is used to disinfect RO permeate and to destroy constituents of emerging concern (CECs) that pass through RO membranes due to their low molecular weight and low ionic charge, notably N-Nitrosodimethylamine (NDMA) and 1,4-dioxane. UV AOP effectively reduces and inactivates pathogenic microorganisms. The sodium hypochlorite used for oxidation also provides the disinfectant residuals in the product water. To stabilize the product water and protect the distribution system against corrosion, a portion of the flow from the UV AOP is treated by the decarbonator to remove carbon dioxide (CO_2). The remainder of the flow bypasses the decarbonator. Downstream of the decarbonator, calcium hydroxide and sodium hydroxide are then added to the

combined flow to adjust the pH before it enters the Product Water Tank. For further details of the chemicals added in the processes, please refer to the process flow diagram in Attachment C.

The advanced treated recycled water which has undergone UF, RO, UV AOP, chlorination, and stabilization flows into the product water storage tank where some of the advanced treated recycled water is pumped to the supplemental recharge wells, which is covered under WRRs Order No. R4-2018-0129. The advanced treated recycled water that is not pumped to the supplemental recharge wells is dechlorinated with sodium bisulfite and flows by gravity to the diversion structure through the open advanced-treated water gate. The equalization basin discharges a certain volume of its contents (i.e., tertiary-treated effluent and secondary UF filtrate) over a weir to the diversion structure, where it is blended with the advanced-treated recycled water. The blended water then flows back into the 66-inch conveyance pipeline to the San Gabriel River discharge outfalls (Discharge Points 001, 001A, and 001B, see Table 1) or to the MFSG.

ARC-AWTF's brine waste and other similar waste streams (e.g., UF backwash) are discharged to the Los Angeles County Sanitation District's (LACSD's) sewer system, along Beverly Boulevard, and is treated at the Joint Water Pollution Control Plant (JWPCP) in Carson.

2.2. Discharge Points and Receiving Water

During dry weather (May 1 – October 31), the primary sources of water in the San Gabriel River downstream of the discharge outfalls are the SJC WRP tertiary-treated effluent, ARC-AWTF's advanced treated recycled water, and other NPDES-permitted discharges including stormwater and dry-weather urban runoff conveyed through the municipal separate storm sewer systems (MS4), regulated under *Waste Discharge Requirements and National Pollutant Discharge Elimination System (NPDES) permit for Municipal Separate Storm Sewer System (MS4) Discharges within the Coastal Watersheds of Los Angeles and Ventura Counties,* NPDES Permit No. CAS004004.

The Los Angeles County Flood Control District channelized portions of the San Gabriel River to convey and control floodwater and to prevent damage to adjacent homes. The unlined portion of the San Gabriel River upstream of the estuary near Discharge Point 001A and 001B is considered part of the MFSG. The San Gabriel River in-channel spreading grounds are controlled by seven rubber dams located in the river channel and comprise approximately 200 wetted acres with a storage capacity of approximately 1,000 acre-feet. When discharged to the unlined portions of the San Gabriel River, the combined treated effluent intentionally percolates into the aquifers to recharge groundwater, which is regulated under separate WRRs, Order No. R4-2018-0129.

The San Gabriel River watershed supports a diversity of wildlife, particularly an abundance of avian species such as the *Least Bell's Vireo*, *Tricolored Blackbird*,

and *California Gnatcatcher*. Aquatic life, such as fish, invertebrates, and algae also exist in the San Gabriel River Watershed.

The ARC-AWTF discharges the advanced-treated water to the San Gabriel River via three Discharge Points 001, 001A, and 001B (Figure E-1), upstream of the San Gabriel River estuary. These three discharge points are the same permitted discharge points used by the SJC WRP to discharge tertiary-treated effluent to the San Gabriel River, which are regulated under separate WDRs and NPDES Permit (CA0053911, Order No. R4-2021-0131). The description of each discharge point is as follows:

Discharge Point 001 (approximate coordinates: 33.93052° N, 118.10774° N): Discharge to San Gabriel River.

Discharge Point 001 is located approximately eight miles south of the SJC WRP, 2.9 miles southwest of Discharge Point 001B, and north of Firestone Boulevard at the end of LACSD's discharge pipeline from the SJC WRP. From this point, blended treated effluent flows directly into a lined, low flow channel in the San Gabriel River and travels about nine miles prior to reaching the estuary. Discharge Point 001 is in Reach 2 of the San Gabriel River [as defined in the Water Quality Control Plan for the Los Angeles Region (Basin Plan)] approximately 1,100 feet upstream of the division between Reach 1 and Reach 2. However, the *Total Maximum Daily Loads* [TMDL] *for Metals and Selenium in the San Gabriel River and Impaired Tributaries* (San Gabriel River Metals TMDL) considers Discharge Point 001 to be in Reach 1 of the San Gabriel River. For the purposes of this Order, Discharge Point 001 is considered to be in Reach 1. TMDL implementation guidance makes this assumption: a concrete apron at the outfall in Reach 2 ensures all discharge is conveyed to Reach 1, and water quality objectives and beneficial uses are judged to be fully protected at and downstream from the outfall into Reach 1. The ARC-AWTF discharge is expected to flow into the San Gabriel River via Discharge Points 001A and/or 001B and fully percolate into the unlined portions of the San Gabriel River prior to reaching the lined portion at Discharge Point 001. The ARC-AWTF's discharge via Discharge Point 001 is expected to be infrequent and small in volume, if any.

Discharge Point 001A (approximate coordinates: 33.99417°N, 118.07333°W): Discharge to San Gabriel River.

Discharge Point 001A is the closest downstream discharge point to the ARC-AWTF (approximately 1 mile downstream of the Facility). The outfall empties into a concrete channel at the San Gabriel Coastal Basin Spreading Grounds and a drop-down gate within the channel can be opened or closed to control discharge of the blended treated effluent either to the MFSG recharge facilities or to the soft bottom reach of the San Gabriel River. Combined treated effluent from Discharge Point 001A is discharged to the unlined portion of the San Gabriel River in Reach 2.

Discharge Point 001B (approximate coordinates: 33.96972°N, 118.08861°W): Discharge to San Gabriel River

Discharge point 001B is located along the unlined portion of Reach 2 of the San Gabriel River, approximately 1,100 feet upstream of Slauson Avenue and 1.9 miles southwest of Discharge Point 001A.

2.3. Summary of Existing Requirements and Self-Monitoring Report (SMR) Data

Effluent limitations contained in the previous Order Number R4-2017-0187 for discharges from Discharge Points 001, 001A, and 001B and representative monitoring data for samples collected from March 2019 to February 2023 are presented in Table F-2 below.

Table F-2. Historic Effluent Limitations and Monitoring Data

Constituent	Units	Current Average Monthly Effluent Limitation (AMEL)	Current Average Weekly Effluent Limitation (AWEL)	Current Maximum Daily Effluent Limitation (MDEL)	Instantaneous Limit	Maximum Monthly Average Concentration	Maximum Weekly Average Concentration	Maximum Daily Average Concentration	Maximum Instantaneous Concentration
Turbidity	nephelometric turbidity unit (NTU)	--	--	0.2	0.5	--	--	12.2	12.2
Total Coliform	most probable number (MPN) or colony forming unit (CFU) per 100 mL	23	2.2	240	--	<1.8	<1.8	6.2	--
pH	standard unit	--	--	--	6.5-8.5	--	--	--	Maximum: 8.5 Minimum: 6.5
Temperature	ºF	--	--	86	--	--	--	89.5	--
Total Residual Chlorine	mg/L	--	--	0.1	--	--	--	0.1	--
2,3,7,8-Tetrachlorodibenzodioxin (TCDD)	pg/L	0.014	--	0.028	--	<2.1	--	<2.1	--
Chronic Toxicity	Pass or Fail, % effect [Test of Significant Toxicity (TST)]	Pass	--	Pass or % effect <50	--	Fail (6 out of 43 tests)	--	Fail and % effect of 100	--
Ammonia Nitrogen (as N) [early life stage (ELS) Absent, year-round]	mg/L	5.5	--	8.0	--	0.26	--	0.26	--
Copper (dry weather only)	µg/L	--	--	18	--	--	--	0.89	--
Total Dissolved Solids (TDS)	mg/L	750	--	--	--	120	--	--	--
Sulfate	mg/L	300	--	--	--	6.3	--	--	--
Chloride	mg/L	180	--	--	--	49.9	--	--	--
Boron	mg/L	1.0	--	--	--	0.28	--	--	--
Ammonia Nitrogen (as N) (ELS Present, April 1 – September 30)	mg/L	4.0	--	6.0	--	0.073	--	0.073	--

Constituent	Units	Current Average Monthly Effluent Limitation (AMEL)	Current Average Weekly Effluent Limitation (AWEL)	Current Maximum Daily Effluent Limitation (MDEL)	Instantaneous Limit	Maximum Monthly Average Concentration	Maximum Weekly Average Concentration	Maximum Daily Average Concentration	Maximum Instantaneous Concentration
Ammonia Nitrogen (as N) (ELS Absent, October 1 – March 31)	mg/L	4.9	--	6.8	--	<0.032	--	<0.032	--
Nitrate + Nitrite (as N)	mg/L	8	--	--	--	1.3	--	--	--
Nitrite (as N)	mg/L	1.0	--	--	--	0.019	--	--	--
Lead (wet weather only)	µg/L	--	--	166	--	Not Applicable	--	--	--
Combined Radium-226 and Radium 228	picocuries per liter (pCi/L)	5	--	--	--	<2	--	--	--
Gross Alpha particle activity (excluding radon and uranium)	pCi/L	15	--	--	--	<3	--	--	--
Uranium	pCi/L	20	--	--	--	<0.36	--	--	--
Gross Beta/photon emitters	millirem/ year	4	--	--	--	<2.7	--	--	--
Strontium-90	pCi/L	8	--	--	--	1.06	--	--	--
Tritium	pCi/L	20,000	--	--	--	<1,000	--	--	--

Table F-2 above summarizes the effluent limitations in the previous permit and the associated monitoring data. On November 11, the turbidity exceeded 0.5 NTU for a total of six minutes. Upon detecting the exceedance, the off-spec mode was triggered, and the system automatically transitioned to a recirculation mode to prevent discharge until the off-spec condition was resolved. As a result, no exceedance was recorded in this monitoring period.

2.4. Compliance Summary

According to the monitoring data collected between March 2017 and February 2023, the Discharger was able to meet all effluent limitations except for the effluent limitation of chronic toxicity.

The effluent exceeded the median monthly effluent limitation (MMEL) and the MDEL for chronic toxicity in October 2019. The Discharger also failed to initiate accelerated monitoring following the MMEL exceedance, as required in the permit.

The effluent also exceeded the chronic toxicity MMEL and MDEL in January 2020. The accelerated monitoring was not initiated as required in the permit because the ARC-AWTF effluent flow was diverted from the San Gabriel River to the MFSG beginning January 15, 2020. The Los Angeles Water Board staff directed the Discharger to conduct a site-specific chronic toxicity investigation for the ARC-AWTF effluent after discussing the effectiveness of conducting a TRE/TIE, and the Discharger submitted a work plan on September 14, 2020. The investigation was conducted from July 2020 through December 2020 to determine the source of chronic toxicity. An Executive Summary of the investigation was provided to the Los Angeles Water Board on March 30, 2021, and a final report of the investigation was submitted to the Los Angeles Water Board on August 27, 2021. The conclusion of the investigation was that the ARC-AWTF product water did not contain concentrations of pollutants indicative of chronic toxicity and that the extended inactivity of the autosampler caused bacteriological growth that had a negative impact on the toxicity results.

There were also violations due to deficient effluent monitoring. The Discharger conducted corrective actions to prevent deficient monitoring violations including reviewing the sample order schedule and procedures with the ARC-AWTF operators and contract laboratories; requesting the compliance manager of the contracting firm to retrain the samplers; and requesting the contract laboratory to provide faster turnaround time so the Permittee can review the data before the end of the compliance monitoring period.

2.5. Planned Changes

The ARC-AWTF infrastructure is designed with a provision to expand to an ultimate production capacity of 29.6 mgd; however, there are no planned expansion activities within the next five years. The current design flow of the ARC-AWTF is 14.8 MGD.

3. APPLICABLE PLANS, POLICIES, AND REGULATIONS

The requirements contained in this Order are based on the requirements and authorities described in this section.

3.1. Legal Authorities

This Order serves as WDRs pursuant to article 4, chapter 4, division 7 of the California Water Code (Water Code) (commencing with section 13260). This Order is also issued pursuant to section 402 of the federal Clean Water Act (CWA) and implementing regulations adopted by the United States Environmental Protection Agency (USEPA) and chapter 5.5, division 7 of the Water Code (commencing with section 13370). It shall serve as an NPDES permit authorizing the Discharger to discharge into waters of the United States at the discharge locations described in Table 2 subject to the WDRs in this Order.

3.2. California Environmental Quality Act (CEQA)

Under Water Code section 13389, this action to adopt an NPDES permit for an existing facility is exempt from CEQA, (commencing with section 21100) of division 13 of the Public Resources Code.

3.3. State and Federal Laws, Regulations, Policies, and Plans

3.3.1. Water Quality Control Plan

The Water Quality Control Plan for the Los Angeles Region (Basin Plan) designates beneficial uses, establishes water quality objectives (WQOs), and contains implementation programs and policies to achieve those objectives for all waters addressed through the plan. Requirements in this Order implement the Basin Plan.

Beneficial uses applicable to relevant reaches of the San Gabriel River are as follows:

Table F-3. Basin Plan Beneficial Users – Receiving Surface Waters

Discharge Point	Watershed Boundary Dataset (WBD)	Receiving Water Name	Beneficial Use(s)
001A and 001B	WBD No. 180701060606 (Hydro Unit No. 405.15)	San Gabriel River Reach 2 (Firestone Boulevard to Whittier Narrows Dam)	Existing: Wildlife Habitat (WILD), Rare, Threatened, or Endangered Species (RARE), Water Contact Recreation (REC-1) (Note a), Non-contact Water Recreation (REC-2) Intermittent: Groundwater Recharge (GWR), Warm Freshwater Habitat (WARM) Potential: Municipal and Domestic Supply (MUN), Industrial Service Supply (IND), Industrial Process Supply (PROC)
001	WBD No. 180701060606 (Hydro Unit No. 405.15)	San Gabriel River Reach 2 (Firestone Blvd. to Whittier Narrows Dam)	Existing: WILD, RARE, REC-1 (Note a), REC-2 Intermittent: WARM Potential: MUN (Note b), IND, PROC
001	WBD No. 180701060606 (Hydro Unit No. 405.15)	San Gabriel River Reach 1 (San Gabriel River Estuary to Firestone Blvd.)	Existing: REC-1 (Note a), REC-2 Potential: MUN (Note b), WARM, WILD

Discharge Point	Watershed Boundary Dataset (WBD)	Receiving Water Name	Beneficial Use(s)
001	WBD No 180701060606 (Hydro. Unit No. 405.15)	San Gabriel River Estuary (Ends at Willow Street)	Existing: IND, Navigation (NAV), Commercial and Sport Fishing (COMM), Estuarine Habitat (EST), Marine Habitat (MAR), WILD, RARE (Note c), Migration of aquatic Organisms (MIGR) (Note d), Spawning, Reproduction, and/or Early Development (SPWN) (Note d), REC1, REC2 Potential: Shellfish Harvesting (SHELL)

Footnotes of Table F-4

a. Access prohibited by Los Angeles County Department in the concrete-channelized areas.

b. The potential MUN beneficial use for the water body is consistent with the *Sources of Drinking Water Policy* (page 5-13 of the Basin Plan). However, the Los Angeles Water Board has only conditionally designated the MUN beneficial use. Therefore, the Los Angeles Water Board is not establishing effluent limitations based on the potential MUN designation at this time.

c. One or more rare species utilize all ocean, bays, estuaries, and coastal wetlands for foraging and/or nesting.

d. Aquatic organisms utilize all bays, estuaries, lagoons and coastal wetlands, to a certain extent, for spawning and early development. This may include migration into areas which are heavily influenced by freshwater inputs.

End of Footnotes for Table F-4

3.3.2. National Toxics Rule (NTR) and California Toxics Rule (CTR)

USEPA adopted the NTR on December 22, 1992, and later amended it on May 4, 1995 and November 9, 1999. About forty criteria in the NTR applied in California. On May 18, 2000, USEPA adopted the CTR. The CTR promulgated new toxics criteria for California and, in addition, incorporated the previously adopted NTR criteria that were applicable in the state. The CTR was amended on February 13, 2001. These rules contain federal water quality criteria for priority pollutants. This Order implements the NTR and CTR.

3.3.3. State Implementation Policy

On March 2, 2000, the California State Water Resources Control Board (State Water 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 became effective on April 28, 2000, with respect to the priority pollutant criteria promulgated for California by the USEPA through the NTR and to the priority pollutant objectives established by the Los Angeles Water Board in the Basin Plan. The SIP became effective on May 18, 2000, with respect to the priority pollutant criteria promulgated by the USEPA through the CTR. The State Water Board adopted amendments to the SIP on February 24, 2005, that became effective on July 13, 2005. The SIP establishes implementation provisions for priority pollutant criteria and objectives and provisions for chronic toxicity control. Requirements of this Order implement the SIP.

3.3.4. Compliance Schedule Policy

On April 15, 2008, the State Water Board adopted Resolution Number 2008-0025, *Policy for Compliance Schedule in National Pollutant Discharge Elimination System Permits* (Compliance Schedule Policy). The Compliance Schedule Policy became effective on December 17, 2008. The Compliance Schedule Policy is a statewide water quality control policy that authorizes compliance schedules in NPDES permits that implement CWA section 301(b)(1)(C). The Compliance Schedule Policy supersedes all existing provisions authorizing NPDES compliance schedules with the exception of: (1) existing compliance schedule provisions in TMDL implementation plans in Regional Water Quality Control Plans; and (2) the provisions authorizing compliance schedules for California Toxics Rule criteria in the SIP. This Order implements the Compliance Schedule Policy by establishing a compliance schedule for the temperature effluent limitation.

3.3.5. Domestic Water Quality

In compliance with Water Code section 106.3, it is the policy of the State of California that every human being has the right to safe, clean, affordable, and accessible water adequate for human consumption, cooking, and

sanitary purposes. This Order implements this policy by ensuring the discharge meets requirements protective of the beneficial uses of the receiving waters.

3.3.6. Alaska Rule

On March 30, 2000, USEPA revised its regulation that specifies when new and revised state and tribal water quality standards become effective for CWA purposes (40 CFR section 131.21, 65 Federal Register 24641 (April 27, 2000)). Under the revised regulation (also known as the Alaska Rule), new and revised standards submitted to USEPA after May 30, 2000, must be approved by USEPA before being used for CWA purposes. The final rule also provides that standards already in effect and submitted to USEPA by May 30, 2000, may be used for CWA purposes, whether or not approved by USEPA. This Order implements this rule by implementing standards developed after May 30, 2000 that have been approved by USEPA and/or implementing standards that were in effect and submitted to USEPA by May 30, 2000.

3.3.7. Stringency of Requirements for Individual Pollutants

This Order contains both technology-based effluent limitations (TBELs) and water quality-based effluent limitations (WQBELs) for individual pollutants. The TBELs consist of restrictions on biochemical oxygen demand (BOD) and total suspended solids (TSS) (percent removal of BOD and TSS). Restrictions on BOD and TSS are discussed in section 4.2.2 of the Fact Sheet. This Order's technology-based pollutant restrictions implement the minimum applicable federal technology-based requirements. In addition, to comply with federal anti-backsliding requirements, this Order contains effluent limitations more stringent than the federal technology-based requirements that are carried over from the previous Order.

WQBELs have been scientifically derived to implement WQOs that protect beneficial uses. Both the beneficial uses and the WQOs have been approved pursuant to federal law and are the applicable federal water quality standards. All beneficial uses and WQOs contained in the Basin Plan and statewide water quality control plans were approved under state law and submitted to and approved by USEPA prior to May 30, 2000. Any WQOs and beneficial uses submitted to USEPA prior to May 30, 2000, but not approved by USEPA before that date, are nonetheless "applicable water quality standards for purposes of the CWA" pursuant to 40 CFR section 131.21(c)(1). Collectively, this Order's restrictions on individual pollutants are no more stringent than required to implement the requirements of the CWA and the applicable water quality standards for purposes of the CWA. The final effluent limitations for these pollutants are described in additional detail in section 4.3.2 of the Fact Sheet.

3.3.8. Antidegradation Policy

Federal regulations at 40 CFR section 131.12 requires that the state water quality standards include an antidegradation policy consistent with the federal policy. The State Water Board established California's antidegradation policy in State Water Board Resolution 68-16 (*Statement of Policy with Respect to Maintaining High Quality of Waters in California*). Resolution 68-16 is deemed to incorporate the federal antidegradation policy where the federal policy applies under federal law. Resolution 68-16 requires that existing water quality be maintained unless degradation is justified based on specific findings. The Los Angeles Water Board's Basin Plan implements, and incorporates by reference, both the state and federal antidegradation policies. The permitted discharge and this Order are consistent with the antidegradation provision of 40 CFR section 131.12 and State Water Board Resolution 68-16, as discussed in section 4.4.2 of the Fact Sheet.

3.3.9. Anti-backsliding Requirements

Sections 402(o) and 303(d)(4) of the CWA and federal regulations at 40 CFR section 122.44(l) restrict backsliding in NPDES permits. These anti-backsliding provisions require that effluent limitations in a reissued permit must be as stringent as those in the previous permit, with some exceptions in which limitations may be relaxed. This Order complies with the anti-backsliding provisions by ensuring the effluent limitations are as stringent as those in the previous Order, unless one of the exceptions applies.

3.3.10. Endangered Species Act Requirements

This Order prohibits any act that results in the taking of a threatened or endangered species or any act that is now prohibited, or becomes prohibited in the future, under either the California Endangered Species Act (ESA) (Fish and Game Code, sections 2050 to 2097) or the Federal Endangered Species Act (16 USC sections 1531 to 1544). This Order requires compliance with effluent limits, receiving water limits, and other requirements to protect the beneficial uses of waters of the state. The Discharger is responsible for meeting all requirements of the applicable ESA.

3.3.11. Water Rights

Prior to making any change in the point of discharge, place of use, or purpose of use of treated wastewater that results in a decrease of flow in any portion of a surface or subterranean stream, the Permittee must file a petition with the State Water Board, Division of Water Rights (DWR), and receive approval for such a change. The State Water Board retains the jurisdictional authority to enforce such requirements under Water Code section 1211.

3.3.12. Water Recycling

In accordance with statewide policies concerning water reclamation, the Los Angeles Water Board strongly encourages, wherever practicable, water recycling, water conservation, and use of stormwater and dry-weather urban runoff. {See, e.g., Water Code sections 13000 and 13550-13557, State Water Board Resolution Number 77-1 [*Policy with Respect to Water Reclamation in California*], and State Water Board Resolution Numbers 2009-0011, 2013-0003, and 2018-0057 [*Water Quality Control Policy for Recycled Water* (Recycled Water Policy)].}

The Permittee shall investigate the feasibility of recycling, conservation, and/or alternative disposal methods for wastewater, and/or capture and treatment of dry-weather urban runoff and stormwater, on a permissive basis for beneficial reuse. The ARC-AWTF generated approximately 7.8 MGD (average from 2019 through 2021) of advanced treated recycled water. Of that effluent, approximately 1.5 MGD is discharged to the Sam Gabriel River, and approximately 6.3 MGD is reused for groundwater recharge at the MFSG. This Order requires the Permittee to submit a feasibility investigation as part of the ROWD submittal for the next order renewal.

The State Water Board adopted the Recycled Water Policy on February 3, 2009, and amended it most recently on December 11, 2018. The most recent amendments became effective on April 8, 2019. The Recycled Water Policy requires wastewater and recycled water dischargers to annually report monthly volumes of influent, wastewater produced, and effluent, including treatment level and discharge type. As applicable, dischargers are additionally required to annually report recycled water use by volume and category of reuse. Consistent with Section 3 of the Recycled Water Policy, the State Water Board issued a Water Code Section 13267 and 13383 Order, Order WQ 2019-0037-EXEC, on July 24, 2019, and amended on January 14, 2020, to amend MRPs for all NPDES permits, WDRs, Water Reclamation Requirements, Master Recycling Requirements, and General WDRs. Annual reports are due by April 30 of each year, and the report must be submitted to GeoTracker under Global ID No. WDR100039623. Order WQ 2019-0037-EXEC is applicable to the Discharger until reissuance or amendment of its MRP to include the recycled water volumetric monitoring and reporting requirements. This Order implements the Recycled Water Policy by incorporating the volumetric monitoring and reporting requirements in accordance with Section 3 of the Recycled Water Policy (https://www.waterboards.ca.gov/board_decisions/adopted_orders/resolutions/2018/121118_7_final_amendment_oal.pdf). Accordingly, upon the effective date of this Order, the State Water Board's Order WQ 2019-0037-EXEC will no longer be applicable to the Discharger.

3.3.13. Monitoring and Reporting

40 CFR section 122.48 requires that all NPDES permits specify requirements for recording and reporting monitoring results. Water Code section 13383 authorizes the Los Angeles Water Board to require technical and monitoring reports. The Monitoring and Reporting Program (MRP) establishes monitoring and reporting requirements to implement federal and state requirements. This MRP is provided in Attachment E.

3.3.14. Mercury Provisions

The State Water Board adopted Part 2 of the *Water Quality Control Plan for Inland Surface Waters, Enclosed Bays, and Estuaries of California - Tribal and Subsistence Fishing Beneficial Uses and Mercury Provisions* (Mercury Provisions) through Resolution Number 2017-0027, which was approved by the California Office of Administrative Law (OAL) on June 28, 2017 and became effective upon USEPA approval on July 14, 2017. The Mercury Provisions establish one narrative and four numeric water quality objectives for mercury; and three new beneficial use definitions, to be implemented through NPDES permits issued pursuant to CWA section 402, waste discharge requirements, or waivers of waste discharge requirements. The Mercury Provisions include implementation provisions for individual non-stormwater NPDES permits for municipal and industrial dischargers; stormwater discharges, including MS4 discharges and discharges regulated by the *General Permit for Storm Water Discharges Associated with Industrial Activities* (NPDES Number CAS000001); mine site remediation; nonpoint source discharges; dredging activities; and wetland projects.

The Mercury Provisions contain provisions that apply to municipal wastewater and industrial discharges. The Mercury Provisions convert the fish tissue-based water quality objectives to water column values, denoted as “C”. The implementation section of the Mercury Provisions requires the application of section 1.3 of the *Policy for the Implementation of Toxics Standards for Inland Surface Waters, Enclosed Bays, and Estuaries of California* (State Implementation Policy or SIP) with modifications to determine whether a discharge has reasonable potential to cause or contribute to an exceedance of the water column concentration for mercury and the development of effluent limitations for mercury based on the water quality objective applicable to the receiving water in accordance with Chapter IV.D.2.b in Mercury Provisions. [See section 4.3.3 of the Fact Sheet for reasonable potential analysis (RPA) SIP procedures].

The Mercury Provisions convert the fish tissue-based water quality objectives into water column values to be used for reasonable potential analysis and development of effluent limitations. The objective for San Gabriel River Reach 2, which is a flowing water body with beneficial uses

of WILD and RARE, is 12 nanograms per liter (ng/L) total mercury. The annual averages of effluent sample testing results ranged from 7 ng/L to 14 ng/L during the monitoring period from March 2019 to February 2023. According to the Mercury Provisions, a water quality-based effluent limitation is not required unless the highest observed annual average effluent mercury concentration is greater than the applicable objective (water column concentration, 12 ng/L). Since the data indicate that there is reasonable potential to cause or contribute to an excursion above the water quality standard, effluent limitations for mercury are established in this Order. Monitoring requirements for mercury in the effluent and receiving water are included in Attachment E. The Mercury Provisions specify the new detection limit of 0.5 ng/L as a quantification limit for water samples. The Permittee used MDLs as low as 0.08 ng/L for the mercury sample analyses, which shall be continuously used.

3.3.15. Bacteria Provisions

The State Water Board adopted the *Bacteria Provisions and Water Quality Standards Variance Policy* (Bacteria Provisions) through Resolution Number 2018-0038, which was approved by OAL on February 4, 2019, and became effective upon USEPA approval on March 22, 2019. The Bacteria Provisions establish *Escherichia coli* (*E. coli*) as the sole indicator of pathogens in freshwater. These *E. coli* water quality objectives supersede any numeric water quality objectives for bacteria for the protection of the REC-1 beneficial use in the Los Angeles Water Board Basin Plan prior to the effective date of the Bacteria Provisions, except in certain circumstances, such as where there are site-specific numeric water quality objectives for bacteria. Further, where there is a TMDL to implement prior bacteria objectives, these TMDLs remain in effect. The San Gabriel River Bacteria TMDL establishes that waste load allocations (WLAs) for non-MS4 dischargers currently subject to permits with effluent limits for bacteria are equal to the existing effluent limits for bacteria, and non-MS4 dischargers that do not have existing effluent limits for bacteria are not assigned WLAs.

This Order includes effluent limitations for bacteria based on the definition of disinfected tertiary recycled water in Title 22 of the California Code of Regulations for the protection of human health. These Title 22 disinfection requirements are more stringent than the Bacteria Provision effluent limitations. Therefore, the limitations based on the Bacteria Provisions are not used in this Order, and the Title 22 based effluent limitations are retained. In addition, USEPA states in its document *NPDES Water Quality Based Permit Limits for Recreational Water Quality Criteria* (2015) that it expects the direct application of criteria values at the end-of-pipe approach where the objective is applied directly as permit limits at the discharge point. Since the effluent limitations are

applied at the discharge point (end-of-pipe) based on Title 22 requirements, which are more stringent than the Bacteria Provisions, additional receiving water limitations are not established.

3.3.16. Toxicity Provisions

Beginning in May 2013, the Los Angeles Water Board began incorporating into the NPDES permits numeric water quality objectives for both acute and chronic toxicity, using the TST, and a program of implementation to control toxicity. As explained later in the Fact Sheet, this approach is a preferred statistical method because it provides a higher confidence in results classifying in-stream waste concentrations as toxic or non-toxic, and it is supported by USEPA. This methodology is used in the last iteration of this Order and is carried over into this Order.

On December 1, 2020, the State Water Board adopted statewide numeric water quality objectives for both acute and chronic toxicity, using the TST, and a program of implementation to control toxicity, which are collectively known as the Toxicity Provisions. On October 5, 2021, the State Water Board adopted a resolution rescinding the December 1, 2020 establishment of *Water Quality Control Plan for Inland Surface Waters, Enclosed Bays, and Estuaries of California* and confirming that the Toxicity Provisions were adopted as a State Policy for Water Quality Control, for all inland surface waters, enclosed bays, estuaries, and coastal lagoons of the state, regardless of their status as waters of the United States. The Toxicity Provisions establish a uniform regulatory approach to provide consistent protection of aquatic life beneficial uses and protect aquatic habitats and life from the effects of known and unknown toxicants. The Toxicity Provisions were approved by OAL on April 25, 2022, and by USEPA on May 1, 2023. Portions of the Toxicity Provisions applicable to this Order went into effect upon approval by OAL, and the Toxicity Provisions in their entirety went into effect upon approval by the USEPA for purposes of federal law. The toxicity requirements in this Order are consistent with the current iteration of the Toxicity Provisions, so the Los Angeles Water Board does not anticipate a need for any changes to the Order.

3.4. Impaired Water Bodies on the CWA section 303 (d) List

The State Water Board adopted the 2020-2022 California Integrated Report based on a compilation of the Los Angeles Water Boards' Integrated Reports. These Integrated Reports contain both the CWA section 305(b) water quality assessment and section 303(d) list of impaired waters. In developing the Integrated Reports, the Water Boards solicit data, information, and comments from the public and other interested persons.

On January 19, 2022, the State Water Board approved the CWA Section 303(d) List portion of the State's 2020-2022 Integrated Report (State Water Board

Resolution No. 2022-0006). On May 11, 2022, the USEPA approved California's 2020-2022 Integrated Report. The CWA section 303(d) List can be found at the following link: https://www.waterboards.ca.gov/water_issues/programs/water_quality_assessment/2020_2022_integrated_report.html.

The San Gabriel River is on the 303(d) list. The following are the identified pollutants impacting the receiving water:

San Gabriel River Reach 2 (Firestone Boulevard to Whittier Narrows Dam) - Hydro Unit No. 405.15 (WBD No. 180701060606)

Pollutants: cyanide, lead, temperature.

San Gabriel River Reach 1 (San Gabriel River Estuary to Firestone Blvd.) - Hydro Unit No. 405.15 (WBD No. 180701060606)

Pollutants: pH, temperature.

San Gabriel River Estuary (Ends at Willow Street) - Hydro Unit No. 405.15 (WBD No. 180701060606)

Pollutants: copper, dioxin, indicator bacteria, nickel, dissolved oxygen (DO).

The limitations in this Order address each of these impairments.

3.5. Other Plans, Policies, and Regulations

3.5.1. Climate Change Adaption and Mitigation

On March 7, 2017, the State Water Board adopted a resolution responding to the challenges posed by climate change and requiring a proactive approach to climate change in all State Water Board actions, including drinking water regulation, water quality protection, and financial assistance (Resolution No. 2017-0012). The Los Angeles Water Board also adopted "A Resolution to Prioritize Actions to Adapt to and Mitigate the Impacts of Climate Change on the Los Angeles Region's Water Resources and Associated Beneficial Uses" (Resolution No. R18-004) on May 10, 2018. The resolution summarizes the steps taken so far to address the impacts of climate change within the Los Angeles Water Board's programs, and lists a series of additional steps, including the identification of potential regulatory adaptation and mitigation measures that could be implemented on a short-term and long-term basis by each of the Los Angeles Water Board's programs to mitigate the effects of climate change on water resources and associated beneficial uses where possible. This kind of study and management is an important part of planning for the future, as "[m]unicipalities across the country are facing the challenging obligation to manage their aging sewer and stormwater systems at a time of urban population growth, more stringent water quality protection requirements, and increased exposure to climate change-related risks." [USEPA, *Asset Management: Incorporating Asset Management Planning Provisions into*

NPDES Permits (December 2014)]. This Order contains provisions to require planning and actions to address climate change impacts in accordance with both the State and Los Angeles Water Boards' resolutions.

The Permittee shall develop and submit a Climate Change Effects Vulnerability Assessment and Management Plan (Climate Change Plan) to the Los Angeles Water Board for the Executive Officer's approval no later than 12 months after the effective date of this Order. The Climate Change Plan shall include an assessment of short- and long-term vulnerabilities of the facility and operations, as well as plans to address vulnerabilities of collection systems, facilities, treatment systems, and outfalls for predicted impacts, in order to ensure that facility operations are not disrupted, compliance with order conditions is achieved, and receiving waters are not adversely impacted by discharges. Control measures shall include, but are not limited to, emergency procedures, contingency plans, alarm/notification systems, training, backup power and equipment, and the need for planned mitigation to ameliorate climate-induced impacts including, but not limited to, changing influent and receiving water quality and conditions, as well as the impact of rising sea level (where applicable), wildfires, storm surges and back-to-back severe storms, which are expected to become more frequent. The Permittee shall also identify new or increased threats to the sewer system resulting from climate change that may impact desired levels of service in the next 50 years. The Permittee shall project upgrades to existing assets or new infrastructure projects, and associated costs, necessary to meet desired levels of service. Climate change research also indicates the overarching driver of climate change is increased atmospheric carbon dioxide from human activity. The increased carbon dioxide emissions trigger changes to climatic patterns, which increase the intensity of sea level rise and coastal storm surges, lead to more erratic rainfall and local weather patterns, trigger a gradual warming of freshwater and ocean temperatures, and trigger changes to ocean water chemistry. As such, the Climate Change Plan shall also identify steps being taken or planned to address greenhouse gas emissions attributable to wastewater treatment plants, solids handling, and effluent discharge processes.

These requirements are consistent with 40 CFR section 122.41(e), requiring permittees to ensure compliance through proper operation and maintenance of facilities, including installation and operation of appropriate auxiliary and backup facilities, and they are authorized pursuant to Water Code section 13383. (*In re the City of Oceanside, Fallbrook Public Utilities Dist. And the Southern California Alliance of Publicly Owned Treatment Works*, State Water Board Order WQ 2021-0005, February 12, 2021 at p. 26.) The Los Angeles Water Board understands that the cost of preparing such a plan could be significant (estimated cost range of $25,000-$60,000), but "the costs of ensuring resilient infrastructure to protect water

quality against the effects of climate change is warranted." (Fallbrook, at p. 27.).

3.5.2. Sources of Drinking Water Policy

On May 19, 1988, the State Water Board adopted Resolution No. 88-63, Sources of Drinking Water Policy (SODW Policy), which established a policy that all surface and ground waters, with limited exemptions, are suitable or potentially suitable for municipal and domestic supply. To be consistent with the State Water Board's Resolution No. 88-63, on March 27, 1989, the Los Angeles Water Board adopted Resolution No. 89-03, *Incorporation of Sources of Drinking Water Policy into the Water Quality Control Plans (Basin Plans) – Santa Clara River Basin (4A)/ Los Angeles River Basin (4B)*. This Order is consistent with the SODW Policy because it establishes requirements to protect the beneficial uses of the receiving water, including municipal and domestic supply.

3.5.3. Title 22 of the California Code of Regulations (CCR Title 22)

The State Water Board, Division of Drinking Water (DDW), established primary and secondary maximum contaminant levels (MCLs) for inorganic, organic, and radioactive contaminants in drinking water. These MCLs are codified in CCR Title 22. The Basin Plan (Chapter 3) incorporates CCR Title 22 primary MCLs by reference. This incorporation by reference is prospective, including future changes to the incorporated provisions as the changes take effect. CCR Title 22 primary MCLs have been used as bases for effluent limitations in WDRs and NPDES permits to protect groundwater recharge (GWR) beneficial use. Also, the Basin Plan establishes the following water quality objective for taste and odor for all groundwaters in the Region, "Ground waters shall not contain taste or odor-producing substances in concentrations that cause nuisance or adversely affect beneficial uses." Because reaches downstream of the discharge have designated GWR beneficial use, this Order establishes effluent limitations based on primary MCLs in CCR Title 22 to protect GWR beneficial uses of the surface water, which is intended to protect groundwater quality where surface water recharges groundwater.

3.5.4. Secondary Treatment Regulations

40 CFR Part 133 establishes the minimum levels of effluent quality to be achieved by secondary treatment. These limitations, established by USEPA, are implemented in this Order, except where more stringent limitations are required by other applicable plans, policies, or regulations or to prevent backsliding.

3.5.5. Stormwater

CWA section 402(p), as amended by the Water Quality Act of 1987, requires NPDES permits for stormwater discharges. Pursuant to this

requirement, in 1990, USEPA promulgated 40 CFR section 122.26, establishing requirements for stormwater discharges under an NPDES program. To facilitate compliance with federal regulations, in November 1991, the State Water Board issued a statewide general permit, *General Permit for Storm Water Discharges Associated with Industrial Activities* (Order Number 2014-0057-DWQ amended by Order 2015-0122-DWQ and Order 2018-0028-DWQ, NPDES No. CAS000001). General NPDES Permit No. CAS000001 has been amended and reissued several times since 1991, and most recently on November 6, 2018. The latest amendment became effective on July 1, 2020.

General NPDES Permit No. CAS000001 is applicable to stormwater discharges from the ARC-AWTF]. On December 9, 2019, the Permittee filed an initial Notice of Intent (NOI) to comply with the requirements of the general permit, and the Permittee was enrolled in the general permit beginning December 11, 2019. The Permittee developed and currently implements a Stormwater Pollution Prevention Plan (SWPPP), to comply with the State Water Board's General NPDES Permit Number CAS000001.

3.5.6. Sanitary Sewer Overflows – Not Applicable

3.5.7. Watershed Management

The Los Angeles Water Board has been implementing a Watershed Management Approach (WMA) to address water quality protection in the Los Angeles Region. Information about watersheds in the region can be obtained at the Los Angeles Water Board's website at http://www.waterboards.ca.gov/losangeles/water_issues/programs/regional_program/watershed/index.shtml. The WMA emphasizes cooperative relationships between regulatory agencies, the regulated community, environmental groups, and other stakeholders in the watershed to achieve the greatest environmental improvements with the resources available.

This Order fosters the implementation of this approach by protecting beneficial uses in the watershed and requiring the Permittee to participate with other stakeholders in the development and implementation of a watershed-wide monitoring program. The MRP (Attachment E) requires the Permittee to undertake the responsibilities delineated under an approved watershed-wide monitoring plan in the implementation of the Watershed-wide Monitoring Program for the San Gabriel River, which was approved by the Los Angeles Water Board on September 25, 2006.

3.5.8. Relevant TMDLs

Section 303(d) of the CWA requires states to identify water bodies that do not meet water quality standards and then to establish TMDLs for each water body for each pollutant of concern. TMDLs identify the maximum

amount of pollutants that can be discharged to water bodies without causing violations of water quality standards.

a. San Gabriel River Metals TMDL - On March 26, 2007, the USEPA established San Gabriel River watershed metals TMDLs (Basin Plan chapter 7-20). The effective date of the TMDLs is October 13, 2014. The San Gabriel River Watershed Metals TMDLs contain WLAs for copper, lead, selenium, and zinc. This Order includes effluent limitations for metals established by San Gabriel River Watershed Metals TMDLs. These effluent limitations are consistent with the concentration-based WLAs established for Publicly-Owned Treatment Works (POTWs) and point sources in these TMDLs.

b. San Gabriel River, Estuary and Tributaries Indicator Bacteria TMDL On June 10, 2015, the Los Angeles Water Board adopted Resolution No. R15-005, amending the Basin Plan to incorporate the San Gabriel River, Estuary, and Tributaries Indicator Bacteria TMDL (Basin Plan chapter 7-41). The effective date of this TMDL is June 14, 2016. This TMDL assigns WLAs to non-MS4 dischargers permitted as of the TMDL effective date with effluent limits for bacteria equal to their existing effluent limits for bacteria. Non-MS4 dischargers without effluent limits for bacteria at the time the TMDL became effective are not assigned WLAs. Because the ARC-AWTF was not permitted prior to the effective date of this TMDL, there were no pre-existing bacteria effluent limitations. Therefore, the TMDL WLAs are not applicable to this facility.

3.5.9. Environmental Justice and Advancing Racial Equity.

Effective January 1, 2023, Water Code section 13149.2 requires regional boards to make a finding on potential environmental justice, tribal impact, and racial equity considerations in connection with anticipated water quality impacts when issuing or reissuing individual waste discharge requirements or waivers of waste discharge requirements that regulate activity or a facility that may impact a disadvantaged or tribal community, and that includes a time schedule in accordance with subdivision (c) of Section 13263 for achieving an applicable water quality objective, an alternative compliance path that allows time to come into compliance with water quality objectives, or a water quality variance. Under Water Code section 13149.2, subdivision (c), for permit reissuances, “the finding may be limited to considerations related to any changes to the requirements of the prior waste discharge requirements…” Water Code section 189.7 requires the Los Angeles Water Board to conduct outreach in disadvantaged and/or tribal communities when considering proposed discharges of waste that may have disproportionate impacts on water quality in those communities. The Los Angeles Water Board is committed to developing and implementing policies and programs to advance racial

equity and environmental justice so that race can no longer be used to predict life outcomes, and outcomes for all groups are improved.

This Order regulates discharge that does not disproportionately impact the water quality of an economically disadvantaged community defined at Water Code section 189.7(d)(1), but the discharge may impact tribal communities. According to the 2021 U.S. Census, the median household income (MHI) for the City of Pico Rivera, where the Facility is located, was $78,056, which is 7.2% below the state MHI ($84,097). Since Pico Rivera's MHI is not less than 80% of the state's MHI, it is not considered to be economically disadvantaged. This Order also authorizes a compliance schedule for the ARC-AWTF to comply with the new temperature effluent limitation. The area around the facility has an overall Cal Enviro score of 82 and a pollution burden score of 99, which indicates that the surrounding community may be disproportionately burdened by pollution. Therefore, the Los Angeles Water Board has conducted outreach per Water Code section 189.7 by reaching out to surrounding communities and tribal communities about this Order. Pursuant to Water Code section 13149.2, the Los Angeles Water Board reviewed readily available information and any information raised to the Board by interested persons concerning anticipated water quality impacts in disadvantaged or tribal communities resulting from adoption of this Order, which is the reissuance of an NPDES permit. The Board also considered any environmental justice concerns within the Board's authority and raised by interested persons regarding those impacts.

In accordance with the Water Board's efforts to advance racial equity, the Order requires the Permittee to meet water quality standards to protect public health and the environment, thereby befitting all persons and communities within the Region. The Los Angeles Water Board anticipates that the changes between Order R4-2017-0187 and this Order will not result in disproportionate water quality impacts to disadvantaged or tribal communities or raise environmental justice concerns. The compliance schedule included in this Order allows for temporary excursions above the water quality objective for temperature while the Discharger carries out a work plan to study the potential impacts of its discharge on the beneficial uses of the San Gabriel River and any potential improvements that may be implemented to reduce the effluent temperature to below the water quality objective. The interim effluent limitations included in this Order are carried over from the final effluent limitations in the 2017 Order. Furthermore, the compliance schedule is in place for less than eight years and the work plan the Discharger develops will ultimately bring the discharge into compliance with the water quality objectives for temperature; therefore, any excursions of the final effluent limitation for temperature are not expected to impact the current uses of the San Gabriel River.

4. RATIONALE FOR EFFLUENT LIMITATIONS AND DISCHARGE SPECIFICATIONS

The CWA requires point source dischargers to control the amount of conventional, non-conventional, and toxic pollutants that are discharged into the waters of the United States. The control of pollutants discharged is established through effluent limitations and other requirements in NPDES permits. There are two principal bases for effluent limitations in the Code of Federal Regulations: 40 CFR section 122.44(a) requires that NPDES permits include applicable technology-based limitations and standards; and 40 CFR section 122.44(d) requires that permits include water quality-based effluent limitations to attain and maintain applicable numeric and narrative water quality criteria to protect the beneficial uses of the receiving water.

The variety of potential pollutants found in the Facility discharge presents a potential for aggregate toxic effects to occur. Whole effluent toxicity (WET) is an indicator of the combined effect of pollutants contained in the discharge. Chronic toxicity is a more stringent requirement than acute toxicity. Therefore, chronic toxicity is considered a pollutant of concern for protection and evaluation of narrative Basin Plan objectives for toxicity.

4.1. Discharge Prohibitions

Effluent and receiving water limitations in this Order are based on the CWA, Basin Plan, State Water Board's plans and policies, USEPA guidance and regulations, and best practicable waste treatment technology. This Order authorizes the discharge of advanced treated recycled water from Discharge Points 001, 00A, and 001B. It does not authorize any other type of discharges.

4.2. Technology-based Effluent Limitations

4.2.1. Scope and Authority

Technology-based effluent limits require a minimum level of treatment for industrial/municipal point sources based on currently available treatment technologies while allowing the Discharger to use any available control techniques to meet the effluent limits. The CWA requires POTWs to meet performance requirements based on available wastewater treatment technology. Section 301 of the CWA establishes a required performance level, referred to as "secondary treatment," which all POTWs were required to meet by July 1, 1977. More specifically, section 301(b)(1)(B) of the CWA requires that USEPA develop secondary treatment standards for POTWs as defined in section 304(d)(1). Based on this statutory requirement, USEPA developed national secondary treatment regulations which are specified in 40 CFR part 133. These technology-based regulations apply to all POTWs and identify the minimum level of effluent quality to be attained by secondary treatment in terms of 5-day BOD at 20 degrees Celsius ($BOD_5$20°C) and TSS.

4.2.2. Applicable TBELs

The ARC-AWTF is not subject to technology-based regulations set forth in 40 CFR part 133 because the minimum level of effluent quality and the removal efficiency for $BOD_5$20°C and TSS have already been attained at the SJC WRP.

4.3. Water Quality-based Effluent Limitations

4.3.1. Scope and Authority

CWA Section 301(b) and 40 CFR section 122.44(d) require that NPDES permits include limitations more stringent than applicable federal technology-based requirements where necessary to achieve applicable water quality standards. This Order contains requirements more stringent than secondary treatment requirements necessary to meet applicable water quality standards. The rationale for these requirements, which consist of tertiary treatment or equivalent requirements or other provisions, is discussed beginning in section 4.3.2. of this Fact Sheet.

40 CFR section 122.44(d)(1)(i) requires permits to include effluent limitations for all pollutants that are or may be discharged at levels that have the reasonable potential to cause or contribute to an exceedance of a water quality standard, including numeric and narrative objectives within a standard. Where reasonable potential has been established for a pollutant, but there is no numeric criterion or objective for the pollutant, WQBELs must be established using (1) USEPA criteria guidance under CWA section 304(a), supplemented where necessary by other relevant information; (2) an indicator parameter for the pollutant of concern; or (3) a calculated numeric water quality criterion, such as a proposed state criterion or policy interpreting the state's narrative criterion, supplemented with other relevant information, as provided in section 122.44(d)(1)(vi). WQBELs must also be consistent with the assumptions and requirements of TMDL WLAs approved by USEPA. (33 USC § 1313(d); 40 CFR §§ 122.44(d)(vii)(B) and 130.7.)

The process for determining reasonable potential and calculating WQBELs, when necessary, is intended to protect the designated uses of the receiving water, as specified in the Basin Plan, and achieve applicable water quality objectives and criteria that are contained in other state plans and policies, or any applicable water quality criteria contained in the CTR and NTR.

4.3.2. Applicable Beneficial Uses and Water Quality Criteria and Objectives

The Basin Plan establishes the beneficial uses for surface water bodies in the Los Angeles region. The beneficial uses of the San Gabriel River affected by the discharge have been described previously in this Fact

Sheet. The Basin Plan also specifies narrative and numeric WQOs applicable to surface water as described below:

a. pH

The hydrogen ion activity of water (pH) is measured on a logarithmic scale, ranging from 0 to 14. While the pH of "pure" water at 25°C is 7.0, the pH of natural waters is usually slightly basic. Minor changes from natural conditions can harm aquatic life. 40 CFR § 133.102(c) requires that effluent values for pH shall be maintained within the limits of 6.0 to 9.0 unless the facility demonstrates that (1) inorganic chemicals are not added to the waste stream as part of the treatment process; and (2) contributions from industrial sources do not cause the pH of the effluent to be less than 6.0 or greater than 9.0. The effluent limitations for pH in this Order are more stringent than those in 40 CFR § 133.102(c) because they are based on the Basin Plan water quality objectives (page 3-40) which reads, "the pH of inland surface waters shall not be depressed below 6.5 or raised above 8.5 as a result of waste discharge." These effluent limitations have been carried over from the previous Order.

b. Residual Chlorine

Disinfection of wastewaters with chlorine produces a residual. Chlorine and its reaction products are toxic to aquatic life. The limit for residual chlorine is a maximum daily limit of 0.1 mg/L, and it is based on the Basin Plan (page 3-30) narrative WQO, "Chlorine residual shall not be present in surface water discharges at concentrations that exceed 0.1 mg/L and shall not persist in receiving waters at any concentration that causes impairment of beneficial uses." It is impracticable to use a 7-day average or a 30-day average limitation because it is not as protective of beneficial uses as a daily maximum limitation. Chlorine is very toxic to aquatic life and short-term exposures of chlorine may cause fish kills. The ARC-AWTF has been able to meet this limit. These effluent limitations have been carried over from the previous Order.

c. TDS, Chloride, Sulfate, and Boron

The effluent limitations applicable to Discharge Points 001, 001A and 001B for TDS, sulfate, and boron are based on Basin Plan water quality objectives for the San Gabriel River (between Valley Boulevard and Firestone Boulevard). The effluent limitations for TDS, sulfate, and boron are 750 mg/L, 300 mg/L, and 1.0 mg/L, respectively. The chloride limit is 180 mg/L, consistent with Los Angeles Water Board Resolution No. 97-02, *Amendment to the Water Quality Control Plan to incorporate a Policy for Addressing Levels of Chloride in Discharges of Wastewaters*. Resolution No. 97-02 was adopted by the Los Angeles Water Board on January 27, 1997; approved by the State Water Board

in No. Resolution 97-94; and, approved by OAL on January 8, 1998; and served to revise the chloride water quality objective in the San Gabriel River and other surface waters. It is appropriate to implement the water quality objectives for TDS, chloride, sulfate, and boron as monthly average effluent limitations since they are not expected to cause acute effects on beneficial uses. Effluent limitations based upon the Basin Plan objectives have been included in this Order because these constituents are always present in potable water, which is the supply source of the wastewater entering the treatment plant. They may be present at concentrations that meet California drinking water standards but exceed the Basin Plan objectives; therefore, effluent limitations are warranted to protect the beneficial uses of the receiving water.

d. Nitrate and Nitrite as Nitrogen

High nitrate levels in drinking water can cause health problems in humans. Infants are particularly sensitive and can develop methemoglobinemia (blue-baby syndrome). Nitrogen is also considered a nutrient. Excessive amounts of nutrients can lead to other water quality impairments such as algal growth. Excessive growth of algae and/or other aquatic plants can degrade water quality. Algal blooms sometimes occur naturally, but they are often the result of excess nutrients (i.e., nitrogen, phosphorus) from waste discharges or nonpoint sources. These algal blooms can lead to problems with tastes, odors, color, and increased turbidity and can depress the DO content of the water, leading to fish kills. Floating algal scum and algal mats are also an aesthetically unpleasant nuisance.

The effluent limitations applicable to Discharge Points 001, 001A and 001B for nitrate plus nitrite nitrogen and nitrite as nitrogen are based on Basin Plan objectives for the San Gabriel River. Since the Basin Plan WQO for nitrate plus nitrite nitrogen is more stringent or equal to that of nitrate as nitrogen, the effluent limitations for nitrate as nitrogen is not established in this Order. The effluent limitation for nitrate plus nitrite nitrogen and nitrite as nitrogen for Discharge Points 001A and 001B are 8 mg/L and 1.0 mg/L, respectively. The effluent limitations for nitrate plus nitrite nitrogen and nitrite as nitrogen at Discharge Point 001 are 10 and 1 mg/L. It is practicable to express these limitations as monthly averages since they are not expected to cause acute effects on beneficial uses.

Watershed-wide monitoring will track concentration levels of phosphorus and all nitrogen species present in the effluent and receiving waters, pursuant to 40 CFR part 122.44(d)(1)(vi)(C)(3).

e. Mercury

The State Water Resources Control Board adopted "Part 2 of the Water Quality Control Plan for the Inland Surface Waters, Enclosed Bays, and Estuaries of California - Tribal and Subsistence Fishing Beneficial Uses and Mercury Provisions" (Mercury Provisions) through Resolution Number 2017-0027 and approved by US EPA on July 14, 2017. According to the Mercury Provisions, the mercury concentration in the San Gabriel River Reaches 1 and 2 to which the ARC-AWTF discharges cannot be greater than 12 ng/L, as the effluent concentration allowance. In addition, the highest observed annual average effluent mercury concentration and the highest observed annual average ambient background mercury concentration shall be used to conduct the RPA. Pursuant to section 1.4.3.1. of the SIP, the ambient background mercury concentrations should be measured immediately upstream or near the discharge. The highest observed annual average effluent mercury concentration was 14 ng/L, recorded at monitoring location EFF-001 in 2022. The highest observed annual average ambient background mercury concentration was 7.9 ng/L, recorded at the upstream receiving water RSW-002 in 2019. The maximum annual average effluent is higher than the effluent concentration allowance of 12 ng/L. Therefore, effluent limitations of mercury are established in this Order.

f. Total Ammonia as nitrogen

i. Water Quality Objectives

Ammonia is a pollutant routinely found in the wastewater effluent of POTWs, in landfill-leachate, as well as in runoff from agricultural fields where commercial fertilizers and animal manure are applied. Ammonia exists in two forms – un-ionized ammonia (NH_3) and the ammonium ion (NH_4^+). They are both toxic, but the neutral, un-ionized ammonia species (NH_3) is much more toxic because it diffuses across the epithelial membranes of aquatic organisms much more readily than the charged ammonium ion. The form of ammonia is primarily a function of pH, but it is also affected by temperature and other factors. Additional impacts can also occur as the oxidation of ammonia lowers the DO content of the water, further stressing aquatic organisms. Oxidation of ammonia to nitrate may lead to groundwater impacts in areas of recharge and groundwater recharge is a beneficial use of the reaches to which the Facility discharges. Ammonia also combines with chlorine (often both are present in POTW treated effluent discharges) to form chloramines – persistent toxic compounds that extend the effects of ammonia and chlorine downstream.

The Basin Plan includes one-hour, 30-day average, and four-day objectives for ammonia nitrogen in freshwater inland surface waters.

The freshwater one-hour average objective is dependent on pH and fish species (salmonids present or absent), but not temperature. It is assumed that salmonids may be present in waters designated in the Basin Plan as "COLD" or "MIGR" and that salmonids are absent in waters not designated in the Basin Plan as "COLD" or "MIGR," in the absence of additional information to the contrary. The freshwater 30-day average objective is dependent on pH, temperature, and the presence or absence of early life stages of fish. Early life stages (ELS) of fish are presumptively present and must be protected at all times of the year unless the water body is listed under the ELS "Absent" condition in Table 3-5 of the Basin Plan or unless a site-specific study is conducted which justifies applying the ELS absent condition or a seasonal ELS present condition. A watershed may have some reaches and tributaries with ELS present conditions and others with ELS absent conditions. Implementation actions to achieve applicable ammonia objectives must implement downstream objectives. The freshwater four-day average objective is 2.5 times the 30-day average objective.

The Basin Plan specifies implementation procedures to translate water quality objectives described previously into effluent limitations. For the one-hour objective, the freshwaters where the discharge points lie do not have COLD or MIGR beneficial uses. Therefore, salmonids are assumed to be absent in all receiving waters, and the applicable condition under Table 3-1 of the Basin Plan is applied. The Basin Plan includes site-specific 30-day average objectives that include the San Gabriel River, Reaches 2 and 3 (Confluence of San Jose Creek and Firestone Blvd.) that receive discharges from the Facility as shown in Table 3-4 of the Basin Plan. The translation of site-specific water quality objectives into effluent limitations is shown below for Discharge Points 001, 001A, and 001B.

ii. Ammonia Effluent Limitations

Translation of ammonia nitrogen WQOs into effluent limitations including ELS Present and ELS Absent applicable to Discharge Points 001, 001A and 001B is shown in Table F-4 and F-5. Ammonia effluent limitations are summarized in Table F-6 and F-7.

Table F-4. Steps of Ammonia Nitrogen Effluent Limitation Calculations for Discharge Points 001

Ammonia site specific objective (SSO) ELS Absent (year-round)
Step 1. Identify applicable water quality criteria.
One-hour Average Objective

Ammonia site specific objective (SSO) ELS Absent (year-round)

Based on one-hour average concentration formula [b]below, using 90th percentile pH 7.9, one-hour average objective for waters not designated COLD and/or MIGR = 9.44 mg/L

$$One - hour\ Average\ Concentration = \frac{0.411}{1 + 10^{7.204 - pH}} + \frac{58.4}{1 + 10^{pH - 7.204}}$$

30-day Average Objective

The 30-day average Ammonia WQOs will be calculated using the formula stated in the Basin Plan Table 3-4 for San Gabriel River, Reaches 1 (Firestone Blvd. to Willow St. or start of estuary)

$$30 - day\ Average\ Concentration = \left(\frac{0.0676}{1 + 10^{7.688 - pH}} + \frac{2.912}{1 + 10^{pH - 7.688}}\right) * 0.854 * 3.34 * 10^{0.028 * [25 - Max(T,7)]}$$

Using the 50th percentile pH = 7.7 and temperature T= 22 °C, based on pH and temperature collected from 2019 to 2022; the 30-day average objective ELS Absent = 5.38 mg/L

4-day Average Objective

4-day Average Objective = 2.5 times the 30-day average objective.
4-day Average Objective = 2.5 x 5.38 mg/L = 13.45 mg/L

Ammonia WQOs Summary ELS Absent:

One-hour average = **8.41 mg/L**
Four-day average = **11.26 mg/L**
30-day average = **4.51 mg/L**

Step 2. For each water quality objective, calculate the effluent concentration allowance (ECA) using the steady-state mass balance model. Since mixing has not been allowed by the Los Angeles Water Board, this equation applies:

ECA=WQOs

$ECA_{1\text{-hour}}$ = **8.41 mg/L**
$ECA_{4\text{-day}}$ = **11.26 mg/L**
$ECA_{30\text{-day}}$ = **4.51 mg/L**

Step 3. Determine the long-term average (LTA) by multiplying each ECA by a factor (multiplier) that adjusts for variability. Using Table 3-6 or multiplier calculations in the Basin Plan and calculated coefficient of variation (CV) (i.e., standard deviation/mean for ammonia), the following is each ECA multiplier.

ECA multipliers when CV = 1.89

$ECA\ multiplier_{1\text{-hour99}}$ = 0.12

Ammonia site specific objective (SSO) ELS Absent (year-round)
ECA multiplier$_{4\text{-day}99}$ = 0.21 ECA multiplier$_{30\text{-day}99}$ = 0.48 Using the LTA equations: LTA$_{1\text{-hour}99}$ = ECA$_{1\text{-hour}}$ x ECA multiplier$_{1\text{-hour}99}$ =8.41 mg/L x 0.12 = **1.02 mg/L** LTA$_{4\text{-day}99}$ = ECA$_{4\text{-day}}$ x ECA multiplier$_{4\text{-day}99}$ = 11.26 mg/L x 0.21 = **2.41 mg/L** LTA$_{30\text{-day}99}$ = ECA$_{30\text{-day}}$ x ECA multiplier$_{30\text{-day}99}$ = 4.51 mg/L x 0.48 = **2.18 mg/L**
Step 4. Select the most limiting of the LTAs derived in Step 3 (LTA$_{min}$) ELS Absent LTA$_{min}$ = **1.02 mg/L**
Step 5. Calculate water quality-based effluent limitation MDEL and AMEL by multiplying LTA$_{min}$ as selected in Step 4, with formulas of MDEL multiplier$_{99}$ and AMEL multiplier$_{95}$ specified in Step 5. Monthly sampling frequency is 1.5 on average for ELS Absent year-round and the LTA$_{min}$ selected in Step 4 is LTA$_{1\text{-hour}99}$. Therefore, the monthly sampling frequency (n) is set as 1.5. MDEL multiplier$_{99}$ = 8.24 AMEL multiplier$_{95}$ = 3.34 MDEL = LTA$_{min}$ x MDEL multiplier$_{99}$ = 0.95 mg/L x 8.86 = **8.41 mg/L** AMEL = LTA$_{min}$ x AMEL multiplier$_{95}$ = 0.95 mg/L x 3.46 = **3.41 mg/L**

Table F-5. Steps of Ammonia Nitrogen Effluent Limitation Calculations for Discharge Points 001A and 001B

Ammonia WQOs ELS Present (from April 1 – September 30)	**Ammonia SSO ELS Absent (from October 1 – March 31)**
Step 1. Identify applicable water quality criteria.	**Step 1**. Identify applicable water quality criteria
<u>One-hour Average Objective</u>	<u>One-hour Average Objective</u>
Based on one-hour average concentration formula [b]elow, using 90th percentile pH 8.04, one-hour average objective for waters not designated COLD and/or MIGR = 7.87 mg/L	Based on one-hour average concentration formula [b]elow, using 90th percentile pH 7.93, one-hour average objective for waters not designated COLD and/or MIGR = 9.51 mg/L
$$One-hour\ Average\ Concentration = \frac{0.411}{1+10^{7.204-pH}} + \frac{58.4}{1+10^{pH-7.204}}$$	$$One-hour\ Average\ Concentration = \frac{0.411}{1+10^{7.204-pH}} + \frac{58.4}{1+10^{pH-7.204}}$$
<u>30-day Average Objective</u>	<u>30-day Average Objective</u>
The 30-day average Ammonia WQOs will be calculated using the formula stated in the Basin Plan Table 3-4 for San Gabriel River, Reaches 2 and 3 (Confluence with San Jose Creek to Firestone Boulevard)	The 30-day average Ammonia WQOs will be calculated using the formula stated in the Basin Plan Table 3-4 for San Gabriel River, Reaches 2 and 3 (Confluence with San Jose Creek to Firestone Boulevard)
$$30-day\ Average\ Concentration = \left(\frac{0.0676}{1+10^{7.688-pH}} + \frac{2.912}{1+10^{pH-7.688}}\right) * 0.89 * MIN\left(2.85, 2.37 * 10^{0.028*(25-T)}\right)$$	$$30-day\ Average\ Concentration = \left(\frac{0.0676}{1+10^{7.688-pH}} + \frac{2.912}{1+10^{pH-7.688}}\right) * 0.89 * 2.37 * 10^{0.028*[25-Max(T,7)]}$$
Using the 50th percentile pH = 7.55 and temperature T= 26.72°C, based on pH and temperature collected during ELS Present from 2019 to 2022; the 30-day average objective ELS Present = 3.24 mg/L	Using the 50th percentile pH = 7.65 and temperature T= 21.86 °C, based on pH and temperature collected during ELS Present from 2019 to 2022; the 30-day average objective ELS Present = 4.01 mg/L
<u>4-day Average Objective</u>	<u>4-day Average Objective</u>

Ammonia WQOs ELS Present (from April 1 – September 30)	**Ammonia SSO ELS Absent (from October 1 – March 31)**
4-day Average Objective = 2.5 times the 30-day average objective. 4-day Average Objective = 2.5 x 3.24 mg/L = 8.09 mg/L Ammonia `WQOs Summary ELS Present: One-hour average = **7.87 mg/L** Four-day average = **8.09 mg/L** 30-day average = **3.24 mg/L**	4-day Average Objective = 2.5 times the 30-day average objective. 4-day Average Objective = 2.5 x 4.01 mg/L = 10.02 mg/L Ammonia WQOs Summary ELS Present: One-hour average = **9.51 mg/L** Four-day average = **10.02 mg/L** 30-day average = **4.01 mg/L**
Step 2. For each water quality objective, calculate the ECA using the steady-state mass balance model. Since mixing has not been allowed by the Los Angeles Water Board, this equation applies: ECA=WQOs $ECA_{1\text{-hour}}$ = **7.87 mg/L** $ECA_{4\text{-day}}$ = **8.09 mg/L** $ECA_{30\text{-day}}$ = **3.24 mg/L**	**Step 2**. For each water quality objective, calculate the ECA using the steady-state mass balance model. Since mixing has not been allowed by the Los Angeles Water Board, this equation applies: ECA=WQOs $ECA_{1\text{-hour}}$ = **9.51 mg/L** $ECA_{4\text{-day}}$ = **10.02 mg/L** $ECA_{30\text{-day}}$ = **4.01 mg/L**
Step 3. Determine the LTA by multiplying each ECA by a factor (multiplier) that adjusts for variability. Using Table 3-6 or multiplier calculations in the Basin Plan and calculated CV (i.e., standard deviation/mean for ammonia), the following is each ECA multiplier. ECA multipliers when CV = 0.858 ECA $multiplier_{1\text{-hour99}}$ = 0.23 ECA $multiplier_{4\text{-day99}}$ = 0.42	**Step 3**. Determine the LTA by multiplying each ECA by a factor (multiplier) that adjusts for variability. Using Table 3-6 or multiplier calculations in the Basin Plan and calculated CV (i.e., standard deviation/mean for ammonia), the following is each ECA multiplier. ECA multipliers when CV = 2.69 ECA $multiplier_{1\text{-hour99}}$ = 0.10 ECA $multiplier_{4\text{-day99}}$ = 0.16

Ammonia WQOs ELS Present (from April 1 – September 30)	**Ammonia SSO ELS Absent (from October 1 – March 31)**
ECA multiplier$_{30\text{-day}99}$ = 0.70 Using the LTA equations: LTA$_{1\text{-hour}99}$ = ECA$_{1\text{-hour}}$ x ECA multiplier$_{1\text{-hour}99}$ =7.87 mg/L x 0.23 = **1.84 mg/L** LTA$_{4\text{-day}99}$ = ECA$_{4\text{-day}}$ x ECA multiplier$_{4\text{-day}99}$ = 8.09 mg/L x 0.42 **= 3.38 mg/L** LTA$_{30\text{-day}99}$ = ECA$_{30\text{-day}}$ x ECA multiplier$_{30\text{-day}99}$ = 3.24 mg/L x 0.70 **= 2.28 mg/L**	ECA multiplier$_{30\text{-day}99}$ = 0.38 Using the LTA equations: LTA$_{1\text{-hour}99}$ = ECA$_{1\text{-hour}}$ x ECA multiplier$_{1\text{-hour}99}$ =9.51 mg/L x 0.10 = **0.93 mg/L** LTA$_{4\text{-day}99}$ = ECA$_{4\text{-day}}$ x ECA multiplier$_{4\text{-day}99}$ = 10.02 mg/L x 0.16 = **1.58 mg/L** LTA$_{30\text{-day}99}$ = ECA$_{30\text{-day}}$ x ECA multiplier$_{30\text{-day}99}$ = 4.01 mg/L x 0.38 = **1.51 mg/L**
Step 4. Select the most limiting of the LTAs derived in Step 3 (LTA$_{min}$) ELS Present LTA$_{min}$ = **1.84 mg/L**	**Step 4**. Select the most limiting of the LTAs derived in Step 3 (LTA$_{min}$) ELS Present LTA$_{min}$ = **0.93 mg/L**
Step 5. Calculate water quality-based effluent limitation MDEL and AMEL by multiplying LTA$_{min}$ as selected in Step 4, with formulas of MDEL multiplier$_{99}$ and AMEL multiplier$_{95}$ specified in Step 5. Monthly sampling frequency is 1.5 on average for ELS present periods and the LTA$_{min}$ selected in Step 4 is LTA$_{1\text{-hour}99}$. Therefore, the monthly sampling frequency (n) is set as 1.5. MDEL multiplier$_{99}$ = 4.27 AMEL multiplier$_{95}$ = 2.24 MDEL = LTA$_{min}$ x MDEL multiplier$_{99}$ = 1.84 mg/L x 4.27 = **7.87 mg/L**	**Step 5**. Calculate water quality-based effluent limitation MDEL and AMEL by multiplying LTA$_{min}$ as selected in Step 4, with formulas of MDEL multiplier$_{99}$ and AMEL multiplier$_{95}$ specified in Step 5. Monthly sampling frequency is 1.3 on average for ELS present periods and the LTA$_{min}$ selected in Step 4 is LTA$_{1\text{-hour}99}$. Therefore, the monthly sampling frequency (n) is set as 1.3. MDEL multiplier$_{99}$ = 10.21 AMEL multiplier$_{95}$ = 3.73 MDEL = LTA$_{min}$ x MDEL multiplier$_{99}$ = 0.93 mg/L x 10.21 = **9.51 mg/L**

Ammonia WQOs ELS Present (from April 1 – September 30)	**Ammonia SSO ELS Absent (from October 1 – March 31)**
AMEL = LTA_{min} x AMEL $multiplier_{95}$ = 1.84 mg/L x 2.24 = **4.13 mg/L**	AMEL = LTA_{min} x AMEL $multiplier_{95}$ = 0.93 mg/L x 3.73 = **3.47 mg/L**

Table F-6. Summary of Ammonia Effluent Limitations for Discharge Points 001

Parameter	Units	Calculated AMEL	Calculated MDEL	AMEL from 2017 Permit	MDEL from 2017 Permit	Final AMEL	Final MDEL
Ammonia Nitrogen (ELS Absent, year-round)	mg/L	3.4	8.4	5.5	8.0	3.4	8.0
Ammonia Nitrogen (ELS Absent, year-round)	pounds per day (lbs/day)	421	1,140	679	987	421	987

Table F-7. Summary of Ammonia Effluent Limitations for Discharge Points 001A and 001B

Parameter	Units	Calculated AMEL	Calculated MDEL	AMEL from 2017 Permit	MDEL from 2017 Permit	Final AMEL	Final MDEL
Ammonia Nitrogen (ELS Present, April 1 to September 30)	mg/L	4.1	7.9	4.0	6.0	4.0	6.0
Ammonia Nitrogen (ELS Present, April 1 to September 30)	lbs/day	510	980	494	741	494	741
Ammonia Nitrogen (ELS Absent, October 31 to March 31)	mg/L	3.5	9.5	4.9	6.8	3.5	6.8
Ammonia Nitrogen (ELS Absent, October 31 to March 31)	lbs/day	429	1,174	605	839	429	839

g. Bacteria

Total coliform bacteria are used to indicate the likelihood of pathogenic bacteria in surface waters. Given the nature of the Facility, pathogens are likely to be present in the effluent if the disinfection process is not operating adequately. In addition, these requirements are established to protect the GWR beneficial use of the surface water. As such, this Order contains the following limitations:

Effluent Limitations (Title 22 Bacteria Criteria)

- The 7-day median number of coliform organisms must not exceed 2.2 MPN or CFU per 100 mL.
- The number of coliform organisms must not exceed 23 MPN or CFU per 100 mL in more than one sample within any 30-day period, and
- No sample shall exceed 240 MPN or CFU total coliform bacteria per 100 mL.

These disinfection-based effluent limitations for total coliform are for human health protection and are consistent with requirements established by the State Water Resources Control Board, DDW in Title 22 of the California Code of Regulations sections 60301.230(b) and 60320.108(b) for disinfected tertiary recycled water. These limitations for total coliform must be met at the point of the treatment train immediately following disinfection, as a measure of the effectiveness of the disinfection process.

h. Temperature

The Basin Plan contains the following water quality objective for temperature:

The natural receiving water temperature of all regional waters shall not be altered unless it can be demonstrated to the satisfaction of the Regional Board that such alteration in temperature does not adversely affect beneficial uses. Alterations that are allowed must meet the requirements below.

For waters designated WARM, water temperature shall not be altered by more than 5°F above the natural temperature. At no time shall these WARM-designated waters be raised above 80°F as a result of waste discharges.

Temperature can adversely affect beneficial uses. The USEPA document, *Quality Criteria for Water 1986* (EPA 440/5-86-001, May 1, 1986), also referred to as the Gold Book, discusses temperature and its effects on beneficial uses, such as recreation and aquatic life.

i. The Federal Water Pollution Control Administration in 1967 called temperature “a catalyst, a depressant, an activator, a restrictor, a stimulator, a controller, a killer, and one of the most important water quality characteristics to life in water.” The suitability of water for total body immersion is greatly affected by temperature. Depending on the amount of activity by the swimmer, comfortable temperatures range from 20°C to 30°C (68°F to 86°F).

ii. Temperature also affects the self-purification phenomenon in water bodies and therefore the aesthetic and sanitary qualities that exist. Increased temperatures accelerate the biodegradation of organic material both in the overlying water and in bottom deposits which makes increased demands on the DO resources of a given system. The typical situation is exacerbated by the fact that oxygen becomes less soluble as water temperature increases. Thus, greater demands are exerted on an increasingly scarce resource which may lead to total oxygen depletion and obnoxious septic conditions. Increased temperature may increase the odor of water because of the increased volatility of odor-causing compounds. Odor problems associated with plankton may also be aggravated.

iii. Temperature changes in water bodies can alter the existing aquatic community. Coutant (1972) has reviewed the effects of temperature on aquatic life reproduction and development. Reproductive elements are noted as perhaps the most thermally restricted of all life phases assuming other factors are at or near optimum levels. Natural short-term temperature fluctuations appear to cause reduced reproduction of fish and invertebrates.

The prior Order (Order Number R4-2017-0187) relied on a white paper prepared by Los Angeles Water Board staff, “Temperature and Dissolved Oxygen Impacts on Biota in Tidal Estuaries and Dissolved Oxygen Impacts on Biota in Tidal Estuaries and Enclosed Bays in the Los Angeles Region,” to conclude that a maximum effluent temperature limitation of 86°F was appropriate for discharges from the Facility. Reliance on the staff white paper is no longer appropriate because it does not apply to inland surface waters that are not tidally influenced. This Order revises the temperature effluent limitation to 80ºF to be consistent with the temperature water quality objectives in the Basin Plan and is a new interpretation of the water quality objective compared to the previous order.

Based on review of the ARC-AWTF’s temperature data recorded between Mach 2019 and May 2022, the effluent temperatures recorded at EFF-001 ranged from 44.8 to 85.8°F. The Facility’s temperature data during the previous Order term shows that effluent and resulting receiving water temperatures have exceeded 80°F, especially during

summer months. The highest recorded temperature in the effluent was 88°F on September 5, 2019. Since the facility cannot consistently comply with the newly interpreted temperature effluent limitation of 80°F, Los Angeles Water Board staff met with WRD's staff to discuss the more stringent temperature effluent limitation on March 15, 2023. The Discharger submitted a request for a compliance schedule to comply with the newly interpreted effluent and receiving water limitations for temperature on June 6, 2023. This Order provides a compliance schedule with tasks to implement actions to comply with the limitation, as set forth in section 6.3.7 of the Order.

i. Turbidity

Turbidity is an expression of the optical property that causes light to be scattered in water due to particulate matter such as clay, silt, organic matter, and microscopic organisms. Turbidity can result in a variety of water quality impairments. Since the ARC-AWTF's effluent is discharged to the unlined portion of the San Gabriel River for groundwater recharge, the turbidity effluent limitations are protective of the water contact recreation and groundwater recharge beneficial uses. In this Order, the turbidity of the advanced treated recycled water shall not exceed: (a) 0.2 NTU more than 5 percent of the time within a 24-hour period; and (b) 0.5 NTU at any time. This requirement is based on title 22 of the CCR, sections 60301.320(b) "Filtered Wastewater" and 60320.108(b), Pathogenic Microorganism Control."

j. Radioactivity

Radioactive substances are generally present in natural waters in extremely low concentrations. Mining or industrial activities increase the amount of radioactive substances in waters to levels that are harmful to aquatic life, wildlife, or humans. Section 301(f) of the CWA states the following with respect to effluent limitations for radioactive substances, "Notwithstanding any other provisions of this Act, it shall be unlawful to discharge any radiological, chemical, or biological warfare agent, any high-level radioactive waste, or any medical waste, into the navigable waters." Chapter 5.5 of the CWC contains a similar prohibition under section 13375, which reads as follows: "The discharge of any radiological, chemical, or biological warfare agent into the waters of the state is hereby prohibited." In addition to the narrative prohibition on radioactive substances, numeric effluent limitations for radioactivity are included in this Order based on Title 22 CCR, Chapter 15, Article 5, sections 64442 and 64443. The numeric limit is based on the Basin Plan's prohibition of concentrations of chemical constituents in amounts that adversely affect any designated beneficial use. The discharge also has reasonable potential to exceed the prohibition on radioactive substances because the discharge includes waste from industrial

facilities and hospitals (which are potential sources of radioactivity depending on the industry). Therefore, this Order retains the narrative prohibition in addition to numeric limitations for radioactive substances to protect the GWR beneficial use of the surface water.

k. Dry-Weather Copper and Wet-Weather Lead

The San Gabriel River Watershed Metals TMDLs contain WLAs for copper, lead, selenium, and zinc. This Order implements the San Gabriel River Watershed Metals TMDLs by including effluent limitations for copper during dry weather and lead during wet weather.

l. 2,3,7,8-TCDD

2,3,7,8-TCDD is on the 303(d) List of impaired waters in the 2020-2022 California Integrated Report. Although no detected 2,3,7,8-TCDD results exceeded the CTR criterion, effluent limitations are included in this Order for 2,3,7,8-TCDD since it is included in the 303(d) List for the watershed. Therefore, the effluent limitations for 2,3,7,8-TCDD from the previous Order (calculated using the RPA SIP procedures and using the CTR criterion) are retained.

4.3.3. CTR and SIP

The CTR and the SIP specify numeric objectives for toxic substances and the procedures whereby these objectives are to be implemented. The procedures include those used to conduct RPA to determine the need for effluent limitations for priority pollutants. The Technical Support Document (TSD) also specifies procedures to conduct reasonable potential analyses for non-priority pollutants.

4.3.4. Determining the Need for WQBELs

The Los Angeles Water Board developed WQBELs for lead during wet weather for Discharge Points 001A and 001B and copper during dry weather for Discharge Point 001 based on the San Gabriel River and Tributaries Metals TMDL.

In accordance with Section 1.3 of the SIP, and noting the exceptions above, the Los Angeles Water Board conducted an RPA for each remaining priority pollutant with an applicable criterion or objective to determine if a WQBEL is required in the Order. The Los Angeles Water Board analyzed effluent data to determine if a pollutant in a discharge has a reasonable potential to cause or contribute to an excursion above a state water quality standard. For all parameters that demonstrate reasonable potential, numeric WQBELs are required. The RPA considers water quality criteria from the CTR, NTR, and when applicable, water quality objectives specified in the Basin Plan. To conduct the RPA, the Los Angeles Water Board staff identified the maximum effluent concentration (MEC) and maximum background concentration (B) in the receiving water for each

constituent, based on data provided by the Discharger. The monitoring data cover the period from March 9, 2019 to June 1, 2022.

Section 1.3 of the SIP provides the procedures for determining reasonable potential to exceed applicable water quality criteria and objectives. The SIP specifies three triggers to complete an RPA:

Trigger 1 – If the MEC is greater than or equal to the CTR water quality criteria or applicable objective (C), a limitation is needed.

Trigger 2 – If B > C and the pollutant is detected in the effluent, a limitation is needed.

Trigger 3 – If other related information such as CWA 303(d) listing for a pollutant, discharge type, compliance history, then best professional judgment is used to determine that a limit is needed.

Sufficient effluent and ambient data are needed to conduct a complete RPA. If the data are not sufficient, the Permittee will be required to gather the appropriate data for the Los Angeles Water Board to conduct the RPA. Upon review of the data, and if the Los Angeles Water Board determines that WQBELs are needed to protect the beneficial uses, this Order will be reopened for appropriate modification.

The RPA was performed for the priority pollutants regulated in the CTR for which data are available. The CTR and the SIP specify numeric objectives for toxic substances and the procedures whereby these objectives are to be implemented. The procedures include those used to conduct RPA to determine the need for effluent limitations for priority pollutants. The RPA was performed for mercury following the Mercury Provisions. Based on the RPA, pollutants that demonstrate reasonable potential for Discharge Point 001 are cyanide, lead, selenium, and thallium; pollutants that demonstrate reasonable potential for Discharge Points 001A and 001B are copper, cyanide, lead during dry weather, selenium, and thallium. Table F-7 below summarizes the results from the RPA..

Table F-7. Summary of RPA

CTR No.	Parameter	C (µg/L)	MEC (µg/L)	B (µg/L)	Discharge Point	RPA Result – Need Limit?	Reason
6	Copper	19	110	20	001A and 001B	Yes	MEC≥C
14	Cyanide	5.2	11	4.6	001, 001A, and 001B	Yes	MEC≥C
7	Lead	13	44	9.7	001	Yes	MEC≥C

CTR No.	Parameter	C (µg/L)	MEC (µg/L)	B (µg/L)	Discharge Point	RPA Result – Need Limit?	Reason
7	Lead (Dry Weather)	13	44	9.7	001A and 001B	Yes	MEC≥C
8	Mercury	0.012	0.014	0.0079	001A and 001B	Yes	MEC≥C
10	Selenium	5	30	1.2	001, 001A, and 001B	Yes	MEC≥C
12	Thallium	6.3	20	0.01	001, 001A, and 001B	Yes	MEC≥C
16	2,3,7,8-TCDD	1.4E-08	≤2.1	2.9	001, 001A, and 001B	Yes	Trigger 3, 303(d) list

4.3.5. WQBEL Calculations

a. Calculation Options. Once RPA has been conducted using either the Mercury Provisions, TSD or the SIP methodologies, WQBELs are calculated. Alternative procedures for calculating WQBELs include:

i. Use WLA from an applicable TMDL;

ii. Use a steady-state model to derive MDELS and AMELs;

iii. Where sufficient data exist, use a dynamic model approved by the State Water Board.

b. San Gabriel River Metals TMDL. Chapter 7-20 of the Basin Plan, *Implementation Plan for the San Gabriel River Metals TMDL*, describes the implementation procedures and regulatory mechanisms to provide reasonable assurances that water quality standards will be met. The Implementation Plan requires permit writers to translate WLAs into effluent limits by applying the SIP procedures or other applicable engineering practices authorized under federal regulations.

Discharge Points 001A and 001B, Reach 2

According to Table 2-9 of the San Gabriel River Metals TMDL, San Gabriel River Reach 2 is only impaired for lead during wet-weather. Table 6-2 of the San Gabriel River Metals TMDL set a wet-weather lead WLA of 166 µg/L to dischargers at Reach 2, which is included in the Order as the final wet-weather MDEL for lead at Discharge Points 001A and 001B. Wet weather is defined as the condition in the San Gabriel River when maximum daily flow at the United States Geological Survey

gauging station 11087020 is equal to or greater than 260 cubic feet per second (cfs).

Discharge Point 001, Reach 1

Allocations will be developed for upstream reaches and tributaries to meet TMDLs in downstream reaches. Discharge to upstream reaches (San Gabriel River Reach 2) can cause or contribute to exceedances of water quality standards and contribute to copper impairment downstream (San Gabriel River Estuary). Discharge Point 001 is located in San Gabriel River Reach 2, and from this point, the discharge flows directly into a lined, low flow channel (San Gabriel River) and travels about nine miles prior to reaching the estuary. Therefore, Discharge Point 001 is considered in Reach 1 of the San Gabriel River for the purpose of the San Gabriel River Metals TMDL. Table 6-5 of the San Gabriel River Metals TMDL sets a dry-weather copper WLA of 18 µg/L to dischargers at Reach 1, which is implemented in the Order as the final dry-weather MDEL for copper at Discharge Point 001. This MDEL will only apply during the dry weather when the maximum daily flow at the San Gabriel River, as measured at station 11087020 is less than 260 cfs.

c. SIP Calculations Procedure. Section 1.4 of the SIP requires the step-by-step procedure to “adjust” or convert CTR numeric criteria into AMELs and MDELs, for toxics.

Step 3 of Section 1.4 of the SIP (page 8) lists the statistical equations that adjust CTR criteria for effluent variability.

Step 5 of Section 1.4 of the SIP (page 10) lists the statistical equations that adjust CTR criteria for averaging periods and exceedance frequencies of the criteria/objectives. This section also reads, “For this method only, maximum daily effluent limitations shall be used for POTWs in place of average weekly limitations.”

Sample calculation for cyanide is presented below:

Step 1. Identify applicable water quality criteria.

The CTR provides freshwater aquatic life and human health criteria.

Freshwater aquatic life criteria:

Criterion maximum concentration (CMC) = 22 µg/L (CTR page 31712, column B1) and the criterion continuous concentration (CCC) = 5.2 µg/L (CTR page 31712, column B1).

Human health Criteria for organisms only = 220,000 µg/L (CTR page 31712, column D2)

Step 2. Calculate ECA

ECA = Aquatic life and human health criteria in CTR, since no dilution is allowed.

ECA_{acute} = CMC = 22 µg/L

$ECA_{chronic}$ = CCC = 5.2 µg/L

ECA for human health = Human health criteria for organism only = 220,000 µg/L

Step 3. Determine LTA discharge condition for each ECA based on aquatic life.

CV = Standard Deviation/Mean = 0.756 [73% of data are reported as not detected (ND)]

Find the ECA Multipliers by calculating them using equations on SIP page 8, when CV = 0.756, then

ECA $Multiplier_{acute}$ = 0.262 and

ECA $Multiplier_{chronic}$ = 0.457

LTA_{acute} = ECA_{acute} x ECA $Multiplier_{acute}$ = 22 µg/L x 0.262 = 5.77 µg/L

$LTA_{chronic}$ = $ECA_{chronic}$ x ECA $Multiplier_{chronic}$ = 5.2 µg/L x 0.457 = 2.38 µg/L

Step 4. Select the lowest LTA.

In this case, LTA_{acute} < $LTA_{chronic}$, therefore the lowest LTA_{min} = 2.38 µg/L

Step 5. Calculate the AMEL & MDEL for aquatic life.

CV and n (frequency of sampling per month) to calculate the multipliers for AMEL and MDEL. If effluent samples are collected 4 times a month or less, then n =4. CV was determined as 0.835 in Step 3.

AMEL $Multiplier_{95}$ = 1.71

MDEL $Multiplier_{99}$ = 3.81

AMEL for aquatic life = LTA_{min} x AMEL $Multiplier_{95}$ = 2.38 µg/L x 1.71 = 4.05 µg/L

MDEL for aquatic life = LTA_{min} x MDEL $Multipler_{99}$ = 2.2.38 µg/L x 3.81 = 9.06 µg/L

Step 6. Find the AMEL & MDEL for human health.

AMEL for human health = ECA for human health = 220,000 µg/L

$MDEL/AMEL_{multiplier}$ = MDEL $multiplier_{99}$ / AMEL $multiplier_{95}$ = 3.81/1.71 = 2.23

MDEL for human health = ECA for human health x MDEL/$AMEL_{multiplier}$ = 220,000 µg/L x 2.23 = 491,411 µg/L

Step 7. Compare the AMELs and MDELs for aquatic life and human health and select the lowest value.

Lowest AMEL = 4.05 µg/L

Lowest MDEL = 9.06 µg/L

d. Impracticability Analysis. Federal NPDES regulations contained in 40 CFR section 122.45(d) states that, for continuous dischargers, all permit limitations, standards, and prohibitions, including those to achieve water quality standards, shall, unless impracticable, be stated as maximum daily and average monthly discharge limitations for all dischargers other than POTWs.

As stated by USEPA in its long-standing guidance for developing WQBELs, average limitations alone are not practical for limiting acute, chronic, and human health toxic effects (See, Section 5.2.3 of USEPA's *Technical Support Document for Water Quality-based Toxics Control* (EPA/505/2-90-001, March 1991)).

For example, a facility sampling for a toxicant to evaluate compliance with a 7-day average limitation could fully comply with this average limit, but still be discharging toxic effluent on one, two, three, or up to four of these seven days and not be meeting 1-hour average acute criteria or 4-day average chronic criteria. Similarly, a 7-day average alone would not protect one, two, three, or four days of discharging pollutants in excess of the acute and chronic criteria.

For these reasons, USEPA recommends daily maximum and 30-day average limits for regulating toxics in all NPDES discharges. For the purposes of protecting the acute effects of discharges containing toxicants, daily maximum limitations have been established in this Order for certain priority pollutants. Thirty-day (or monthly) average limitations have been established for priority pollutants that cause long-term impacts because they are carcinogenic, bioaccumulative, and/or endocrine disruptors.

e. Mass-based Limits. 40 CFR section 122.45(f)(1) requires that, except under certain conditions, or for certain pollutants, all permit limits, standards, or prohibitions be expressed in terms of mass units. 40 CFR section 122.45(f)(2) allows the permit writer, at their discretion, to express limits in additional units (e.g., concentration units). The regulations mandate that, where limits are expressed in more than one unit, the permittee must comply with both.

Generally, mass-based limits ensure that proper treatment, and not dilution, is employed to comply with the final effluent concentration

limits. Concentration-based effluent limits, on the other hand, discourage reduction in treatment efficiency during low-flow periods and require proper operation of the treatment units at all times. In the absence of concentration-based effluent limits, a permittee would be able to increase its effluent concentration (i.e., reduce its level of treatment) during low-flow periods and still meet its mass-based limits. To account for this, this Order includes mass and concentration limits for some constituents. The mass-based limits are based on the design capacity.

Table F-8. Summary of WQBELs for Discharge Points 001, 001A, and 001B

Parameter	Unit	AMEL	AWEL	MDEL	Note
Ammonia (as N, ELS Absent, October 1 - March 31)	mg/L	3.5	--	6.8	f
Ammonia (as N, ELS Absent, October 1 - March 31)	lbs/day	429	--	839	a & f
Ammonia (as N, ELS Present, April 1 - September 30)	mg/L	4.0	--	6.0	f
Ammonia (as N, ELS Present, April 1 - September 30)	lbs/day	494	--	741	a & f
Ammonia (as N, ELS Absent, year-round)	mg/L	3.4	--	8.0	e
Ammonia (as N, ELS Absent, year-round)	lbs/day	421	--	987	a & e
Chlorine, Total Residual	mg/L	--	--	0.1	--
Chlorine, Total Residual	lbs/day	--	--	12	a
Total Coliform	MPN or CFU/100 mL	2.3	2.2	240	g
Turbidity	NTU	--	--	--	h
pH	standard unit	--	--	--	i
Temperature	°F	--	--	80	b

Parameter	Unit	AMEL	AWEL	MDEL	Note
TDS	mg/L	750	--	--	f
TDS	lbs/day	92,574	--	--	a & f
Sulfate (as SO_4)	mg/L	300	--	--	--
Sulfate (as SO_4)	lbs/day	37,030	--	--	a & f
Chloride	mg/L	180	--	--	f
Chloride	lbs/day	22,218	--	--	a & f
Boron	mg/L	1.0	--	--	f
Boron	lbs/day	123	--	--	a & f
Nitrate + Nitrite (as N)	mg/L	10	--	--	e
Nitrate + Nitrite (as N)	lbs/day	1,200	--	--	a & e
Nitrate + Nitrite (as N)	mg/L	8	--	--	f
Nitrate + Nitrite (as N)	lbs/day	987	--	--	a & f
Nitrite (as N)	mg/L	1	--	--	e
Nitrite (as N)	mg/L	1.0	--	--	f
Nitrite (as N)	lbs/day	120	--	--	a
Copper	µg/L	8.3	--	27	f & j
Copper	lbs/day	1.0	--	3.4	a, f, & j
Copper (Dry Weather)	µg/L	--	--	18	b, e, & j
Lead	µg/L	3.6	--	12	f & j
Lead	lbs/day	0.44	--	1.5	a, e, & j
Lead (Dry Weather)	µg/L	3.6	--	12	b, f, & j
Lead (Dry Weather)	lbs/day	0.44	--	1.5	a, b, f, & j
Lead (Wet Weather)	µg/L	--	--	166	b, f, & j
Mercury	µg/L	0.012	--	--	j

Parameter	Unit	AMEL	AWEL	MDEL	Note
Mercury	lbs/day	0.0015	--	--	a & j
Selenium	µg/L	2.7	--	8.4	j
Selenium	lbs/day	0.33	--	1.0	a & j
Thallium	µg/L	6.3	--	20	j
Thallium	lbs/day	0.78	--	2.5	a & j
Cyanide	µg/L	4.1	--	9.1	--
Cyanide	lbs/day	0.5	--	1.1	a
2,3,7,8-TCDD	pg/L	0.014	--	0.028	--
2,3,7,8-TCDD	lbs/day	$1.7x10^{-9}$	--	$3.5x10^{-9}$	a
Combined Radium-226 and Radium-228	pCi/L	5	--	--	d & f
Gross Alpha particle activity (excluding radon and uranium)	pCi/L	15	--	--	d & f
Gross Beta/photon emitters	millirem/year	4	--	--	d & f
Strontium-90	pCi/L	8	--	--	d & f
Tritium	pCi/L	20,000	--	--	d & f
Uranium	pCi/L	20	--	--	d & f
Chronic Toxicity *Pimephales promelas* Survival and Growth endpoints	Pass or Fail (TST), % Effect	Pass	--	Pass (TST) or % Effect < 50 (survival endpoint)	c

Footnotes for Table F-8

a. The mass-based effluent limitations are based on the plant design flow rate of 14.8 MGD and are calculated as follows: Flow (MGD) x Concentration (mg/L) x 8.34 (conversion factor) = lbs/day or Flow (MGD) x Concentration (µg/L) x 0.00834 (conversion factor) = lbs/day.

b. Dry or wet-weather effluent limitations apply when the maximum daily flow measured at the San Gabriel River, United States Geological Survey gauging station 11087020 is less than 260 cfs. Wet-weather effluent limitations apply when the maximum daily

flow measured at the San Gabriel River, United States Geological Survey gauging station 11087020 is equal to or greater than 260 cfs.

c. A numeric WQBEL is established because effluent data showed that there was reasonable potential for the effluent to cause or contribute to an exceedance of the chronic toxicity water quality objective. The Chronic Toxicity final effluent limitation is protective of both the numeric acute toxicity and the narrative toxicity Basin Plan water quality objectives. These final effluent limitations are established based on the *State Policy for Water Quality Control: Toxicity Provisions* (Toxicity Provisions), adopted by the State Water Board on October 5, 2021, and approved by OAL and USEPA on April 5, 2022, and May 1, 2023, respectively.

d. The radioactivity final effluent limitations are derived from 22 CCR § 64442 and § 64443. The incorporation by reference is prospective including future changes to the incorporated provisions as changes take effect.

e. Apply to Discharge Point 001 only.

f. Apply to Discharge Points 001A and 001B only.

g. The wastes or advanced treated recycled water discharged to water courses shall at all times be adequately disinfected. For the purpose of this requirement, the wastes or advanced treated recycled water shall be considered adequately disinfected if: (1) the median number of total coliform bacteria in the disinfected effluent does not exceed a 7-day median of 2.2 MPN or CFU per 100 mL utilizing the bacteriological results of the last seven (7) days for which an analysis has been completed, (2) the number of total coliform bacteria does not exceed 23 MPN or CFU per 100 mL in more than one sample within any 30-day period, and (3) no sample shall exceed 240 MPN or CFU of total coliform bacteria per 100 mL. Samples shall be collected at a time when flow and characteristics are most demanding on treatment facilities and disinfection processes.

h. For the protection of the water contact recreation beneficial use and human health, the effluent discharged from the ARC-AWTF to water courses shall have received adequate treatment, per California Code of Regulations, title 22, sections 60301.320(b) and 60320.108(b), so that the turbidity of the treated effluent does not exceed any of the following: (a) 0.2 NTUs more than 5 percent of the time (72 minutes) within a 24-hour period; and (b) 0.5 NTU at any time.

i. The effluent values for pH shall be maintained within the limits of 6.5 standard units and 8.5 standard units.

j. Expressed as total recoverable.

End of Footnotes for Table F-8

4.3.6. Whole Effluent Toxicity

WET testing protects the receiving water quality from the aggregate toxic effect of a mixture of pollutants in the effluent. An acute toxicity test is conducted over a short time period and measures mortality. A chronic toxicity test is conducted over a longer time period and may measure mortality, reproduction, and growth. Chronic toxicity is a more stringent requirement than acute toxicity. A chemical at a low concentration can

have chronic effects but no acute effects until the concentration increases. Therefore, chronic toxicity is considered a pollutant of concern for protection and evaluation of narrative Basin Plan objectives for toxicity.

On December 1, 2020, the State Water Board adopted statewide numeric water quality objectives for both acute and chronic toxicity, using the TST, and a program of implementation to control toxicity, which are collectively known as the Toxicity Provisions. On October 5, 2021 the State Water Board adopted a resolution rescinding the December 1, 2020 establishment of Water Quality Control Plan for Inland Surface Waters, Enclosed Bays, and Estuaries of California and confirming that the Toxicity Provisions were adopted as a State Policy for Water Quality Control, for all inland surface waters, enclosed bays, estuaries, and coastal lagoons of the state, regardless of their status as waters of the United States. The Toxicity Provisions were approved by OAL for purposes of state law on April 25, 2022, and were approved by USEPA for purposes of federal law on May 1, 2023.

Section III.C.3 of the Toxicity Provisions states:

> "Except for POTW dischargers that are authorized to discharge at a rate equal to or greater than 5.0 million gallons per day (MGD) and are required to have a pretreatment program by the terms of 40 CFR § 403.8(a) (effective January 1, 2020), all Non-stormwater Dischargers shall conduct a Reasonable Potential analysis for chronic aquatic toxicity, pursuant to the procedures specified in Section III.C.3.c, for review and approval by the Permitting Authority. A Reasonable Potential analysis for chronic aquatic toxicity is not required for POTW dischargers that are authorized to discharge at a rate equal to or greater than 5.0 MGD and are required to have a pretreatment program by the terms of 40 CFR § 403.8(a) (effective January 1, 2020), because the Permitting Authority shall include an effluent limitation for these dischargers pursuant to Section III.C.5."

The Facility is authorized to discharge at a rate higher than 5.0 MGD but is not required to have a pretreatment program. As such, a reasonable potential analysis for chronic aquatic toxicity was conducted for the effluent of this Facility.

Five of the 15 effluent chronic toxicity tests collected from March 2019 to June 2022 failed the TST. Therefore, the effluent discharged from the Facility has reasonable potential to cause or contribute to an exceedance of the water quality objective for chronic toxicity per section III.C.3.c.ii of the Toxicity Provisions. As such, this Order contains chronic toxicity effluent limitations, consistent with the Toxicity Provisions.

Compliance with the chronic toxicity requirement contained in this Order shall be determined in accordance with section 7.10. of this Order. This Order contains a reopener to allow the Los Angeles Water Board to modify

the Order, if necessary, to make it consistent with any new policy, law, or regulation.

For this Order, chronic toxicity in the discharge is evaluated using the TST hypothesis testing approach, consistent with the Toxicity Provisions. Section III.C.5.c of the Toxicity Provisions includes the following chronic aquatic toxicity MDEL for non-stormwater dischargers:

> "No {Most sensitive species} chronic aquatic toxicity test shall result in a 'fail' at the [instream waste concentration] for the sub-lethal endpoint measured in the test and a Percent Effect for the survival endpoint greater than or equal to 50 percent."

Section III.C.5.d of the Toxicity Provisions includes the following chronic aquatic toxicity MMEL:

> "No {Most sensitive species} chronic aquatic toxicity test shall result in a 'fail' at the [instream waste concentration] for the sub-lethal endpoint measured in the test and a Percent Effect for the survival endpoint greater than or equal to 50 percent."

The most sensitive species for the ARC-AWTF discharge is *Pimephales promelas*. Consistent with the Toxicity Provisions, chronic toxicity effluent limitations in this Order are expressed as "Pass" for the median monthly effluent limitation (MMEL) and "Pass" and "<50% Effect" for each maximum daily effluent limitation (MDEL) individual result. The chronic toxicity effluent limitations implement the statewide water quality objective for aquatic chronic toxicity.

4.4. Final Effluent Limitation Concentration

4.4.1. Anti-Backsliding Requirements

Sections 402(o) and 303(d)(4) of the CWA and federal regulations at 40 CFR section 122.44(l) prohibit backsliding in NPDES permits. These anti-backsliding provisions require effluent limitations in a reissued permit to be as stringent as those in the previous permit, with some exceptions where limitations may be relaxed. The effluent limitations in this Order are as at least stringent as the effluent limitations in the previous Order.

4.4.2. Antidegradation Policies

40 CFR section 131.12 requires that state water quality standards include an antidegradation policy consistent with the federal antidegradation policy. On October 28, 1968, the State Water Board established California's antidegradation policy when it adopted Resolution Number 68-16, *Statement of Policy with Respect to Maintaining the Quality of the Waters of the State*. Resolution Number 68-16 requires that existing water quality be maintained unless degradation is justified based on specific findings. The State Water Board has, in State Water Board Order Number

86-17 and an October 7, 1987 guidance memorandum, interpreted Resolution Number 68-16 to be fully consistent with the federal antidegradation policy contained in 40 CFR section 131.12. Similarly, CWA section 303(d)(4)(B) and 40 CFR section 131.12 require that all permitting actions be consistent with the federal antidegradation policy. Together, the state and federal antidegradation policies are designed to ensure that a water body will not be degraded resulting from the permitted discharge. The Los Angeles Water Board's Basin Plan implements, and incorporates by reference, both the state and federal antidegradation policies.

The renewal of this Order is consistent with the antidegradation policy because it is not expected to allow degradation of receiving water quality. No reduction in the existing level of wastewater treatment is anticipated. In addition, the renewal of this Order will not lower the surface water quality because the conditions in this Order are at least as stringent as the previous Order.

4.4.3. Stringency of Requirements for Individual Pollutants

This Order contains only WQBELs for individual pollutants. TBELs for $BOD_5$20°C, TSS, and percent removal of $BOD_5$20°C and TSS are not applicable to ARC-AWTF because these TBELs have consistently been met in the SJC WRP's tertiary treated effluent, which is the influent to ARC-AWTF. Similarly, the pH TBEL of 6.0 to 9.0 has also been consistently met in ARC-AWTF influent, so a pH TBEL is also not applicable to ARC-AWTF. However, pH effluent limitations of 6.5 to 8.5 from the Basin Plan are included in this Order because pH is listed on the 303(d) list of impaired waterbodies for the San Gabriel River Reach 1 and the treatment process at ARC-AWTF includes pH adjustments. TBELs implement the minimum, applicable, federal technology-based requirements. This Order also contains effluent limitations that are more stringent than the TBELs that are necessary to meet water quality standards.

WQBELs have been scientifically derived to implement WQOs that protect beneficial uses. Both the beneficial uses and the WQOs have been approved or established (in the case of CTR criteria) pursuant to federal law and are the applicable federal water quality standards. To the extent that toxic pollutant water quality-based effluent limitations were derived from the CTR, the CTR is the applicable standard pursuant to 40 CFR section 131.38. The scientific procedures for calculating the individual water quality-based effluent limitations for priority pollutants are based on the CTR and SIP, which was approved by USEPA on May 18, 2000. All beneficial uses and WQOs contained in the Basin Plan or statewide water quality control plans were approved under state law and submitted to and approved by USEPA prior to May 30, 2000. Any water quality objectives and beneficial uses submitted to USEPA prior to May 30, 2000, but not

approved by USEPA before that date, are nonetheless "applicable water quality standards for purposes of the CWA" pursuant to 40 CFR section 131.21(c)(1). This Order's restrictions on individual pollutants are collectively no more stringent than required to implement the requirements of the CWA and the applicable water quality standards for purposes of the CWA.

Table F-9. Summary of Final Effluent Limitations for Discharge Points 001, 001A and 001B

Parameter	Unit	AMEL	AWEL	MDEL	Basis	Note
Ammonia (as N, ELS Absent, October 1 - March 31)	mg/L	3.5	--	6.8	Basin Plan	h
Ammonia (as N, ELS Absent, October 1 - March 31)	lbs/day	429	--	839	Basin Plan	a & h
Ammonia (as N, ELS Present, April 1 - September 30)	mg/L	4.0	--	6.0	Existing/ Basin Plan	h
Ammonia (as N, ELS Present, April 1 - September 30)	lbs/day	494	--	741	Existing/ Basin Plan	a & h
Ammonia (as N, ELS Absent, year-round)	mg/L	3.4	--	8.0	Basin Plan	g
Ammonia (as N, ELS Absent, year-round)	lbs/day	421	--	987	Basin Plan	a & g
Chlorine, Total Residual	mg/L	--	--	0.1	Existing/ Basin Plan	--
Chlorine, Total Residual	lbs/day	--	--	12	Existing/ Basin Plan	a
Total Coliform	MPN or CFU/100 mL	2.3	2.2	240	Existing/ Title 22	i
Turbidity	NTU	--	--	--	Existing/ Title 22	j
pH	standard unit	--	--	--	Existing/ Basin Plan	k
Temperature	°F	--	--	80	Basin Plan	b

Parameter	Unit	AMEL	AWEL	MDEL	Basis	Note
TDS	mg/L	750	--	--	Existing/ Basin Plan	h
TDS	lbs/day	92,574	--	--	Existing/ Basin Plan	a & h
Sulfate	mg/L	300	--	--	Existing/ Basin Plan	h
Sulfate	lbs/day	37,030	--	--	Existing/ Basin Plan	a & h
Chloride	mg/L	180	--	--	Existing/ Basin Plan	h
Chloride	lbs/day	22,218	--	--	Existing/ Basin Plan	a & h
Boron	mg/L	1.0	--	--	Existing/ Basin Plan	h
Boron	lbs/day	123	--	--	Existing/ Basin Plan	a & h
Nitrate + Nitrite (as N)	mg/L	8	--	--	Existing/ Basin Plan	h
Nitrate + Nitrite (as N)	lbs/day	987	--	--	Existing/ Basin Plan	a & h
Nitrate + Nitrite (as N)	mg/L	10	--	--	Basin Plan	g
Nitrate + Nitrite (as N)	lbs/day	1,200	--	--	Basin Plan	a & g
Nitrite (as N)	mg/L	1	--	--	Basin Plan	g
Nitrite (as N)	mg/L	1.0	--	--	Existing/ Basin Plan	h
Nitrite (as N)	lbs/day	123	--	--	Existing/ Basin Plan	a
Copper	µg/L	8.3	--	27	SIP/CTR	h & l
Copper	lbs/day	1.0	--	3.4	SIP/CTR	a, h, & l
Copper (Dry Weather)	µg/L	--	--	18	Existing/ TMDL	c, g, & l

Parameter	Unit	AMEL	AWEL	MDEL	Basis	Note
Lead	µg/L	3.6	--	12	SIP/CTR	g & l
Lead	lbs/day	0.44	--	1.5	SIP/CTR	a, g, & l
Lead (Dry Weather)	µg/L	3.6	--	12	SIP/CTR	c, h, & l
Lead (Dry Weather)	lbs/day	0.44	--	1.5	SIP/CTR	a, c, h, & l
Lead (Wet Weather)	µg/L	--	--	166	Existing/ TMDL	d, h, & l
Mercury	µg/L	0.012	--	--	Mercury Provisions	l
Mercury	lbs/day	0.0015	--	--	Mercury Provisions	a & l
Selenium	µg/L	2.7	--	8.4	SIP/CTR	l
Selenium	lbs/day	0.33	--	1.0	SIP/CTR	a & l
Thallium	µg/L	6.3	--	20	SIP/CTR	l
Thallium	lbs/day	0.78	--	2.5	SIP/CTR	a & l
Cyanide	µg/L	4.1	--	9.1	SIP/CTR	--
Cyanide	lbs/day	0.5	--	1.1	SIP/CTR	a
Combined Radium-226 and Radium-228	pCi/L	5	--	--	Existing/ Title 22	f & h
Gross Alpha particle activity (excluding radon and uranium)	pCi/L	15	--	--	Existing/ Title 22	f & h
Gross Beta/photon emitters	millirem/ year	4	--	--	Existing/ Title 22	f & h
Strontium-90	pCi/L	8	--	--	Existing/ Title 22	f & h
Tritium	pCi/L	20000	--	--	Existing/ Title 22	f & h
Uranium	pCi/L	20	--	--	Existing/ Title 22	f & h

Parameter	Unit	AMEL	AWEL	MDEL	Basis	Note
2,3,7,8-TCDD	pg/L	0.014	--	0.028	Existing/ 303(d) list	--
2,3,7,8-TCDD	lbs/day	$1.7x10^{-9}$	--	$3.5x10^{-9}$	Existing/ 303(d) list	a
Chronic Toxicity *Pimephales promelas* Survival and growth Endpoints	Pass or Fail (TST), % Effect	Pass	--	Pass (TST) or % Effect < 50 (survival endpoint)	Existing	e

Footnotes for Table F-9

a. The mass-based effluent limitations are based on the plant design flow rate of 14.8 MGD and are calculated as follows: Flow (MGD) x Concentration (mg/L) x 8.34 (conversion factor) = lbs/day or Flow (MGD) x Concentration (µg/L) x 0.00834 (conversion factor) = lbs/day.

b. An interim effluent limitation for temperature is included in section 4.1.2 of this Order for the duration of the compliance schedule.

c. Dry weather effluent limitations apply when the maximum daily flow measured at the San Gabriel River, United States Geological Survey gauging station 11087020 is less than 260 cfs.

d. Wet-weather effluent limitations apply when the maximum daily flow measured at the San Gabriel River, United States Geological Survey gauging station 11087020 is equal to or greater than 260 cfs.

e. A numeric WQBEL is established because effluent data showed that there was reasonable potential for the effluent to cause or contribute to an exceedance of the chronic toxicity water quality objective. The chronic toxicity final effluent limitations implement the Basin Plan narrative water quality objectives for toxicity. These final effluent limitations are based on the *State Policy for Water Quality Control: Toxicity Provisions* (Toxicity Provisions).

f. The radioactivity final effluent limitations are derived from 22 CCR § 64442 and § 64443. The incorporation by reference is prospective including future changes to the incorporated provisions as changes take effect.

g. Apply to Discharge Point 001 only.

h. Apply to Discharge Points 001A and 001B only.

i. The waste or advanced treated recycled water discharged to water courses shall at all times be adequately disinfected. For the purpose of this requirement, the wastes or advanced treated recycled water shall be considered adequately disinfected if: (1) the median number of total coliform bacteria in the disinfected effluent does not exceed a 7-day median of 2.2 MPN or CFU per 100 mL utilizing the bacteriological results of

the last seven (7) days for which an analysis has been completed, (2) the number of total coliform bacteria does not exceed 23 MPN or CFU per 100 mL in more than one sample within any 30-day period, and (3) no sample shall exceed 240 MPN or CFU of total coliform bacteria per 100 mL. Samples shall be collected at a time when flow and characteristics are most demanding on treatment facilities and disinfection processes.

j. For the protection of the water contact recreation beneficial use and human health, the effluent discharged from the ARC-AWTF to water courses shall have received adequate treatment, per California Code of Regulations, title 22, sections 60301.320(b) and 60320.108(b), so that the turbidity of the treated effluent does not exceed any of the following: (a) 0.2 NTUs more than 5 percent of the time (72 minutes) within a 24-hour period; and (b) 0.5 NTU at any time.

k. The effluent values for pH shall be maintained within the limits of 6.5 standard units and 8.5 standard units.

l. Expressed as total recoverable.

End of Footnotes for Table F-9

4.5. Interim Effluent Limitations

The ARC-AWTF is subject to a compliance schedule for the temperature 80°F final effluent limitation, as described further in section 6.3.7 of this Fact Sheet. Since that compliance schedule exceeds one year, the Order includes an 86°F interim effluent limitation for temperature, except as a result of external ambient or influent temperature.

4.6. Land Discharge Specifications- Not Applicable

4.7. Recycling Specifications

The ARC-AWTF generates approximately 7.8 MGD (3-year average from 2019 through 2021) of advanced treated recycled water. Of that effluent, about 1.5 MGD (approximately 19%) is discharged to the San Gabriel River, and about 6.3 MGD (approximately 81%) is used for groundwater recharge at MFSG. These potable recycled water applications are regulated by water recycling requirements in Order Number R4-2018-0129 that was adopted by this Los Angeles Water Board on September 13, 2018.

Under this Order, the Permittee shall continue to investigate the feasibility of recycling, conservation, and/or alternative disposal methods for wastewater, and/or beneficial use of stormwater and dry-weather urban runoff. The Permittee shall submit a feasibility investigation as part of the submittal of the ROWD for the next Order renewal.

5. RATIONALE FOR RECEIVING WATER LIMITATIONS

5.1. Surface Water

Receiving water limitations are based on WQOs contained in the Basin Plan and applicable statewide water quality control plans and are a required part of this Order.

6. RATIONALE FOR PROVISIONS

6.1. Standard Provisions

Standard Provisions, which apply to all NPDES permits in accordance with 40 CFR section 122.41, and additional conditions applicable to specified categories of permits in accordance with 40 CFR section 122.42, are provided in Attachment D. The Permittee must comply with all standard provisions and with those additional conditions that are applicable under section 122.42.

40 CFR sections 122.41(a)(1) and (b) through (n) establish conditions that apply to all state-issued NPDES permits. These conditions must be incorporated into the permits either expressly or by reference. If incorporated by reference, a specific citation to the regulations must be included in the Order. Section 123.25(a)(12) of 40 CFR allows the state to omit or modify conditions to impose more stringent requirements. In accordance with 40 CFR section 123.25, this Order omits federal conditions that address enforcement authority specified in 40 CFR section 122.41(j)(5) and (k)(2) because the enforcement authority under the Water Code is more stringent. In lieu of these conditions, this Order incorporates by reference Water Code section 13387(e).

6.2. Special Provisions

6.2.1. Reopener Provisions

These provisions are based on 40 CFR part 123. The Los Angeles Water Board may reopen the Order to modify Order conditions and requirements. Causes for modifications include the promulgation of new regulations, modification in sludge use or disposal practices, new information based on the results of special studies conducted as required by this Order, or adoption of new regulations by the State Water Board or Los Angeles Water Board, including revisions to the Basin Plan.

6.2.2. Special Studies and Additional Monitoring Requirements

a. Antidegradation Analysis and Engineering Report for Any Proposed Plant Expansion. This provision is based on the State Water Board Resolution Number 68-16, which requires the Los Angeles Water Board in regulating the discharge of waste to maintain high quality waters of the state. The Discharger must demonstrate that it has implemented adequate controls (e.g., adequate treatment capacity) to ensure that high quality waters will be maintained. If the Discharger

increases the plant's capacity, this provision requires the Discharger to clarify that it has increased plant capacity through the addition of new treatment system(s) to obtain revised effluent limitations for the discharge from the treatment system(s). This provision requires the Discharger to report specific time schedules for the plant's projects being implemented to increase the plant's capacity. This provision requires the Discharger to submit a report to the Los Angeles Water Board including the information included in this section for approval.

b. Operations Plan for Proposed Expansion. This provision is based on section 13385(j)(1)(D) of the Water Code and allows a time period not to exceed 90 days in which the Discharger may adjust and test the treatment system(s). This provision requires the Permittee to submit an Operations Plan describing the actions the Discharger will take during the period of adjusting and testing to prevent violations.

c. Treatment Plant Capacity – Not Applicable

d. UF Filtrate Special Study. The effluent discharged to the San Gabriel River may contain UF filtrate that is not required to be monitored in this Order. To confirm the UF filtrate flow that is returned to the equalization basin does not impact the Discharger's compliance with the effluent limitations in this Order, the Discharger shall submit a UF Filtrate Special Study Work Plan for Executive Officer approval within 12 months following the effective date of this Order. The special study shall include results of two sets monitoring of the secondary UF filtrate regarding the chemicals added upstream of the secondary UF, as well as analysis of the impacts of these chemicals on the quality of the final discharge of ARC-AWTF.

6.2.3. Best Management Practices and Pollution Prevention

Pollutant Minimization Program (PMP). This provision is based on the requirements of section 2.4.5 of the SIP.

6.2.4. Construction, Operation, and Maintenance Specifications

The requirements in section 6.3.4 (wastewater treatment operator certification; climate change plan; back-up power source and maintenance and testing of emergency equipment) are based on the requirements of 40 CFR section 122.41(e) (proper operation and maintenance) and the previous Order. 40 CFR section 122.41(e) also requires the operation of back-up or auxiliary facilities or similar systems when the operation is necessary to achieve compliance with the conditions of the Order. For proper and effective operation of such facilities or systems, routine maintenance and operational testing of emergency infrastructure/equipment is necessary. Major spills can cause harm to residents of the Los Angeles Region, such as the closure of beaches, and harm to wildlife and benthic life. The impact of any such incident to the

receiving waters can be minimized or prevented if the operation of emergency infrastructure occurs unimpeded by operational challenges and in a timely fashion. Thus, this Order contains requirements for routine maintenance and operational testing of emergency infrastructure/equipment in section 6.3.4.c.

6.2.5. Special Provisions for Municipal Facilities – Not Applicable

6.2.6. Other Special Provisions – Not Applicable

6.2.7. Compliance Schedule

In general, an NPDES permit must include final effluent limitations that are consistent with CWA section 301 and with 40 CFR section 122.44(d). There are exceptions to this general rule. State Water Board adopted the *Policy for Compliance Schedules in National Pollutant Discharge Elimination System Permits* (Resolution No. 2008-0025), which governs compliance schedules in NPDES permits (hereafter "Compliance Schedule Policy"). The Compliance Schedule Policy authorizes compliance schedules for permits issued to existing dischargers when a permit limitation more stringent than the one previously imposed is based on new, revised, or newly interpreted WQOs or criteria, or in accordance with a TMDL.

All compliance schedules must be as short as possible and may not exceed 10 years from the effective date of the adoption, revision, or new interpretation of the applicable WQO or criterion, unless a TMDL allows a longer schedule. Where a compliance schedule for a final effluent limitation exceeds one year, the Order must include interim numeric effluent limitations for that constituent or parameter, interim requirements and dates toward achieving compliance, and compliance reporting within 14 days after each interim date. The Order may also include interim requirements to control the pollutant, such as pollutant minimization and source control measures.

In accordance with the Compliance Schedule Policy and 40 CFR section 122.47, a Discharger who seeks a compliance schedule must demonstrate additional time is necessary to implement actions to comply with the more stringent permit limitation. The Discharger must provide the following documentation as part of the application requirements:

a. Diligent efforts have been made to quantify pollutant levels in the discharge and the sources of the pollutant in the waste stream, and the results of those efforts;

b. Source control efforts are currently underway or completed, including compliance with any pollution prevention programs that have established;

c. A proposed schedule for additional source control measures or waste treatment;

d. Data demonstrating current treatment facility performance to compare against existing Order effluent limits, as necessary to determine which is the more stringent interim, Order effluent limit to apply if a schedule of compliance is granted;

e. The highest discharge quality that can reasonably be achieved until final compliance is attained;

f. The proposed compliance schedule is as short as possible, given the type of facilities being constructed or programs being implemented, and industry experience with the time typically required to construct similar facilities or implement similar programs; and

g. Additional information and analyses to be determined by the Los Angeles Water Board on a case-by-case basis.

The Order limitations for temperature in effluent and receiving surface waters are more stringent than the limitations previously implemented. The new limitations are based on a new interpretation of the temperature WQO established in the Basin Plan. The Discharger has complied with the application requirements in paragraph 4 of the Compliance Schedule Policy. Based on information submitted with the Report of Waste Discharge, self-monitoring reports, infeasibility analysis, and other additional submittals, it has been demonstrated to the satisfaction of the Los Angeles Water Board that the Discharger needs time to implement actions to comply with the new effluent and receiving water limitations for temperature and has complied with the relevant governing authorities concerning compliance schedules. Therefore, this Order includes the compliance schedule specified in Table 7 of Order section 6.3.7, to require the Discharger to develop and carry out a technical work plan that will bring the Discharger into compliance with the new effluent and receiving water limitations for temperature.

7. RATIONALE FOR MONITORING AND REPORTING REQUIREMENTS

CWA section 308 and 40 CFR sections 122.41(h), (j)-(l), 122.44(i), and 122.48 require that all NPDES permits specify monitoring and reporting requirements. Water Code section 13383 also authorizes the Los Angeles Water Board to establish monitoring, reporting, and recordkeeping requirements. The MRP of this Order establishes monitoring, reporting, and recordkeeping requirements that implement federal and state requirements. The following provides the rationale for the monitoring and reporting requirements contained in the MRP for this Facility.

7.1. Influent Monitoring

Influent monitoring is required:

- To determine compliance with the Order conditions for $BOD_5$20°C and suspended solids removal rates.
- To assess treatment plant performance.
- To assess the effectiveness of the Pretreatment Program.
- As a requirement of the PMP.

7.2. Effluent Monitoring

The Discharger is required to conduct monitoring of the permitted discharges in order to evaluate compliance with Order conditions. Monitoring requirements are given in the MRP Attachment E. This provision requires compliance with the MRP, and is based on 40 CFR sections 122.44(i), 122.62, 122.63, and 124.5. The MRP is a standard requirement in almost all NPDES permits (including this Order) issued by the Los Angeles Water Board. In addition to defining terms in the permit, the MRP specifies general sampling/analytical protocols and the requirements of reporting spills, violation, and routine monitoring data in accordance with NPDES regulations, the Water Code, and Los Angeles Water Board policies. The MRP also contains a sampling program specific for the Permittee's wastewater treatment plant. It identifies the sampling stations and frequency of sampling, pollutants to be monitored, and additional reporting requirements. Pollutants to be monitored include all pollutants for which effluent limitations are specified. Further, in accordance with section 1.3 of the SIP, periodic monitoring is required for all priority pollutants defined by the CTR, for which criteria apply and for which no effluent limitations have been established, to evaluate reasonable potential to cause or contribute to an excursion above a water quality standard.

Monitoring for those pollutants expected to be present in the discharge from the Facility, is required as set forth in the MRP and as required in the SIP.

The proposed monitoring requirements for PFAS compounds are consistent with USEPA's PFAS Action Plan (dated June 15, 2022), PFAS Strategic Roadmap (October 2021) (https://www.epa.gov/system/files/documents/2021-10/pfas-roadmap_final-508.pdf) that describe that USEPA's goals of reducing PFAS discharges to waterways, and USEPA's memo dated December 5, 2022 (https://www.epa.gov/system/files/documents/2022-12/NPDES_PFAS_State%20Memo_December_2022.pdf) updating guidance for addressing PFAS discharges in NPDES permits and/or in pretreatment programs.

Accelerated chronic toxicity monitoring, which served as an indicator of persistent toxicity in the prior Order, is not included in this Order. This allows the Discharger to initiate a TRE sooner than was possible in the 2017 Order. On occasions when the toxicity was intermittent, the accelerated monitoring step delayed the initiation of the TRE, such that when the TRE was initiated, the effluent no longer exhibited toxicity, and subsequently, the cause of toxicity could

not be identified. In this Order, a TRE will be initiated following two consecutive chronic toxicity exceedances.

Table F-10. Monitoring Frequency Comparison

Parameter	Minimum Sampling Frequency (2017 Order)	Minimum Sampling Frequency (2022 Order)
Total flow	continuous	continuous
Turbidity	continuous	continuous
Total residual chlorine	continuous	continuous
Total residual chlorine (grab)	daily	daily
Total coliform	daily	daily
E. coli	weekly	monthly
Temperature	weekly	weekly
pH	weekly	weekly
Settleable Solids	quarterly	semiannually
TSS	quarterly	semiannually
$BOD_5 20^oC$	quarterly	semiannually
Oil and Grease (O&G)	semiannually	semiannually
DO	monthly	quarterly
TDS	monthly	quarterly
Sulfate	monthly	quarterly
Chloride	monthly	quarterly
Boron	monthly	quarterly
Ammonia (as N)	monthly	quarterly
Nitrite (as N)	monthly	quarterly
Nitrate (as N)	monthly	quarterly
Nitrate + nitrite (as N)	--	quarterly
Organic nitrogen	monthly	quarterly
Total Kjeldahl Nitrogen (TKN)	monthly	quarterly

Parameter	Minimum Sampling Frequency (2017 Order)	Minimum Sampling Frequency (2022 Order)
Total nitrogen	monthly	quarterly
Total phosphorus	monthly	quarterly
Orthophosphate (as P)	monthly	quarterly
Surfactants [methylene blue active substances (MBAS)]	quarterly	semiannually
Surfactants [cobalt thiocyanate active substances (CTAS)]	quarterly	semiannually
Total hardness ($CaCO_3$)	monthly	semiannually
Chronic toxicity *Pimephales promelas* Survival and Growth endpoints	monthly	monthly
Radioactivity (Including gross alpha, gross beta, combined radium-226 and radium- 228, tritium, strontium-90 and uranium)	semiannually	semiannually
Copper	monthly	monthly
Lead	monthly	monthly
Cyanide	semiannually	monthly
Antimony	semiannually	semiannually
Arsenic	semiannually	semiannually
Beryllium	semiannually	semiannually
Cadmium	semiannually	semiannually
Total Chromium	semiannually	semiannually
Chromium III	semiannually	semiannually
Chromium VI	semiannually	semiannually
Mercury	semiannually	monthly
Nickel	semiannually	semiannually
Selenium	semiannually	monthly

Parameter	Minimum Sampling Frequency (2017 Order)	Minimum Sampling Frequency (2022 Order)
Silver	semiannually	semiannually
Thallium	semiannually	monthly
Zinc	semiannually	semiannually
2,3,7,8-TCDD	semiannually	--
TCDD equivalents	--	semiannually
Perchlorate	annually	annually
1,4-Dioxane	annually	annually
1,2,3-Trichloropropane	annually	annually
Methyl tert-butyl ether (MTBE)	annually	removed
Iron	semiannually	annually
Fluoride	semiannually	annually
Chlorpyrifos	annually	removed
Diazinon	annually	removed
Total trihalomethanes	semiannually	semiannually
Polychlorinated biphenyls (PCBs) as aroclors	annually	annually
PCBs as congeners	annually	annually
PFAS	---	quarterly
Remaining priority pollutants excluding asbestos and PCBs	semiannually	semiannually

This Order has maintained the same monitoring frequency for most constituents except a few pollutants. Monitoring frequencies of cyanide, mercury, selenium, and thallium were increased from semiannually to monthly because these pollutants have reasonable potential to cause or contribute to an excursion above a water quality standard. Monitoring of 2,3,7,8-TCDD, was replaced by semiannual monitoring of TCDD equivalents per chapter 3 of SIP. A monitoring requirement was added for nitrate+nitrite since there is an effluent limitation included in this Order. The new quarterly PFAS monitoring requirement is

consistent with USEPA's PFAS Action Plan. The following monitoring reductions and the rationale for each is described below:

E. coli

E. coli monitoring was reduced from weekly to monthly since the water quality objectives for indicator bacteria is being determined through total coliform effluent limitations.

$BOD_5$20°C, CTAS, MBAS, TSS, and settleable solids

Considering the type of facility and that the narrative water quality objectives for $BOD_5$20°C, CTAS, MBAS, TSS, and settleable solids have been met, effluent monitoring for these parameters has been reduced from quarterly to semiannually.

Dissolved oxygen, salts, and nutrients

Considering the type of facility and that the water quality objectives for dissolved oxygen, salts, and nutrients have been met, the effluent monitoring for these parameters has been reduced from monthly to quarterly.

Fluoride and Iron

The effluent monitoring frequency for fluoride and iron was also reduced from semiannually to annually since the effluent concentrations of these pollutants were below the concentrations expected to impact beneficial uses.

MTBE

The MTBE effluent monitoring requirement was removed since MTBE has not been detected in the effluent and the discharger will continue to monitor for MTBE in the WDRs/WRRs for this facility to ensure the groundwater is being protected.

Chlorpyrifos and Diazinon

The effluent monitoring for chlorpyrifos and diazinon was removed because they were not detected in the effluent and the Discharger conducts routine toxicity monitoring to ensure toxic pollutants such as pesticides do not cause toxicity in the receiving water.

7.3. Whole Effluent Toxicity Requirements

WET testing protects the receiving water quality from the aggregate toxic effect of a mixture of pollutants in the effluent. An acute toxicity test is conducted over a short time period and measures mortality. A chronic toxicity test is conducted over a longer period of time and may measure mortality, reproduction, and growth. Chronic toxicity is a more stringent requirement than acute toxicity. A chemical at a low concentration can have chronic effects but no acute effects until the concentration increases. For this Order, chronic toxicity in the discharge is evaluated using USEPA's 2010 TST hypothesis testing statistical approach, and is expressed as "Pass" or "Fail" for the median monthly summary results and

"Pass" or "Fail" and "Percent Effect" for each individual chronic toxicity result. The chronic toxicity effluent limitations implement the statewide water quality objective for aquatic toxicity in the Toxicity Provisions and the Basin Plan narrative water quality objective for chronic toxicity. Further rationale for WET is included in section 4.3.6 of this Fact Sheet.

7.4. Receiving Water Monitoring

7.4.1. Surface Water

Receiving water monitoring is required to determine compliance with receiving water limitations and to characterize the water quality of the receiving water.

7.4.2. Groundwater – Not Applicable

7.5. Other Monitoring Requirements

7.5.1. Watershed Monitoring and Bioassessment Monitoring

The goals of the Watershed-wide Monitoring Program including the bioassessment monitoring for the San Gabriel River Watershed are to:

a. Determine compliance with receiving water limits.

b. Evaluate progress in achieving numeric targets and waste load allocations in the San Gabriel River and Tributaries TMDLs.

c. Monitor trends in surface water quality.

d. Ensure protection of beneficial uses.

e. Provide data for modeling contaminants of concern.

f. Characterize water quality including seasonal variation of surface waters within the watershed.

g. Assess the health of the biological community.

h. Determine mixing dynamics of effluent and receiving waters

7.5.2. Discharge Monitoring Report-Quality Assurance (DMR-QA) Study Program

Under the authority of section 308 of the CWA (33 U.S.C. § 1318), USEPA requires major and selected minor NPDES dischargers to participate in the annual DMR-QA Study Program. The DMR-QA Study evaluates the analytical ability of laboratories that routinely perform or support self-monitoring analyses required by NPDES permits. There are two options to satisfy the requirements of the DMR-QA Study Program: (1) The Discharger can obtain and analyze a DMR-QA sample as part of the DMR-QA Study; or (2) Per the waiver issued by USEPA to the State Water Board, the Discharger can submit the results of the most recent Water Pollution Performance Evaluation Study from its own laboratories or its

contract laboratories. A Water Pollution Performance Evaluation Study is similar to the DMR-QA Study. Thus, a Water Pollution Performance Evaluation Study also evaluates a laboratory's ability to analyze wastewater samples to produce quality data that ensure the integrity of the NPDES Program. The Discharger shall ensure that the results of the DMR-QA Study or the results of the most recent Water Pollution Performance Evaluation Study are submitted annually to the State Water Board. The State Water Board's Quality Assurance Program Officer will send the DMR-QA Study results or the results of the most recent Water Pollution Performance Evaluation Study to USEPA's DMR-QA Coordinator and Quality Assurance Manager.

8. CONSIDERATION OF WATER CODE SECTION 13241 FACTORS

Provision 4.3 of the Order implements state law. Because this provision is not required or authorized under the federal CWA, violations of the provision is not subject to the enforcement remedies that are available for NPDES violations. As required by Water Code section 13263, the Los Angeles Water Board has considered the factors listed in Water Code section 13241, including the need to prevent nuisance, in establishing the Provision 4.3. The Los Angeles Water Board finds, on balance, that the state law requirement in this Order is reasonably necessary to prevent nuisance and to protect beneficial uses identified in the Basin Plan, and the remaining section 13241 factors are not sufficient to justify failing to protect those beneficial uses.

8.1. Need to prevent pollution or nuisance: In establishing effluent limitations in this Order, the Los Angeles Water Board has considered state law requirements to prevent pollution or nuisance as defined in section 13050, subdivisions (l) and (m), of the Water Code. The only requirement in this Order that is based on state law is an investigation of the feasibility of recycling, conservation, an/or alternative disposal methods for wastewater (such as groundwater injection), and/or capture and treatment of dry-weather urban runoff and stormwater on a permissive basis for the beneficial reuse. This investigation will allow the Los Angeles Water Board to determine if and how to prevent pollution and nuisance from any recycling or conservation program that might be implemented in the future.

8.2. Past, present, and probable future beneficial uses of water: Chapter 2 of the Basin Plan identifies designated beneficial uses for water bodies in the Los Angeles Region. Beneficial uses of water relevant to this Order are also identified above in Fact Sheet section 3.3.1. The Los Angeles Water Board has taken the beneficial uses of relevant waterbodies into account in establishing the requirements in the Order, including the requirement set forth in section 4.3. The feasibility investigation will not affect the past or present beneficial uses of water, but it could affect the future beneficial uses of water. Should the Discharger be required to implement actions based on the feasibility investigation, any recycled water that may be produced will have to meet all legal requirements, including

those set forth in title 22 of the California Code of Regulations, to protect future beneficial uses. The requirements herein are protective of the past, present and probable future beneficial uses of water.

8.3. Environmental characteristics of the hydrographic unit under consideration, including the quality of water available thereto: The environmental characteristics of this watershed are discussed in Chapter 3 of the Basin Plan, as well as available in State of the Watershed reports and the State's CWA Section 303(d) List of impaired waters. The environmental characteristics of the hydrographic unit, including the quality of available recycled water that may be produced as a result of the feasibility investigation, will be improved by compliance with the requirements of this Order. Additional information on the Los Angeles River Watershed is available at https://www.waterboards.ca.gov/losangeles/water_issues/programs/regional_program/Water_Quality_and_Watersheds/ws_losangeles.shtml.

8.4. Water quality conditions that could reasonably be achieved through the coordinated control of all factors which affect water quality in the area: The water quality standards necessary to protect beneficial uses of the waterbodies in the Los Angeles River Watershed can reasonably be achieved through the coordinated control of all factors that affect water quality in the area, including the conservation of water and/or the production of recycled water contemplated in the feasibility investigation. For example, the water quality in the watershed could be improved through the addition of recycled water which meets title 22 standards. The Los Angeles Water Board has taken this factor into account in establishing effluent limitations in the Order.

8.5. Economic considerations: The Permittee did not present any evidence regarding economic considerations related to this Order. However, the Los Angeles Water Board has considered the economic impact of requiring Provision 4.3 pursuant to state law, and in conjunction with the applicable TMDLs incorporated into the Order. The only cost here would be the cost of the feasibility investigation. Any additional costs associated with the feasibility investigation is reasonably necessary to prevent nuisance and protect beneficial uses identified in the Basin Plan, and to increase water supply. The failure to consider the feasibility of conservation or increased recycling could potentially result in the loss of, or impacts to, beneficial uses, and any such loss or impact would have a detrimental economic impact, particularly given the effects on beneficial uses and supplies of water from drought and climate change. Economic considerations related to costs of compliance are therefore not sufficient, in the Los Angeles Water Board's determination, to justify failing to prevent nuisance and protect beneficial uses.

8.6. Need for developing housing within the region: The Los Angeles Water Board does not anticipate that these state law requirements will adversely impact the need for housing in the area. The region generally relies on imported water to meet many of its water resource needs. Imported water makes up a vast majority

of the region's water supply, with local groundwater, local surface water, and reclaimed water making up the remaining amount. This Order helps address the need for housing by controlling pollutants in discharges, which will improve the quality of local surface and ground water, as well as water available for recycling and reuse. This in turn may reduce the demand for imported water, thereby increasing the region's capacity to support continued housing development. A reliable water supply for future housing development is required by law, and with less imported water available to guarantee this reliability, an increase in local supply is necessary. Therefore, the potential for developing housing in the area will be facilitated by the conservation of water, or reuse or the production of, recycled water that may result from the feasibility investigation.

8.7. Need to develop and use recycled water: The State Water Board's Recycled Water Policy requires the Los Angeles Water Boards to encourage the use of recycled water. In addition, as discussed immediately above, a need to develop and use recycled water exists within the region, especially during times of drought. To encourage recycling, Provision 4.3 of the Order requires the Permittee to continue to explore the feasibility of recycling to maximize the beneficial reuse of advanced treated recycled water and to report on its recycled water production and use. The Discharger shall submit an update to this feasibility investigation as part of the submittal of the ROWD for the next Order renewal.

9. PUBLIC PARTICIPATION

The Los Angeles Water Board has considered the issuance of WDRs that will serve as an NPDES permit for ARC-AWTF. As a step in the WDR adoption process, the Los Angeles Water Board staff has developed tentative WDRs and has encouraged public participation in the WDR adoption process.

9.1. Notification of Interested Persons

The Los Angeles Water Board notified the Permittee and interested agencies and persons of its intent to prescribe WDRs for the discharge and provided an opportunity to submit written comments and recommendations, and the public notice, the fact sheet and the draft order were posted on the Los Angeles Water Board's home page at https://www.waterboards.ca.gov/losangeles/ under the "Tentative Permits" heading. Permittee notification was provided by xxx. In addition, interested agencies and persons were notified through a transmittal email to the Discharger, being included in the email transaction, of the Los Angeles Water Board's intention to prescribe WDRs for the discharge.

The public had access to the agenda and any changes in dates and locations through the Los Angeles Water Board's website at: http://www.waterboards.ca.gov/losangeles/.

9.2. Written Comments

Interested persons were invited to submit written comments concerning tentative amended WDRs as provided through the notification process. Comments were due either in person or by mail to the Executive Office at the Los Angeles Water Board at the address above on the cover page of this Order, or by email submitted to Xiaofei.Cui@waterboards.ca.gov.

To be fully responded to by staff and considered by the Los Angeles Water Board, the written comments were due at the Los Angeles Water Board office by 5:00 p.m. on September 10, 2023.

9.3. Public Hearing

The Los Angeles Water Board held a public hearing on the tentative WDRs during its regular Board meeting on the following date and time and at the following location:

Date: October 19, 2023
Time: 9:00 a.m.
Location: 320 W. 4th Street, Carmel Room
Los Angeles, California 90013

A virtual platform was also available for those who want to join online, and directions were provided in the agenda to register or to view the Board meeting.

Additional information about the location of the hearing and options for participating were available 10 days before the hearing. Any person desiring to receive future notices about any proposed Board action regarding this Discharger, please contact Xiaofei Cui at Xiaofei.Cui@waterboards.ca.gov, to be included on the e-mail list. Interested persons were invited to attend. At the public hearing, the Los Angeles Water Board heard testimony pertinent to the discharge, WDRs, and permit. For accuracy of the record, important testimony was requested in writing.

9.4. Review of Waste Discharge Requirements

Any person aggrieved by this action of the Los Angeles Water Board may petition the State Water Board to review the action in accordance with Water Code section 13320 and California Code of Regulations, title 23, sections 2050 and following. The State Water Board must receive the petition by 5:00 p.m., within 30 calendar days of the date of adoption of this Order at the following address, except that if the thirtieth day following the date of this Order falls on a Saturday, Sunday, or state holiday, the petition must be received by the State Water Board by 5:00 p.m. on the next business day:

State Water Resources Control Board
Office of Chief Counsel
P.O. Box 100, 1001 I Street
Sacramento, CA 95812-0100
Or by email at waterqualitypetitions@waterboards.ca.gov

For instructions on how to file a petition for review, http://www.waterboards.ca.gov/public_notices/petitions/water_quality/wqpetition_instr.shtml

9.5. Information and Copying

The ROWD, other supporting documents, and comments received are on file and may be inspected at the address above by appointment between 8:30 a.m. and 4:45 p.m., Monday through Friday. Copying of documents may be arranged through the Los Angeles Water Board at the address below or by calling (213) 576-6600.

Los Angeles Regional Water Quality Control Board
320 W. 4th Street, Suite 200
Los Angeles, CA 90013-2343

9.6. Register of Interested Persons

Any person interested in being placed on the email list for information regarding the WDRs and NPDES permit should contact the Los Angeles Water Board, reference this facility, and provide a name, address, and email address.

9.7. Additional Information

Requests for additional information or questions regarding this order should be directed to Xiaofei Cui at (213) 576-6696 or via email at Xiaofei.Cui@waterboards.gov.ca.

ATTACHMENT G – TOXICITY REDUCTION EVALUATION (TRE) WORK PLAN

1. Gather and Review Information and Data
   1.1. Facility Operations and Performance
   1.2. Facility Influent and Pretreatment Program
   1.3. Effluent Data, including Toxicity Results
2. Evaluate Facility Performance
3. Conduct Toxicity Identification Evaluation (TIE)
4. Evaluate Sources and In-Plant Controls
5. Implement Toxicity Control Measures
6. Conduct Confirmatory Toxicity Testing