

**CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
SAN DIEGO REGION**

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**ORDER NO. R9-2023-0011
NPDES NO. CA0109282**

**Waste Discharge Requirements
For Southern California Edison Company,
Discharge to the Pacific Ocean Related to the Decommissioning of San Onofre
Nuclear Generating Station, San Diego County**

The following Discharger is subject to waste discharge requirements (WDRs) set forth in this Order:

Discharger Southern California Edison Company
Name of Facility San Onofre Nuclear Generating Station
Facility Address 5000 Pacific Coast Highway, San Clemente, CA 92672

Table 1. Discharge Location

Discharge Point	Effluent Description	Discharge Point Latitude (North)	Discharge Point Longitude (West)	Receiving Water
002	Ocean water, treated domestic wastewater, and other low-volume waste stream	33° 20' 55.8" N	117° 34' 13.5" W	Pacific Ocean
001-A	NIA Sewage Treatment Plant	--	--	Internal Discharge Location
001-E	Yard Drains	--	--	Internal Discharge Location
001-F	Dewatering	--	--	Internal Discharge Location
002-D	Makeup Demineralizer (mobile)	--	--	Internal Discharge Location
002-E	Radwaste System	--	--	Internal Discharge Location
002-K	Concrete Cutting Water and/or Dust Control (mobile)	--	--	Internal Discharge Location

Discharge Point	Effluent Description	Discharge Point Latitude (North)	Discharge Point Longitude (West)	Receiving Water
002-L	Common Oil Removal System	--	--	Internal Discharge Location
002-M	Dewatering	--	--	Internal Discharge Location

This Order was adopted on: **April 12, 2023**
 This Order shall become effective on: **June 1, 2023**
 This Order shall expire on: **May 31, 2028**

The Discharger shall file a Report of Waste Discharge (ROWD) as an application for reissuance of WDRs in accordance with title 23 of the California Code of Regulations, and an application for reissuance of a National Pollutant Discharge Elimination System (NPDES) permit no later than 180 days prior to the Order expiration date. The United States Environmental Protection Agency (USEPA) and the California Regional Water Quality Control Board, San Diego Region (San Diego Water Board) have classified this discharge as follows: **Major**.

I, David W. Gibson, Executive Officer, do hereby certify that this Order with all attachments is a full, true, and correct copy of the Order adopted by the San Diego Water Board on the date indicated above.

David W. Gibson, Executive Officer

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1. Facility Information

Information describing the San Onofre Nuclear Generating Station (SONGS or Facility) is summarized on page 1 and in sections 1 and 2 of the Fact Sheet (Attachment F). Section 1 of the Fact Sheet also includes information regarding the Discharger's permit application.

2. Findings

The San Diego Water Board finds:

- 2.1. **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 USEPA and chapter 5.5, division 7 of the Water Code (commencing with section 13370). This Order shall serve as an NPDES permit authorizing the Discharger to discharge into waters of the United States at the discharge location described in Table 1 subject to the WDRs in this Order.
- 2.2. **Background and Rationale for Requirements.** The San Diego 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 State Law.** The provisions/requirements in subsections 4.3, 4.4, and 5.2 are included to implement State of California (State) law only. These provisions/requirements 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. **Executive Officer Delegation of Authority.** The San Diego Water Board by prior resolution has delegated all matters that may legally be delegated to its Executive Officer to act on its behalf pursuant to Water Code section 13223. Therefore, the Executive Officer is authorized to act on the San Diego Water Board's behalf on any matter within this Order unless such delegation is unlawful under Water Code section 13223, or this Order explicitly states otherwise.
- 2.5. **Notification of Interested Parties.** The San Diego 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 (Attachment F).
- 2.6. **Consideration of Public Comment.** The San Diego 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 (Attachment F).

THEREFORE, IT IS HEREBY ORDERED, that this Order supersedes Order No. R9-2015-0073, 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 federal CWA and regulations and guidelines adopted thereunder, the Discharger shall comply with the requirements in this Order. The Discharger is hereby authorized to discharge subject to WDRs in this Order at the discharge locations described in Table 1 to the Pacific Ocean offshore of the coast of San Diego County. This action in no way prevents the San Diego Water Board from taking enforcement action for past violations of Order No. R9-2015-0073.

3. Discharge Prohibitions

- 3.1. Discharges of waste in a manner or to a location that has not been specifically authorized by this Order and for which valid WDRs are not in force are prohibited.
- 3.2. The discharge of oil or any residuary product of petroleum to waters of the State, except in accordance with WDRs or other provisions of division 7 of the Water Code, is prohibited.
- 3.3. The discharge of polychlorinated biphenyl (PCB) compounds, such as those commonly used for transformer fluid, is prohibited.
- 3.4. The total combined discharge of wastewater through Discharge Point No. 002 in excess of 42.252 million gallons per day (MGD) is prohibited.
- 3.5. The discharge of total residual oxidants (such as free available chlorine, total residual chlorine, or bromine) is prohibited from any unit through the discharge point for more than two hours per day and not more than one unit in any plant at any one time, unless the Discharger has demonstrated to the San Diego Water Board Executive Officer's satisfaction in advance of the discharge that a discharge lasting for more than two hours is required (.e.g., for macroinvertebrate control). The duration of a chlorination cycle exceeding 25 minutes is prohibited.
- 3.6. The discharge of the North Industrial Area (NIA) Sewage Treatment Plant effluent without the ocean water from the saltwater pump intakes, at a ratio of at least 10:1, ocean water to wastewater, is prohibited.
- 3.7. The Discharger must comply with the Waste Discharge Prohibitions contained in chapter 4 of the *Water Quality Control Plan for the San Diego Basin* (Basin Plan), incorporated into this Order as if fully set forth herein and summarized in Attachment G, as a condition of this Order.
- 3.8. The Discharger must comply with the Waste Discharge Prohibitions contained in the *Water Quality Control Plan for Ocean Waters of California* (Ocean Plan), incorporated into this Order as if fully set forth herein and summarized in Attachment G, as a condition of this Order.

4. Effluent Limitations and Discharge Specifications

4.1. Effluent Limitations – Discharge Point No. 002

4.1.1. Internal Effluent Limitations

4.1.1.1. **NIA Sewage Treatment Plant Waste Stream Compliance Point (INT-001-A).** The Discharger shall maintain compliance with the following internal effluent limitations for the NIA Sewage Treatment Plant waste stream compliance point, with compliance measured at Monitoring Location INT-001-A, as described in the Monitoring and Reporting Program (MRP, Attachment E).

Table 2. Internal Effluent Limitations – NIA Sewage Treatment Plant Waste Stream¹

Parameter	Units	Average Monthly Effluent Limitation (AMEL)	Average Weekly Effluent Limitation (AWEL)	Instantaneous Minimum Effluent Limitation	Instantaneous Maximum Effluent Limitation
Flow	MGD	0.05			
Oil and Grease	milligram per liter (mg/L)	25	40	--	75
Oil and Grease	pounds per day (lbs/day)	10.4 ²	--	--	--
Total Suspended Solids (TSS)	% Removal ³	75 ³	--	--	--
Settleable Solids	milliliters per liter (ml/L)	1.0	1.5	--	3.0
Turbidity	nephelometric turbidity units (NTU)	75	100	--	225
pH	standard units	--	--	6.0	9.0

Notes for Table 2

1. See Attachment A for definitions of abbreviations and a glossary of common terms used in this Order.
2. The Mass Emission Rate (MER) effluent limitation was calculated based on the equation in section 7.13 of this Order, using the maximum flow for the NIA Sewage Treatment Plant of 0.05 MGD and oil and grease concentration of 25 mg/L.
3. The average monthly percent removal of TSS shall not be less than 75 percent. The percent shall be calculated according to section 7.9 of this Order, *Compliance Determination, Percent Removal*.

4.1.1.2. **Combined Low-Volume Waste Stream Compliance Points (INT-002).** The Discharger shall maintain compliance with the following internal effluent limitations using the flow-weighted composite sample of discharges of all the low-volume waste streams taken together. The flow-weighted composite sample (Monitoring Location INT-002) includes samples from Monitoring

Locations INT-001-E, INT-001-F, INT-002-D, INT-002-E, INT-002-K, INT-002-L, and INT-002-M as described in the MRP (Attachment E). Scientific “E” notation is used to express certain values. In scientific “E” notation, the number following the “E” indicates that position of the decimal point in the value. Negative numbers after the “E” indicate that the value is less than 1, and positive numbers after the “E” indicate that the value is greater than 1. In this notation, a value of 6.1E-02 represents 6.1×10^{-2} or 0.061, 6.1E+02 represents 6.1×10^2 or 610, and 6.1E+00 represents 6.1×10^0 or 6.1.

Table 3. Internal Effluent Limitations – Combined Low-Volume Waste Streams¹

Parameter	Units ²	6-Month Median Effluent Limitation	30-Day Average Effluent Limitation	Maximum Daily Effluent Limitation (MDEL)
TSS	mg/L	--	30	100
TSS	lbs/day	--	2972	9906
Oil and Grease	mg/L	--	15	20
Oil and Grease	lbs/day	--	1486	1981
pH	Standards units	--	--	Between 6.0 and 9.0 at all times
Cadmium, Total Recoverable	lbs/day	1.1E+00	--	4.4E+00
Copper, Total Recoverable	lbs/day	1.3E+00	--	1.1E+01
Mercury, Total Recoverable	lbs/day	4.3E-02	--	1.7E-01
Nickel, Total Recoverable	lbs/day	5.4E+00	--	2.2E+01
Selenium, Total Recoverable	lbs/day	1.63E+01	--	6.54E+01
Silver, Total Recoverable	lbs/day	6.0E-01	--	2.9E+00
Zinc, Total Recoverable	lbs/day	1.39E+01	--	7.93E+01
Cyanide, Total (as Cyanide) ⁴	lbs/day	1.1E+00	--	4.4E+00
Ammonia (as Nitrogen)	lbs/day	6.54E+02	--	2.62E+03
Phenolic Compounds (non-chlorinated) ¹	lbs/day	3.3E+01	--	1.3E+02
Chlorinated Phenolics ¹	lbs/day	1.1E+00	--	4.4E+00
Endosulfan ¹	lbs/day	9.8E-03	--	2.0E-02
Endrin	lbs/day	2.2E-03	--	4.4E-03
Hexachlorocyclohexane (HCH) ¹	lbs/day	4.4E-03	--	8.7E-03
Acrolein	lbs/day	--	2.40E+02	--
Bis(2-chloroethoxy) methane	lbs/day	--	4.79E+00	--
Bis(2-chloroisopropyl) ether	lbs/day	--	1.31E+03	--
Chlorobenzene	lbs/day	--	6.21E+02	--
Chromium (III), Total Recoverable ³	lbs/day	--	2.07E+05	--
Di-n-butyl phthalate	lbs/day	--	3.81E+03	--
Dichlorobenzenes ¹	lbs/day	--	5.56E+03	--

Parameter	Units ²	6-Month Median Effluent Limitation	30-Day Average Effluent Limitation	Maximum Daily Effluent Limitation (MDEL)
Diethyl phthalate	lbs/day	--	3.60E+04	--
Dimethyl phthalate	lbs/day	--	8.94E+05	--
4,6-Dinitro-2-methylphenol	lbs/day	--	2.40E+02	--
2,4-Dinitrophenol	lbs/day	--	4.36E+00	--
Ethylbenzene	lbs/day	--	4.47E+03	--
Fluoranthene	lbs/day	--	1.63E+01	--
Hexachlorocyclopentadiene	lbs/day	--	6.32E+01	--
Nitrobenzene	lbs/day	--	5.34E+00	--
Thallium, Total Recoverable	lbs/day	--	2.18E+00	--
Toluene	lbs/day	--	9.26E+04	--
Tributyltin	lbs/day	--	1.53E-03	--
1,1,1-Trichloroethane	lbs/day	--	5.88E+05	--
Acrylonitrile	lbs/day	--	1.09E-01	--
Aldrin	lbs/day	--	2.40E-05	--
Benzene	lbs/day	--	6.43E+00	--
Benzidine	lbs/day	--	7.52E-05	--
Beryllium, Total Recoverable	lbs/day	--	3.60E-02	--
Bis(2-chloroethyl) ether	lbs/day	--	4.90E-02	--
Bis(2-ethylhexyl) phthalate	lbs/day	--	3.81E+00	--
Carbon tetrachloride	lbs/day	--	9.81E-01	--
Chlordane ¹	lbs/day	--	2.51E-05	--
Chlorodibromomethane	lbs/day	--	9.37E+00	--
Chloroform	lbs/day	--	1.42E+02	--
Dichlorodiphenyltrichloroethane (DDT) ¹	lbs/day	--	1.85E-04	--
1,4-Dichlorobenzene	lbs/day	--	1.96E+01	--
3,3'-Dichlorobenzidine	lbs/day	--	8.83E-03	--
1,2-Dichloroethane	lbs/day	--	3.05E+01	--
1,1-Dichloroethylene	lbs/day	--	9.81E-01	--
Dichlorobromomethane	lbs/day	--	6.76E+00	--
Dichloromethane	lbs/day	--	4.90E+02	--
1,3-Dichloropropene	lbs/day	--	9.70E+00	--
Dieldrin	lbs/day	--	4.36E-05	--
2,4-Dinitrotoluene	lbs/day	--	2.83E+00	--
1,2-Diphenylhydrazine	lbs/day	--	1.74E-01	--
Halomethanes ¹	lbs/day	--	1.42E+02	--
Heptachlor	lbs/day	--	5.45E-05	--
Heptachlor Epoxide	lbs/day	--	2.18E-05	--
Hexachlorobenzene	lbs/day	--	2.29E-04	--

Parameter	Units ²	6-Month Median Effluent Limitation	30-Day Average Effluent Limitation	Maximum Daily Effluent Limitation (MDEL)
Hexachlorobutadiene	lbs/day	--	1.53E+01	--
Hexachloroethane	lbs/day	--	2.72E+00	--
Isophorone	lbs/day	--	7.95E+02	--
N-nitrosodimethylamine	lbs/day	--	7.95E+00	--
N-nitrosodi-N-propylamine	lbs/day	--	4.14E-01	--
N-nitrosodiphenylamine	lbs/day	--	2.72E+00	--
Polynuclear aromatic hydrocarbons (PAHs) ¹	lbs/day	--	9.59E-03	--
PCBs ¹	lbs/day	--	2.07E-05	--
TCDD equivalents ¹	lbs/day	--	4.25E-09	--
1,1,2,2-Tetrachloroethane	lbs/day	--	2.51E+00	--
Tetrachloroethylene	lbs/day	--	2.18E+00	--
Toxaphene	lbs/day	--	2.29E-04	--
Trichloroethylene	lbs/day	--	2.94E+01	--
1,1,2-Trichloroethane	lbs/day	--	1.02E+01	--
2,4,6-Trichlorophenol	lbs/day	--	3.16E-01	--
Vinyl chloride	lbs/day	--	3.92E+01	--

Notes for Table 3

1. See Attachment A for definitions of abbreviations and a glossary of common terms used in this Order.
2. The MER effluent limitation was calculated based on the equation in section 7.13 of this Order. The MER calculations utilized the flow limitation for the combined low-volume waste stream of 11.878 MGD and dilution of 10:1.
3. The Discharger may, at their option, apply this effluent limitation as a total chromium effluent limitation.
4. If the Discharger can demonstrate to the satisfaction of USEPA and the State Water Resources Control Board (State Water Board) that an analytical method is available to reliably distinguish between strongly and weakly complexed cyanide, effluent limitations may be evaluated with the combined measurement of free cyanide, simple alkali metals cyanides, and weakly complexed organometallic cyanide complexes. In order for the analytical method to be acceptable, the recovery of free cyanide from metal complexes must be comparable to that achieved by the approved method in title 40 of the Code of Federal Regulations (40 CFR) part 136.

4.1.1.3. **Individual Low-Volume Waste Stream Compliance Points.** The Discharger shall maintain compliance with the following internal effluent limitations at all individual, low-volume waste stream discharges from the NIA, Unit 2, and Unit 3. Compliance shall be determined individually at Monitoring Locations INT-001-E, INT-001-F, INT-002-D, INT-002-E, INT-002-K, INT-002-L, and INT-002-M, as described in the MRP (Attachment E).

Table 4. Internal Effluent Limitations – Individual Low-Volume Waste Streams¹

Parameter	Units	MDEL	30-Day Average Effluent Limitation
TSS	mg/L	100	30
Oil and Grease	mg/L	20	15

Note for Table 4

- See Attachment A for definitions of abbreviations and a glossary of common terms used in this Order.

4.1.2. Ocean Outfall (Discharge Point No. 002)

The Discharger shall maintain compliance with the following effluent limitations at Discharge Point No. 002, with compliance measured at Monitoring Location EFF-002 (Discharge Point No. 002), as described in the MRP (Attachment E). Scientific “E” notation is used to express certain values. In scientific “E” notation, the number following the “E” indicates that position of the decimal point in the value. Negative numbers after the “E” indicate that the value is less than 1, and positive numbers after the “E” indicate that the value is greater than 1. In this notation, a value of 6.1E-02 represents 6.1×10^{-2} or 0.061, 6.1E+02 represents 6.1×10^2 or 610, and 6.1E+00 represents 6.1×10^0 or 6.1.

Table 5. Final Effluent Limitations – Ocean Outfall Discharge Point No. 002^{1,2}

Parameter	Units	MDEL	Instantaneous Maximum Effluent Limitation	Six-Month Median Effluent Limitation
Total Residual Chlorine	µg/L	88	660	22
Total Residual Chlorine	lbs/day	31	70 ³	7.7
Chronic Toxicity	Toxic Units Chronic (TUC)	11 ⁴	--	--
Arsenic	µg/L	--	8.5E+02	--
Arsenic	lbs/day	--	3.0E+02	--
Cadmium, Total Recoverable	µg/L	--	1.1E+02	--
Cadmium, Total Recoverable	lbs/day	--	3.9E+01	--
Chromium (hexavalent), Total Recoverable ⁵	µg/L	--	2.2E+02	--
Chromium (hexavalent), Total Recoverable ⁵	lbs/day	--	7.8E+01	--
Copper, Total Recoverable	µg/L	--	3.1E+02	--
Copper, Total Recoverable	lbs/day	--	1.1E+02	--
Lead, Total Recoverable	µg/L	--	2.2E+02	--
Lead, Total Recoverable	lbs/day	--	7.8E+01	--
Mercury, Total Recoverable	µg/L	--	4.4E+00	--

Parameter	Units	MDEL	Instantaneous Maximum Effluent Limitation	Six-Month Median Effluent Limitation
Mercury, Total Recoverable	lbs/day	--	1.5E+00	--
Selenium, Total Recoverable	µg/L	--	1.7E+03	--
Selenium, Total Recoverable	lbs/day	--	5.8E+02	--
Silver, Total Recoverable	µg/L	--	7.5E+01	--
Silver, Total Recoverable	lbs/day	--	2.7E+01	--
Cyanide ⁶	µg/L	--	1.1E+02	--
Cyanide ⁶	lbs/day	--	3.9E+01	--
Ammonia, Un-ionized (as Nitrogen)	µg/L	--	6.6E+04	--
Ammonia, Un-ionized (as Nitrogen)	lbs/day	--	2.3E+04	--
Non-Chlorinated Phenolic Compounds	µg/L	--	3.3E+03	--
Non-Chlorinated Phenolic Compounds	lbs/day	--	1.2E+03	--
Chlorinated Phenolics	µg/L	--	1.1E+02	--
Chlorinated Phenolics	lbs/day	--	3.9E+01	--
Endosulfan	µg/L	--	3.0E-01	--
Endosulfan	lbs/day	--	1.0E-01	--
Endrin	µg/L	--	6.6E-02	--
Endrin	lbs/day	--	2.3E-02	--
HCH	µg/L	--	1.3E-01	--
HCH	lbs/day	--	4.7E-02	--

Notes for Table 5

1. See Attachment A for definitions of abbreviations and a glossary of common terms used in this Order.
2. Except as noted for the instantaneous maximum effluent limitation for total residual chlorine, the MER effluent limitation was calculated based on the equation in section 7.13 of this Order. The MER calculations utilized the flow limitation for the ocean outfall of 42.252 MGD and dilution of 10:1.
3. The instantaneous maximum mass-based limitation was based on the maximum concentration standard for best available technology economically achievable (BAT) (0.20 mg/L). See section 4.2.2.2.2. of the Fact Sheet for more information.
4. Compliance with the MDEL for chronic toxicity shall be based on the procedures specified in section 7.16 of this Order and section 3.3 of Attachment E of this Order.
5. The Discharger may, at their option, apply this effluent limitation as a total chromium effluent limitation.
6. If the Discharger can demonstrate to the satisfaction of the San Diego Water Board (subject to USEPA approval) that an analytical method is available to reliably distinguish between strongly and weakly complexed cyanide, effluent limitations for cyanide may be met by the combined measurement of free cyanide, simple alkali metal cyanides, and weakly

complexed organometallic cyanide complexes. In order for the analytical method to be acceptable, the recovery of free cyanide from metal complexes must be comparable to that achieved by the approved method in 40 CFR part 136.

4.2. Discharge Specifications

- 4.2.1. Waste management systems that discharge to the Pacific Ocean must be designed and operated in a manner that will maintain the indigenous marine life and a healthy and diverse marine community.
- 4.2.2. Waste discharged to the ocean must be essentially free of:
 - 4.2.2.1. Material that is floatable or will become floatable upon discharge;
 - 4.2.2.2. Settleable material or substances that may form sediments which will degrade benthic communities or other aquatic life;
 - 4.2.2.3. Substances which will accumulate to toxic levels in marine waters, sediments, or biota;
 - 4.2.2.4. Substances that significantly decrease the natural light to benthic communities and other marine life; and
 - 4.2.2.5. Materials that result in aesthetically undesirable discoloration of the ocean surface.
- 4.2.3. Waste effluents shall be discharged in a manner which provides sufficient initial dilution to minimize the concentrations of substances not removed in the treatment.
- 4.2.4. Location of waste discharges must be determined after a detailed assessment of the oceanographic characteristics and current patterns to assure that:
 - 4.2.4.1. Pathogenic organisms and viruses are not present in areas where shellfish are harvested for human consumption or in areas used for swimming or other body-contact sports;
 - 4.2.4.2. Natural water quality conditions are not altered in areas designated as being of special biological significance or areas that existing marine laboratories use as a source of seawater; and
 - 4.2.4.3. Maximum protection is provided to the marine environment.
- 4.2.5. Waste that contains pathogenic organisms or viruses should be discharged a sufficient distance from shellfishing and water-contact sports areas to maintain applicable bacterial standards without disinfection. Where conditions are such that an adequate distance cannot be attained, reliable disinfection in conjunction with a reasonable separation of the discharge point from the area of use must be provided. Disinfection procedures that do not increase effluent toxicity and that constitute the least environmental and human hazard should be used.

4.3. Land Discharge Specifications – Not Applicable

4.4. Recycling Specifications – Not Applicable

5. Receiving Water Limitations

5.1. Surface Water Limitation

The receiving water limitations set forth below for ocean waters are based on water quality objectives contained in the Basin Plan and Ocean Plan and are a required part of this Order. The discharge of waste shall not cause or contribute to violation of these limitations in the Pacific Ocean. Compliance with these limitations shall be determined from samples collected at stations representative of the area outside of the zone of initial dilution (ZID).

5.1.1. Bacterial Characteristics

5.1.1.1. Within a zone bounded by the shoreline and a distance of three nautical miles from the shoreline, including all kelp beds, the following bacterial objectives shall be maintained throughout the water column. The ZID for the ocean outfall is excluded.

5.1.1.1.1. Fecal Coliform

5.1.1.1.1.1. Thirty-day geometric mean of fecal coliform density not to exceed 200 colony forming units (CFU) per 100 milliliters (ml) calculated based on the five most recent samples from each site.

5.1.1.1.1.2. Single sample maximum not to exceed 400 CFU per 100 ml.

5.1.1.1.2. Enterococci

5.1.1.1.2.1. Six-week rolling geometric mean not to exceed 30 CFU per 100 ml, calculated weekly.

5.1.1.1.2.2. Statistical threshold value (STV) of 110 CFU per 100 ml not to be exceeded by more than 10 percent of samples collected in a calendar month, calculated in a static manner.

5.1.1.2. The ZID of any wastewater outfall shall be excluded from designation as kelp beds for purposes of bacterial standards. Adventitious assemblages of kelp plants on waste discharge structures (e.g., outfall pipes and diffusers) do not constitute kelp beds for purposes of bacterial standards.

5.1.1.3. At all areas where shellfish may be harvested for human consumption, as determined by the San Diego Water Board, the median total coliform density (CFU) shall not exceed 70 per 100 ml throughout the water column, and not more than 10 percent of the samples shall exceed 230 per 100 ml.

5.1.2. Physical Characteristics

5.1.2.1. Floating particulates and grease and oils shall not be visible.

5.1.2.2. The discharge of waste shall not cause aesthetically undesirable discoloration of the ocean surface.

5.1.2.3. Natural light shall not be significantly reduced at any point outside the initial dilution zone as a result of the discharge of waste.

5.1.2.4. The rate of deposition of inert solids and the characteristics of inert solids in the ocean sediments shall not be changed such that benthic communities are degraded.

5.1.2.5. Trash shall not be present in ocean waters, along shorelines or adjacent areas in amounts that adversely affect beneficial uses or cause nuisance.

5.1.3. Chemical Characteristics

5.1.3.1. The dissolved oxygen concentration shall not at any time be depressed more than 10 percent from that which occurs naturally, as the result of the discharge of oxygen demanding waste materials.

5.1.3.2. The pH shall not be changed at any time more than 0.2 units from that which occurs naturally.

5.1.3.3. The dissolved sulfide concentration of waters in and near sediments shall not be significantly increased above that present under natural conditions.

5.1.3.4. The concentration of substances set forth in chapter II, Table 3 of the Ocean Plan shall not be increased in marine sediments to levels that would degrade indigenous biota.

5.1.3.5. The concentration of organic materials in marine sediments shall not be increased to levels that would degrade marine life.

5.1.3.6. Nutrient materials shall not cause objectionable aquatic growths or degrade indigenous biota.

5.1.3.7. The water quality objectives set forth in chapter II, Table 3 of the Ocean Plan shall not be exceeded.

5.1.4. Biological Characteristics

5.1.4.1. Marine communities, including vertebrate, invertebrate, and plant species, shall not be degraded.

5.1.4.2. The natural taste, odor, color of fish, shellfish, or other marine resources used for human consumption shall not be altered.

5.1.4.3. The concentration of organic materials in fish, shellfish, or other marine resources used for human consumption shall not bioaccumulate to levels that are harmful to human health.

5.1.5. Radioactivity

5.1.5.1. Discharge of radioactive waste shall not degrade marine life.

5.1.5.2. As stated in Attachment F, Fact Sheet section 3.5.3, the United States Nuclear Regulatory Commission (USNRC) regulates radioactivity from the Facility pursuant to the Atomic Energy Act (AEA).

5.1.6. Elevated Temperature Requirements (Thermal Plan)

5.1.6.1. As stated in Attachment F, Fact Sheet section 3.3.6., the San Diego Water Board has determined that the Thermal Plan no longer applies to this Order.

5.2. Groundwater Limitations – Not Applicable

6. Provisions

6.1. Standard Provisions

6.1.1. **Federal Standard Provisions.** The Discharger shall comply with all Standard Provisions included in Attachment D of this Order.

6.1.2. **San Diego Water Board Standard Provisions.** The Discharger shall comply with the following provisions. In the event that there is any conflict, duplication, or overlap between provisions specified by this Order, the more stringent provision shall apply.

6.1.2.1. The expiration date of this Order is contained on page 2 of this Order. After the expiration date, the terms and conditions of this Order are automatically continued pending issuance of a new permit, provided that all requirements of USEPA's NPDES regulations at 40 CFR section 122.6 and the State's regulations at title 23, division 3, chapter 9, article 3, section 2235.4 of the CCR regarding the continuation of expired permits and WDRs are met.

6.1.2.2. The Discharger shall maintain a copy of this Order for access in hard copy at a prominent on-site location at the Facility or access in electronic format. The Order shall be available for access by site personnel, San Diego Water Board, State Water Board, and USEPA or their authorized representative at all times. Electronic access to the Order through a device that provide on-line access on the premises of the Facility shall be considered equivalent to on-site access.

6.2. Monitoring and Reporting Program (MRP) Requirements

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

6.2.2. Notifications required to be provided under this Order to the San Diego Water Board shall be made to:

E-mail – SanDiego@waterboards.ca.gov, or
Telephone – (619) 516-1990, or
Facsimile – (619) 516-1994.

6.3. Special Provisions

6.3.1. Reopener Provisions

6.3.1.1. This Order may be reopened for modification to include an effluent limitation if monitoring establishes that the discharge causes, has the reasonable potential to cause, or contributes to an excursion above an Ocean Plan Table 3 water quality objective. (40 CFR section 122.44(d)(1))

- 6.3.1.2. This Order may be reopened for modification of the monitoring and reporting requirements and/or special studies requirements, at the discretion of the San Diego Water Board. Such modification(s) may include, but is (are) not limited to, revision(s) (i) to implement recommendations from Southern California Coastal Water Research Project (SCCWRP); (ii) to develop, refine, implement, and/or coordinate a regional monitoring program; (iii) to develop and implement improved monitoring and assessment programs in keeping with San Diego Water Board Resolution No. R9-2012-0069, *Resolution in Support of a Regional Monitoring Framework*; and/or (iv) to add provisions to require the Dischargers to evaluate and provide information on cost and values of the MRP (Attachment E).
- 6.3.1.3. This Order may be modified, revoked and reissued, or terminated for cause in accordance with the provisions of 40 CFR parts 122, 124, and 125 at any time prior to its expiration under any of the following circumstances:
 - 6.3.1.3.1. Violation of any terms or conditions of this Order. (Water Code section 13381(a));
 - 6.3.1.3.2. Obtaining this Order by misrepresentation or failure to disclose fully all relevant facts. (Water Code section 13381(b)); and
 - 6.3.1.3.3. A change in any condition that requires either a temporary or permanent reduction or elimination of the authorized discharge. (Water Code section 13381(c).
- 6.3.1.4. The filing of a request by the Discharger for modifications, revocation and reissuance, or termination of this Order does not stay any condition of this Order. Notification by the Discharger of planned operational or Facility changes, or anticipated noncompliance with this Order does not stay any condition of this Order. (40 CFR section 122.41(f))
- 6.3.1.5. If any applicable toxic effluent standard or prohibition (including any schedule of compliance specified in such effluent standard or prohibition) is promulgated under federal CWA section 307(a) for a toxic pollutant and that standard or prohibition is more stringent than any limitation on the pollutant in this Order, the San Diego Water Board may institute proceedings under these regulations to modify or revoke and reissue this Order to conform to the toxic effluent standard or prohibition. (40 CFR section 122.44(b)(1))
- 6.3.1.6. This Order may be reopened and modified for consistency with any new water quality control plan, policy, law, or regulation. (40 CFR section 122.62(a)(3))
- 6.3.1.7. This Order may be reopened and modified to revise effluent limitations as a result of future Ocean Plan, Basin Plan, and/or other statewide Water Quality Control Plan amendments; or the adoption of a total maximum daily load (TMDL) for the receiving water. (40 CFR section 122.62(a)(2))
- 6.3.1.8. This Order may be reopened upon submission by the Discharger of adequate information, as determined by the San Diego Water Board, to provide for

dilution credits or a mixing zone, as may be appropriate. (40 CFR section 122.62(a)(2))

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

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

6.3.2.1. Spill Reporting Requirements

The Discharger shall report spills in accordance with the following procedures:

- 6.3.2.1.1. If a spill results in a discharge of treated or untreated wastewater that is equal to or exceeds 1,000 gallons, and/or results in a discharge to a drainage channel and/or surface water, or results in a discharge to a storm drain that was not fully captured and returned to a sanitary sewer system for treatment at a sewage treatment plant, the Discharger shall:
- 6.3.2.1.1.1. Report the spill to the San Diego Water Board by email at SanDiego@waterboards.ca.gov within 24 hours from the time the Discharger become aware of the spill. If email communication is not possible, report the spill by telephone (619-516-1990) within 24 hours from the time the Discharger becomes aware of the spill. The report shall include a description of the spill and its cause; the spill material; the duration of the spill including exact dates and times; the estimated spill volume and its destination; if the spill has not been terminated, the anticipated time it is expected to continue; and steps taken or planned to reduce and/or eliminate the spill.
- 6.3.2.1.1.2. Submit a written report by email at SanDiego@waterboards.ca.gov, as well as any additional pertinent information, to the San Diego Water Board no later than five days from the time the Discharger becomes aware of the spill. The written report must be signed and certified as required by section 5 of the Standards Provisions (Attachment D).
- 6.3.2.1.1.3. The San Diego Water Board may waive the above-required written report under this provision on a case-by-case basis if the email or oral report has been received within 24 hours.
- 6.3.2.1.2. If a spill results in a discharge of treated or untreated wastewater less than 1,000 gallons and the discharge does not reach a drainage channel or surface waters, or results in a discharge to a storm drain that was fully captured and returned to a sanitary sewer system for treatment at a sewage treatment plant, the Discharger is not required to notify the San Diego Water Board within 24 hours, or provide a 5-day written report.

- 6.3.2.1.3. For spills of waste material other than treated or untreated wastewater, including any such spills that may endanger human health or the environment, the Discharger shall:
- 6.3.2.1.3.1. Notify the San Diego Water Board by email at SanDiego@waterboards.ca.gov within 24 hours from the time the Discharger becomes aware of the spill. If email communication is not possible, report the spill by telephone (619-516-1990) within 24 hours from the time the Discharger becomes aware of the spill. The report shall include a description of the spill and its cause; the spill material; the duration of the spill including exact dates and times; the estimated spill volume and its destination; if the spill has not been terminated, the anticipated time it is expected to continue; and steps taken or planned to reduce and/or eliminate the spill.
- 6.3.2.1.3.2. Submit a written report by email at SanDiego@waterboards.ca.gov, as well as any additional pertinent information, to the San Diego Water Board no later than five days from the time the Discharger becomes aware of the spill. The written report must be signed and certified as required by section 5 of the Standards Provisions (Attachment D).
- 6.3.2.1.3.3. The San Diego Water Board may waive the above-required written report under this provision on a case-by-case basis if the email or oral report has been received within 24 hours.
- 6.3.2.1.4. For all spills, the Discharger shall include a detailed summary of spills in the monthly self-monitoring report (SMR) for the month in which the spill occurred. If no spills occurred during the calendar month, the Discharger shall report no spills in the monthly SMR for that calendar month.
- 6.3.2.1.5. The spill reporting requirements contained in this Order do not relieve the Discharger of responsibilities to report spills to other agencies, such as the California Office of Emergency Services and the San Diego Department of Environmental Health.

6.3.2.2. **Receiving Water Violation Assessment**

In the event of a violation of any receiving water limitation established within this Order, the San Diego Water Board may require the Discharger to perform a special assessment to investigate the nature and cause of the receiving water violation. The receiving water assessment shall identify measures needed to ensure future compliance with receiving water limitations. The Discharger shall submit the required assessment to the San Diego Water Board within 90 days of receipt of the San Diego Water Board's notification to perform a Receiving Water Violation Assessment.

6.3.3. **Best Management Practices (BMPs) and Pollution Prevention**

The Discharger shall continue to operate the Facility in accordance with their BMP Plan and in accordance with any subsequent amendments to the BMP Plan due to decommissioning. The Discharger shall maintain their existing BMP Plan in accordance with the *USEPA Guidance Manual for Developing Best*

Management Practices (BMPs) (EPA 833-B-93-004) and update the plan whenever there is a change in Facility design, construction, operation, or maintenance, which materially affects the potential for discharge from the Facility of significant amounts of hazardous or toxic pollutants into waters of the United States.

The BMP Plan and any updates thereto, shall be subject to the approval of the San Diego Water Board and shall be modified as directed by the San Diego Water Board. The Discharger shall submit the BMP Plan and any updates thereto to the San Diego Water Board upon request of the San Diego Water Board. A copy of the up-to-date BMP Plan shall be maintained at the Facility and shall be readily available to operating personnel at all times.

6.3.4. **Construction, Operation and Maintenance Specifications**

6.3.4.1. All proposed new treatment facilities and expansions of existing treatment facilities shall be completely constructed and operable prior to initiation of the discharge from the new or expanded facilities. The Discharger shall submit a certification report for each new treatment facility, expansion of an existing treatment facility, and design capacity re-ratings, prepared by the design engineer. For design capacity re-ratings, the certification report shall be prepared by the engineer who evaluated the treatment facility design capacity. The signature and engineering license number of the engineer preparing the certification report shall be affixed to the report. If reasonable, the certification report shall be submitted prior to beginning construction of new treatment facilities or expansions of existing treatment facilities.

6.3.4.1.1. The certification report shall:

6.3.4.1.1.1. Identify the design capacity of the treatment facility, including the daily and 30-day design capacity;

6.3.4.1.1.2. Certify the adequacy of each component of the treatment facility; and

6.3.4.1.1.3. Contain a requirement-by-requirement analysis, based on acceptable engineering practices, of the process and physical design of the facility to ensure compliance with this Order.

6.3.4.1.2. The Discharger shall not initiate a discharge from a treatment facility at a daily flow rate in excess of its previously approved design capacity until:

6.3.4.1.2.1. The certification report is received by the San Diego Water Board,

6.3.4.1.2.2. The San Diego Water Board has received written notification of completion of construction (new or expanded treatment facilities only),

6.3.4.1.2.3. An inspection of the facility has been made by the San Diego Water Board or its designated representatives (new or expanded treatment facilities only), and

6.3.4.1.2.4. The San Diego Water Board has provided the Discharger with written authorization to initiate discharge from a new or expanded treatment

facility or at a daily flow rate in excess of its previously approved design capacity.

- 6.3.4.2. The Facility shall be protected against a 100-year frequency flood flows as defined by the San Diego County Flood Control District.
- 6.3.4.3. The Facility shall be protected against erosion, overland runoff, and other impacts resulting from a 100-year, 24-hour storm event as defined by the National Oceanic and Atmospheric Administration Atlas 14 Point Precipitation Frequency Estimates available at <https://www.nws.noaa.gov/oh/hdsc/index.html>.
- 6.3.4.4. The Facility shall be protected against regional impacts of changing climate conditions (e.g., rising sea levels, flooding, higher storm surges, and changing hydrography, including more intense atmospheric rivers). Compliance with this requirement shall be implemented through development and implementation of applicable measures identified in the Climate Change Action Plan (CCAP) which is required to be submitted within three years of the effective date of this Order pursuant to section 6.3 of the MRP (Attachment E).
- 6.3.5. **Special Provisions for Publicly-Owned Treatment Works (POTWs) – Not Applicable**
- 6.3.6. **Other Special Provisions – Policy on the Use of Coastal and Estuarine Waters for Power Plant Cooling (Once-Through Cooling or OTC Policy)**
- 6.3.6.1. **Offshore Intake Structures.** The offshore intake structures shall be constructed and operable in accordance with the requirements of this Order:
- The intake of seawater must not exceed 30 MGD.
 - The Discharger shall continue to maintain the large organism exclusion devices (LOEDs) at the Facility’s primary offshore intake structures, including any necessary inspections, repairs, and redesigns. The LOEDs must be functional in accordance with the OTC Policy.
 - A minimum 93 percent reduction in intake flow rate for each SONGS unit is required, compared to the unit’s design intake flow rate, and the through-screen intake velocity at the onset of seawater withdrawal must not exceed 0.5 foot per second at all times.
 - The intake of seawater shall be reduced to the minimum volume necessary to maintain Facility operations.
 - The Discharger shall cease intake of seawater except when intake of seawater is necessary to maintain Facility operations or to comply with this Order.
 - Heat treatment of the intake system is prohibited.
- 6.3.6.2. **OTC Policy’s Interim Mitigation Requirements.** The Discharger shall continue to demonstrate compliance with the OTC Policy’s interim mitigation

requirements through the ongoing SONGS Marine Mitigation Program required by and monitored through the California Coastal Commission.

6.3.7. Compliance Schedules – Not Applicable

7. Compliance Determination

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

7.1 Compliance with 30-Day Average Effluent Limitation

If the arithmetic mean of daily discharges over any 30 consecutive day period exceeds the 30-day average effluent limitation, an alleged violation will be flagged, and the Discharger will be considered out of compliance for each day of that 30-day period for that parameter. The next assessment of compliance will occur after the next sample is taken. If only a single sample is taken during a given 30-day period and the analytical result for that sample exceeds the 30-day average effluent limitation, the Discharger will be considered out of compliance for the 30-day period. For any 30-day period during which no sample is taken, no compliance determination can be made for the 30-day average effluent limitation.

7.2. Compliance with Average Monthly Effluent Limitation (AMEL)

If the average of daily discharges over a calendar month exceeds the AMEL 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). The average of daily discharges over the calendar month that exceeds the AMEL for a parameter will be considered out of compliance for that month only. If only a single sample is taken during the calendar month and the analytical result for that sample exceeds the AMEL, the Discharger will be considered out of compliance for that calendar month. For any one calendar month during which no sample (daily discharge) is taken, no compliance determination can be made for that calendar month.

7.3. Compliance with Average Weekly Effluent Limitation (AWEL)

If the average of daily discharges over a calendar week (Sunday through Saturday) 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 seven 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.

7.4. Compliance with Maximum Daily Effluent Limitation (MDEL)

The MDEL shall apply to flow-weighted 24-hour composite samples, or grab samples, as specified in the MRP (Attachment E). If a daily discharge exceeds the MDEL for a given parameter, an alleged violation will be flagged, and the Discharger will be considered out of compliance for that parameter for that one day only within the reporting period. For any one day during which no sample is taken, no compliance determination can be made for that day.

7.5. Compliance with Instantaneous Minimum Effluent Limitation

The instantaneous minimum effluent concentration limitation shall apply to grab sample determinations. If the analytical result of a single grab sample is lower than the instantaneous minimum effluent limitation for a parameter, an alleged violation will be flagged, and the Discharger will be considered out of compliance for that parameter for that single sample. Non-compliance 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).

7.6. Compliance with Instantaneous Maximum Effluent Limitation

The instantaneous maximum effluent concentration limitation shall apply to grab sample determinations. If the analytical result of a single grab sample is higher than the instantaneous maximum effluent limitation for a parameter, an alleged violation will be flagged, and the Discharger will be considered out of compliance for that parameter for that single sample. Non-compliance 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 noncompliance with the instantaneous maximum effluent limitation).

7.7. Compliance with Six-Month Median Effluent Limitation

If the median of daily discharges over any 180-day period exceeds the six-month median effluent limitation for a given parameter, an alleged violation will be flagged, and the Discharger will be considered out of compliance for each day of that 180-day period for that parameter. The next assessment of compliance will occur after the next sample is taken. If only a single sample is taken during a given 180-day period and the analytical result for that sample exceeds the six-month median, the Discharger will be considered out of compliance for the 180-day period. For any 180-day period during which no sample is taken, no compliance determination can be made for the six-month median limitation.

7.8. 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 not detected (ND) or detected, but not quantified (DNQ), the corresponding MER

determined from that sample concentration shall also be reported as “ND” or “DNQ.”

7.9. Percent Removal

Compliance with percent TSS for the NIA Sewage Treatment Plant shall be calculated according to the following equation:

$$\text{Daily discharge percent removal} = \frac{\text{Influent concentration} - \text{Effluent Concentration}}{\text{Influent Concentration}} \times 100\%$$

7.10. Compliance with Single-constituent Effluent Limitations

The Discharger shall be deemed out of compliance with an effluent limitation or discharge specification if the concentration of the constituent in the monitoring sample is greater than the effluent limitation or discharge specification and greater than or equal to the minimum level (ML).

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

The Discharger is out of compliance with an effluent limitation that applies to the sum of a group of chemicals (e.g., 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.

7.12. Multiple Sample Data Reduction

The concentration of the pollutant in the effluent may be estimated from the result of a single sample analysis or by a measure of central tendency (arithmetic mean, geometric mean, median, etc.) of multiple sample analyses when all sample results are quantifiable (i.e., greater than or equal to the reported ML). When one or more sample results are reported as ND or DNQ, the central tendency concentration of the pollutant shall be the median (middle) value of the multiple samples. If, in an even number of samples, one or both of the middle values is ND or DNQ, the median will be the lower of the two middle values.

7.13. Mass Emission Rate (MER)

The MER, in lbs/day, shall be obtained from the following calculation for any calendar day:

$$MER = 8.34 \times Q \times C$$

In which Q and C are the flow rate in MGD and the constituent concentration in mg/L, respectively, and 8.34 is a conversion factor (lbs/gallon of water). If a composite sample is taken, then C is the concentration measured in the composite sample and Q is the average flow rate occurring during the period over which the samples are composited. If the constituent concentration is µg/L, the conversion factor is 0.00834.

7.14. Bacterial Standards and Analysis

7.14.1. Geometric Mean

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

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

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

7.14.2. Statistical Threshold Value (STV)

The STV used for determining compliance with bacterial standards shall not be exceeded by more than 10 percent of the samples collected in a calendar month, collected in a static manner.

7.14.3. Sample Dilutions

Sample dilutions for fecal coliform bacterial analyses should be performed so the range of values extends from 2 to 16,000 CFU. Sample dilutions for enterococci bacterial analyses shall range from 1 to 10,000 CFU per 100 ml. The detection methods used for each analysis shall be reported with the results of the analysis. Detection methods used for fecal coliform shall be those listed in 40 CFR part 136 or any improved method determined by the San Diego Water Board (and approved by USEPA) to be appropriate. Detection methods used for enterococci shall be those presented in USEPA publication USEPA 600/4-85/076, *Test Methods for Escherichia coli and Enterococci in Water by Membrane Filter Procedure*, listed under 40 CFR part 136, and any other method approved by the San Diego Water Board.

7.15. Single Operational Upset (SOU)

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

- 7.15.1. A 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.
- 7.15.2. Discharger may assert SOU to limit liability only for those violations which the Discharger submitted notice of the upset as required in section 1.8 of Attachment D.
- 7.15.3. For purposes outside of Water Code sections 13385(h) and (i), determination of compliance and civil liability (including any more specific definition of SOU), the requirements for Discharger to assert the SOU limitation of liability, and the manner of counting violations, shall be in accordance with the *USEPA Memorandum Issuance of Guidance Interpreting Single Operational Upset* (September 27, 1989).

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

7.16. Chronic Toxicity

Chronic toxicity is used to measure the acceptability of waters for supporting a healthy marine biota until approved methods are developed to evaluate biological response. Compliance with the chronic toxicity effluent limit established in section 4.1.2. of this Order for Discharge Point No. 002 shall be determined using critical life stage toxicity tests in accordance with procedures prescribed by the Ocean Plan (2019) and restated in the MRP (Attachment E). Chronic toxicity shall be expressed as TU_c, where:

$$TU_c = 100 / NOEC$$

where NOEC is the No Observed Effect Concentration (also referred to as the No Observed Effect Level or NOEL) and is expressed as the maximum percent of effluent that causes no observable effect on a test organism, as determined by the result of a critical life stage toxicity test. The MDEL for chronic toxicity is exceeded and a violation will be flagged when a chronic toxicity test results in greater than or equal to 11 TU_c.

ATTACHMENT A – ABBREVIATIONS AND DEFINITIONS

Part 1. – Abbreviations

For the abbreviations with an asterisk (*), see Part 2 of Attachment A (Glossary of Common Terms) for further definition.

Abbreviation	Definition
40 CFR	Title 40 of the Code of Federal Regulations
AEA	Atomic Energy Act
AMEL*	Average Monthly Effluent Limitation
AQUA	Aquaculture
ASBS*	Areas of Special Biological Significance
ATP	Alternative Test Procedure
AWEL*	Average Weekly Effluent Limitation
Basin Plan	<i>Water Quality Control Plan for the San Diego Basin</i>
BEF	Bioaccumulation Equivalency Factor
BAT	Best Available Technology
BCT	Best Conventional Pollutant Control Technology
BIOL	Preservation of Biological Habitats of Special Significance
BMPs	Best Management Practices
BMPs	Best Management Practices
BPJ	Best Professional Judgement
BPT	Best Practicable Treatment
CCAP	Climate Change Action Plan
CDDs	Chlorinated Dibenzodioxins
CDFs	Chlorinated Dibenzofurans
CCR	California Code of Regulations
CEQA	California Environmental Quality Act
CFR	Code of Federal Regulations
cfs	Cubic Feet Per Second
CFU	Colony Forming Units
CIWQS	California Integrated Water Quality System
COMM	Commercial and Sport Fishing
CSLC	California State Lands Commission
CWA	Clean Water Act
DDD	Dichlorodiphenyldichloroethane
DDE	Dichlorodiphenyldichloroethylene
DDT*	Dichlorodiphenyltrichloroethane
Discharger	Southern California Edison Company
DL	Don Light
DMR*	Discharge Monitoring Report
DNQ*	Detected, But Not Quantified
EC25	Effects Concentration at 25 Percent
ELAP	Environmental Laboratory Accreditation Program
ELGs	Effluent Limitation Guidelines

Abbreviation	Definition
eSMR	Electronic Self-Monitoring Reports
°F	Degrees Fahrenheit
Facility	San Onofre Nuclear Generating Station Units 2 and 3
gpm	Gallons per minute
GPS	Global Positioning System
HCH*	Hexachlorocyclohexane
IND	Industrial Service Supply
lbs/day	Pounds per Day
MAR	Marine Habitat
MDEL*	Maximum Daily Effluent Limitation
MDL*	Method Detection Limit
MEC	Maximum Effluent Concentration
MER	Mass Emission Rate
mg/L	Milligram per Liter
MGD	Million Gallons per Day
MIGR	Migration of Aquatic Organisms
ML*	Minimum Level
ml	Milliliter
ml/L	Milliliter per Liter
MRP	Monitoring and Reporting Program
NAV	Navigation
NIA	North Industrial Area
ND*	Not Detected
NOEC	No Observed Effect Concentration
NOEL	No Observed Effect Level
NPDES	National Pollutant Discharge Elimination System
NSPS	New Source Performance Standards
NTU	Nephelometric Turbidity Units
OAL	Office of Administrative Law
Ocean Plan	<i>Water Quality Control Plan for Ocean Waters of California</i>
ODCM	Offsite Dose Calculation Manual
OTC	Policy on the Use of Coastal and Estuarine Waters for Power Plant Cooling (Once-Through Cooling or OTC Policy)
PAHs*	Polynuclear Aromatic Hydrocarbons
PCBs*	Polychlorinated Biphenyls
pCi/L	Picocuries per Liter
PMP*	Pollutant Minimization Program
POTWs	Publicly-Owned Treatment Works
ppt	Parts per Thousand
QA	Quality Assurance
QC	Quality Control
RARE	Rare, Threatened, or Endangered Species
REC-1	Contact Water Recreation
REC-2	Non-Contact Water Recreation

Abbreviation	Definition
RCRA	Resource Conservation and Recovery Act
RL	Reporting Level
RNKSC	Region Nine Kelp Survey Consortium
ROWD	Report of Waste Discharge
RPA	Reasonable Potential Analysis
San Diego Water Board	California Regional Water Quality Control Board, San Diego Region
SCCWRP	Southern California Coastal Water Research Project
SHELL	Shellfish Harvesting
SIC	Standard Industrial Classification
SM	San Mateo
SMR	Self-Monitoring Report
SO	San Onofre
SONGS	San Onofre Nuclear Generating Station
SOU	Single Operational Upset
SPWN	Spawning, Reproduction, and/or Early Development
State Water Board	State Water Resources Control Board
STV	Statistical Threshold Value
SWDA	Solid Waste Disposal Act
SWPPP	Storm Water Pollution Prevention Plan
SWQPAs	State Water Quality Protection Areas
TAC	Test Acceptability Criteria
TBELs	Technology-Based Effluent Limitations
TCDD*	Tetrachlorodibenzodioxin
TEF	Toxicity Equivalency Factor
Thermal Plan	<i>Water Quality Control Plan for Control of Temperature in the Coastal and Interstate Waters and Enclosed Bays and Estuaries of California</i>
TIE*	Toxicity Identification Evaluation
TMDL	Total Maximum Daily Load
TRE*	Toxicity Reduction Evaluation
TSD	Technical Support Document
TSS	Total Suspended Solids
TUa	Toxic Units Acute
TUc*	Toxic Units Chronic
µg/L	Microgram per Liter
U.S.C.	United States Code
USEPA	United States Environmental Protection Agency
USNRC	United States Nuclear Regulatory Commission
Water Code	California Water Code
WDRs	Waste Discharge Requirements
WET	Whole Effluent Toxicity
WILD	Wildlife Habitat
WQBELs	Water Quality-Based Effluent Limitations
ZID	Zone of Initial Dilution

Part 2. – Definitions

30-day average

The arithmetic mean of pollutant parameter values of samples collected in a period of 30 consecutive days.

6-Month Median Effluent Limitation

The highest allowable moving median of all daily discharges for any 180-day period.

Antidegradation

Policies which ensure protection of water quality for a particular body where the water quality exceeds levels necessary to protect fish and wildlife propagation and recreation on and in the water. This also includes special protection of waters designated as outstanding natural resource waters.

Areas of Special Biological Significance (ASBS)

Those areas designated by the State Water Board as ocean areas requiring protection of species or biological communities to the extent that alteration of natural water quality is undesirable. All Areas of Special Biological Significance are also classified as a subset of SWQPAs.

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.

Beneficial Uses

The uses of water necessary for the survival or wellbeing of man, plants, and wildlife. These uses of water serve to promote the tangible and intangible economic, social, and environmental goal. "Beneficial Uses" of the waters of the State of California that may be protected against include, but are not limited to, domestic, municipal, agricultural, and industrial supply; power generation; recreation; aesthetic enjoyment; navigation; and preservation and enhancement of fish, wildlife, and other aquatic resources or preserves. In the Basin Plan, existing beneficial uses are uses that were attained in the surface or ground water on or after November 28, 1975; and potential beneficial uses are uses that would probably develop in future years through the implementation of various control measures. "Beneficial Uses" are equivalent to "Designated Uses" under federal law. (Water Code section 13050(f)).

Bioaccumulation

The accumulation of contaminants in the tissues of organisms through any route, including respiration, ingestion, or direct contact with contaminated water, sediment, food, or dredged material.

Brine

The byproduct of desalinated water having a salinity concentration greater than a desalination facility's intake source water.

Bypass

The intentional diversion of waste streams from any portion of a treatment facility. (40 CFR section 122.41(m)(1)(i).)

Chlordane

The sum of chlordane-alpha, chlordane-gamma, chlordene-alpha, chlordene-gamma, nonachlor-alpha, nonachlor-gamma, and oxychlordane.

Chlorinated Phenolics

The sum of 4-chloro-3-methylphenol, 2-chlorophenol, pentachlorophenol, 2,4,5-trichlorophenol, and 2,4,6-trichlorophenol.

Chronic Toxicity

The measure of the sub-lethal effects of a discharge or ambient water sample (e.g., reduced growth or reproduction). Certain chronic toxicity tests include an additional measurement of lethality. Compliance with the effluent limitation for chronic toxicity in this Order is demonstrated by conducting chronic toxicity tests for the effluent as described in section 7.16 of this Order and section 3.3 of the MRP (Attachment E). Chronic Toxicity effluent limitation is expressed as TUc and is calculated by the following equation:

$$TUc = 100 / NOEC$$

where NOEC is the No Observed Effect Concentration (also referred to as the No Observed Effect Level or NOEL) or the maximum percent effluent that causes no observable effect on a test organism, as determined by the result of a critical life stage toxicity test.

Composite Sample

The combination of at least eight sample aliquots of at least 100 ml, collected at periodic intervals during the operating hours of a facility over a 24-hour period. For volatile pollutants, aliquots must be combined in the laboratory immediately before analysis. The composite must be flow proportional; either the time interval between each aliquot or the volume of each aliquot must be proportional to either the stream flow at the time of sampling or the total stream flow since the collection of the previous aliquot. Aliquots may be collected manually or automatically. The 100 ml minimum volume of an aliquot does not apply to automatic self-purging samplers. If one 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.

A grab sample is an individual sample of at least 100 ml collected at a randomly selected time over a period not exceeding 15 minutes.

Daily Discharge

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 permit), 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.

A composite sample is defined as a combination of at least eight sample aliquots of at least 100 ml, collected at periodic intervals during the operating hours of a facility over a 24-hour period. For volatile pollutants, aliquots must be combined in the laboratory immediately before analysis. The composite must be flow proportional; either the time interval between each aliquot or the volume of each aliquot must be proportional to either the stream flow at the time of sampling or the total stream flow since the collection of the previous aliquot. Aliquots may be collected manually or automatically. The 100 ml minimum volume of an aliquot does not apply to automatic self-purging samplers. If one 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.

A grab sample is an individual sample of at least 100 ml collected at a randomly selected time over a period not exceeding 15 minutes.

Degrade

Degradation shall be determined by comparison of the waste field and reference site(s) for characteristic species diversity, population density, contamination, growth anomalies, debility, or supplanting of normal species by undesirable plant and animal species. Degradation occurs if there are significant differences in any of three major biotic groups, namely, demersal fish, benthic invertebrates, or attached algae. Other groups may be evaluated where benthic species are not affected or are not the only ones affected.

Detected, But Not Quantified (DNQ)

Sample results that are less than the reported ML, but greater than or equal to the laboratory's MDL. Sample results reported as DNQ are estimated concentrations.

Dichlorobenzenes

The sum of 1,2- and 1,3-dichlorobenzene.

Dichlorodiphenyltrichloroethane (DDT)

The sum of 4,4'DDT, 2,4'DDT, 4,4'DDE, 2,4'DDE, 4,4'DDD, and 2,4'DDD.

Discharge of a Pollutant

Discharge of a pollutant means: (a) Any addition of any “pollutant” or combination of pollutants to “waters of the United States” from any “point source,” or (b) Any addition of any pollutant or combination of pollutants to the waters of the “contiguous zone” or the ocean from any point source other than a vessel or other floating craft which is being used as a means of transportation. This definition includes additions of pollutants into waters of the United States from: surface runoff which is collected or channeled by man; discharges through pipes, sewers, or other conveyances owned by a state, municipality, or other person which do not lead to a treatment works; and discharges through pipes, sewers, or other conveyances, leading into privately owned treatment works. This term does not include an addition of pollutants by any “indirect discharger.” “Discharge” when used without qualification means the “discharge of a pollutant.” (40 CFR section 122.2)

Discharge Monitoring Reports (DMRs)

The USEPA uniform national form, including any subsequent additions, revisions, or modifications for the reporting of self-monitoring results by permittees. DMRs must be used by “approved States” as well as by USEPA. USEPA will supply DMRs to any approved state upon request. The USEPA national forms may be modified to substitute the state agency name, address, logo, and other similar information, as appropriate, in place of USEPA’s.

Downstream Ocean Waters

Waters downstream with respect to ocean currents.

Dredged Material

Any material excavated or dredged from the navigable waters of the United States, including material otherwise referred to as “spoil.”

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 headlands or outermost harbor works is less than 75 percent of the greatest dimension of the enclosed portion of the bay. This definition includes but is not limited to Humboldt Bay, Bodega Harbor, Tomales Bay, Drakes Estero, San Francisco Bay, Morro Bay, Los Angeles Harbor, Upper and Lower Newport Bay, Mission Bay, and San Diego Bay.

Endosulfan

The sum of endosulfan-alpha and -beta and endosulfan sulfate.

Estuaries and Coastal Lagoons

Estuaries and Coastal Lagoons are waters at the mouths of streams that serve as mixing zones for fresh and ocean waters during a major portion of the year. Mouths of streams that are temporarily separated from the ocean by sandbars shall be considered as estuaries. Estuarine waters will generally be considered to extend from a bay or the open ocean to the upstream limit of tidal action but may be considered to extend

seaward if significant mixing of fresh and salt water occurs in the open coastal waters. The waters described by this definition include but are not limited to the Sacramento-San Joaquin Delta as defined by section 12220 of the Water Code, Suisun Bay, Carquinez Strait downstream to Carquinez Bridge, and appropriate areas of the Smith, Klamath, Mad, Eel, Noyo, and Russian Rivers.

Facility

San Onofre Nuclear Generating Station

Halomethanes

The sum of bromoform, bromomethane (methyl bromide) and chloromethane (methyl chloride).

Hexachlorocyclohexane (HCH)

The sum of the alpha, beta, gamma (lindane) and delta isomers of hexachlorocyclohexane.

Initial Dilution

The process that results in the rapid and irreversible turbulent mixing of wastewater with ocean water around the point of discharge.

For a submerged buoyant discharge, characteristic of most municipal and industrial wastes that are released from the submarine outfalls, the momentum of the discharge and its initial buoyancy act together to produce turbulent mixing. Initial dilution in this case is completed when the diluting wastewater ceases to rise in the water column and first begins to spread horizontally.

For shallow water submerged discharges, surface discharges, and non-buoyant discharges, characteristic of cooling water wastes and some individual discharges, turbulent mixing results primarily from the momentum of discharge. Initial dilution, in these cases, is considered to be completed when the momentum induced velocity of the discharge ceases to produce significant mixing of the waste, or the diluting plume reaches a fixed distance from the discharge to be specified by the San Diego Water Board, whichever results in the lower estimate for initial dilution.

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).

Interference

A discharge which, alone or in conjunction with a discharge or discharges from other sources, both:

- (1) Inhibits or disrupts the POTW, its treatment processes or operations, or its sludge processes, use or disposal; and

(2) Therefore is a cause of a violation of any requirement of the POTW's NPDES permit (including an increase in the magnitude or duration of a violation) or of the prevention of sewage sludge use or disposal in compliance with the following statutory provisions and regulations or permits issued thereunder (or more stringent State or local regulations): Section 405 of the federal CWA, the Solid Waste Disposal Act (SWDA) (including title II, more commonly referred to as the Resource Conservation and Recovery Act (RCRA), and including State regulations contained in any State sludge management plan prepared pursuant to subtitle D of the SWDA), the Clean Air Act, the Toxic Substances Control Act, and the Marine Protection, Research and Sanctuaries Act.

Kelp Beds

For purposes of the bacteriological standards of the Ocean Plan, kelp beds are significant aggregations of marine algae of the genera *Macrocystis* and *Nereocystis*. Kelp beds include the total foliage canopy of *Macrocystis* and *Nereocystis* plants throughout the water column.

Mariculture

The culture of plants and animals in marine waters independent of any pollution source.

Material

(a) In common usage: (1) the substance or substances of which a thing is made or composed (2) substantial; (b) For purposes of the Ocean Plan relating to waste disposal, dredging and the disposal of dredged material and fill, MATERIAL means matter of any kind or description which is subject to regulation as waste, or any material dredged from the navigable waters of the United States. See also, DREDGED MATERIAL.

Maximum Daily Effluent Limitation (MDEL)

The highest allowable daily discharge of a pollutant.

Method Detection Limit (MDL)

The minimum 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 that all the method specified sample weights, volumes, and processing steps have been followed.

Natural Light

Reduction of natural light may be determined by the San Diego Water Board by measurement of light transmissivity or total irradiance, or both, according to the monitoring needs of the San Diego Water Board.

Natural water quality

Water quality (based on selected physical, chemical, and biological characteristics) that is required to sustain marine ecosystems, and which is without apparent human influence, i.e., an absence of significant amounts of:

- Man-made constituents (e.g., DDT);
- Other chemical (e.g., trace metals), physical (temperature/thermal pollution, sediment burial), and biological (e.g., bacteria) constituents at concentrations that have been elevated due to man's activities above those resulting from the naturally occurring processes that affect the area in question; and
- Non-Indigenous (e.g., invasive algal bloom species) or Genetically Modified biota that has been introduced either deliberately or accidentally by man.

Not Detected (ND)

Those sample results less than the laboratory's MDL.

Ocean Waters

The territorial marine waters of the State as defined by California law to the extent these waters are outside of enclosed bays, estuaries, and coastal lagoons. If a discharge outside the territorial waters of the State could affect the quality of the waters of the State, the discharge may be regulated to assure no violation of the Ocean Plan will occur in ocean waters.

Offshore intake

Offshore intake refers to any submerged intake structure that is not located at the shoreline, and includes such intakes that are located in ocean, bay and estuary environments.

Pass Through

A discharge which exits the POTW into waters of the United States in quantities or concentrations which, alone or in conjunction with a discharge or discharges from other sources, is a cause of a violation of any requirement of the POTW's NPDES permit (including an increase in the magnitude or duration of a violation).

Percent Removal

A percentage expression of the removal efficiency across a treatment plant for a given pollutant parameter, as determined from the monthly average values of the raw wastewater influent pollutant concentrations to the facility and the monthly average values of the effluent pollutant concentrations for a given time period. (40 CFR section 133.101(j))

PAHs (polynuclear aromatic hydrocarbons)

The sum of acenaphthylene, anthracene, 1,2-benzanthracene, 3,4 benzofluoranthene, benzo[k]fluoranthene, 1,12-benzoperylene, benzo[a]pyrene, chrysene, dibenzo[ah]anthracene, fluorene, indeno[1,2,3-cd]pyrene, phenanthrene and pyrene.

PCBs (polychlorinated biphenyls)

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.

Phenolic Compounds (non-chlorinated)

The sum of 2,4-dimethylphenol, 4,6-dinitro-2-methylphenol, 2,4-dinitrophenol, 2-methylphenol, 4-methylphenol, 2-nitrophenol, 4-nitrophenol, and phenol.

Pollutant

Dredged spoil, solid waste, incinerator residue, filter backwash, sewage, garbage, sewage sludge, munitions, chemical wastes, biological materials, radioactive materials (except those regulated under the Atomic Energy Act of 1954, as amended (42 U.S.C. 2011 et seq.)), heat, wrecked or discarded equipment, rock, sand, cellar dirt and industrial, municipal, and agricultural waste discharged into water. It does not mean: (a) Sewage from vessels; or (b) Water, gas, or other material which is injected into a well to facilitate production of oil or gas, or water derived in association with oil and gas production and disposed of in a well, if the well is used either to facilitate production or for disposal purposes is approved by authority of the State in which the well is located, and if the State determines that the injection or disposal will not result in the degradation of ground or surface water resources.

Pollutant Minimization Program (PMP)

A program to reduce all potential sources of a pollutant through pollutant minimization (control) strategies, including pollution prevention measures, in order to maintain the effluent concentration at or below the effluent limitation.

Publicly-Owned Treatment Works (POTW)

A treatment works as defined by section 212 of the federal CWA, which is owned by a State or municipality (as defined by section 502(4) of the federal CWA). This definition includes any devices and systems used in the storage, treatment, recycling and reclamation of municipal sewage or industrial wastes of a liquid nature. It also includes sewers, pipes and other conveyances only if they convey wastewater to a POTW Treatment Plant. The term also means the municipality as defined in section 502(4) of the federal CWA, which has jurisdiction over the indirect discharges to and the discharges from such a treatment works.

Radiation

Alpha particles, beta particles, gamma rays, x-rays, neutrons, high-speed electrons, high-speed protons, and other particles capable of producing ions. Radiation, as used in this part, does not include non-ionizing radiation, such as radio- or microwaves, or visible, infrared, or ultraviolet light.

Recycled Water

Water which, as a result of treatment of waste, is suitable for a direct beneficial use or a controlled use that would not otherwise occur and is therefore considered a valuable resource.

Reported Minimum Level (ML)

The reported ML (also known as the Reporting Level or RL) is 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 San Diego Water Board either from Appendix II of the Ocean Plan in accordance with II.C.5.a. of the Ocean Plan or established in accordance with section III.C.5.b. of the Ocean Plan. 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 reported ML.

Salinity

A measure of the dissolved salts in a volume of water. Salinity shall be measured using a standard method approved by the San Diego Water Board (e.g., Standard Method 2520 B, USEPA Method 120.1, USEPA Method 160.1) and reported in parts per thousand. For historical salinity data not recorded in parts per thousand, the San Diego Water Board may accept converted data at their discretion.

Severe Property Damage

Substantial physical damage to property, damage to the treatment facilities which causes them to become inoperable, or substantial and permanent loss of natural resources which 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 section 122.41(m)(1)(ii))

Shellfish

Organisms identified by the California Department of Health Services as shellfish for public health purposes (i.e., mussels, clams, and oysters).

Significant Difference

Statistically significant difference in the means of two distributions of sampling results at the 95 percent confidence level.

Six-Month Median Effluent Limitation

See 6-Month Median above for the definition of this term.

Sludge

Any solid, semisolid, or liquid waste generated from a municipal, commercial, or industrial wastewater treatment plant, water supply treatment plant, or air pollution control facility or any other such waste having similar characteristics and effect.

State Water Quality Protection Areas (SWQPAs)

Non-terrestrial marine or estuarine areas designated to protect marine species or biological communities from an undesirable alteration in natural water quality. All ASBS that were previously designated by the State Water Board in Resolutions 74-28, 74-32, and 75-61 are now also classified as a subset of State Water Quality Protection Areas and require special protections afforded by the Ocean Plan.

Statistical Threshold Value (STV)

A set value that approximates the 90th percentile of the water quality distribution for a bacterial population.

Tetrachlorodibenzodioxin (TCDD) Equivalentents

The sum of the concentrations of chlorinated dibenzodioxins (2,3,7,8-CDDs) and chlorinated dibenzofurans (2,3,7,8-CDFs) multiplied by their respective toxicity factors and bioaccumulation equivalency factor, as shown in the table below:

$$TCDD \text{ Equivalentents} = \sum C_x \times TEF_x \times BEF_x$$

where:

C_x is the measured or estimated concentration of congener x
 TEF_x is the toxicity equivalency factor for congener x; and
 BEF_x is the bioaccumulation equivalency factor for congener x.

Isomer Group	Minimum Level (picogram per liter, pg/L)	2005 Toxicity Equivalency Factor (TEF)	Bioaccumulation Equivalency Factor (BEF)
2,3,7,8-tetra CDD	10	1.0	1.0
1,2,3,7,8-penta CDD	50	1.0	0.9
1,2,3,4,7,8-hexa CDDs	50	0.1	0.3
1,2,3,6,7,8-hexa CDDs	50	0.1	0.1
1,2,3,7,8,9-hexa CDDs	50	.01	0.1
1,2,3,4,6,7,8-hepta CDD	50	0.01	0.05
octa CDD	100	0.0003	0.01
2,3,7,8-tetra CDF	10	0.1	0.8
1,2,3,7,8-penta CDF	50	0.03	0.2
2,3,4,7,8-penta CDF	50	0.3	1.6
1,2,3,4,7,8-hexa CDFs	50	0.1	0.08
1,2,3,6,7,8-hexa CDFs	50	0.1	0.2
1,2,3,7,8,9-hexa CDFs	50	0.1	0.6
2,3,4,6,7,8-hexa CDFs	50	0.1	0.7
1,2,3,6,7,8-hepta CDFs	50	0.01	0.01

Isomer Group	Minimum Level (picogram per liter, pg/L)	2005 Toxicity Equivalency Factor (TEF)	Bioaccumulation Equivalency Factor (BEF)
1,2,3,4,7,8,9-hepta CDFs	50	0.1	0.4
octa CDF	100	0.0003	0.02

Thirty-Day Average

See 30-day average above for the definition of this term.

Toxicity Identification Evaluation (TIE)

A set of procedures conducted 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.

Toxicity Reduction Evaluation (TRE)

A study conducted in a stepwise 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 BMPs. A TIE may be required as part of the TRE, if appropriate.

Trash

All improperly discarded solid material from any production, manufacturing, or processing operation including, but not limited to, products, product packaging, or containers constructed of plastic, steel, aluminum, glass, paper, or other synthetic or natural materials.

Upset

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.

Waste

As used in the Ocean Plan, waste includes a Discharger’s total discharge, of whatever origin, i.e., gross, not net, discharge.

Water Quality Control Plans

There are two types of water quality control plans - Basin Plans and Statewide Plans. Regional Boards adopt Basin Plans for each region based upon surface water hydrologic basin boundaries. The Regional Basin Plans designates or describes (1) existing and potential beneficial uses of ground and surface water; (2) water quality objectives to protect the beneficial uses; (3) implementation programs to achieve these objectives; and (4) surveillance and monitoring activities to evaluate the effectiveness of the water quality control plan. The Statewide Plans address water quality concerns for surface waters that overlap Regional Board boundaries, are statewide in scope, or are otherwise considered significant and contain the same four elements. Statewide Water Quality Control Plans include the Ocean Plan, the Enclosed Bays and Estuaries Plan, the Inland Surface Waters Plan, and the Thermal Plan. A water quality control plan consists of a designation or establishment for the waters within a specified area of (1) beneficial uses to be protected, (2) water quality objectives, and (3) a program of implementation needed for achieving water quality objectives (Water Code section 13050(j)).

Water Quality Objectives

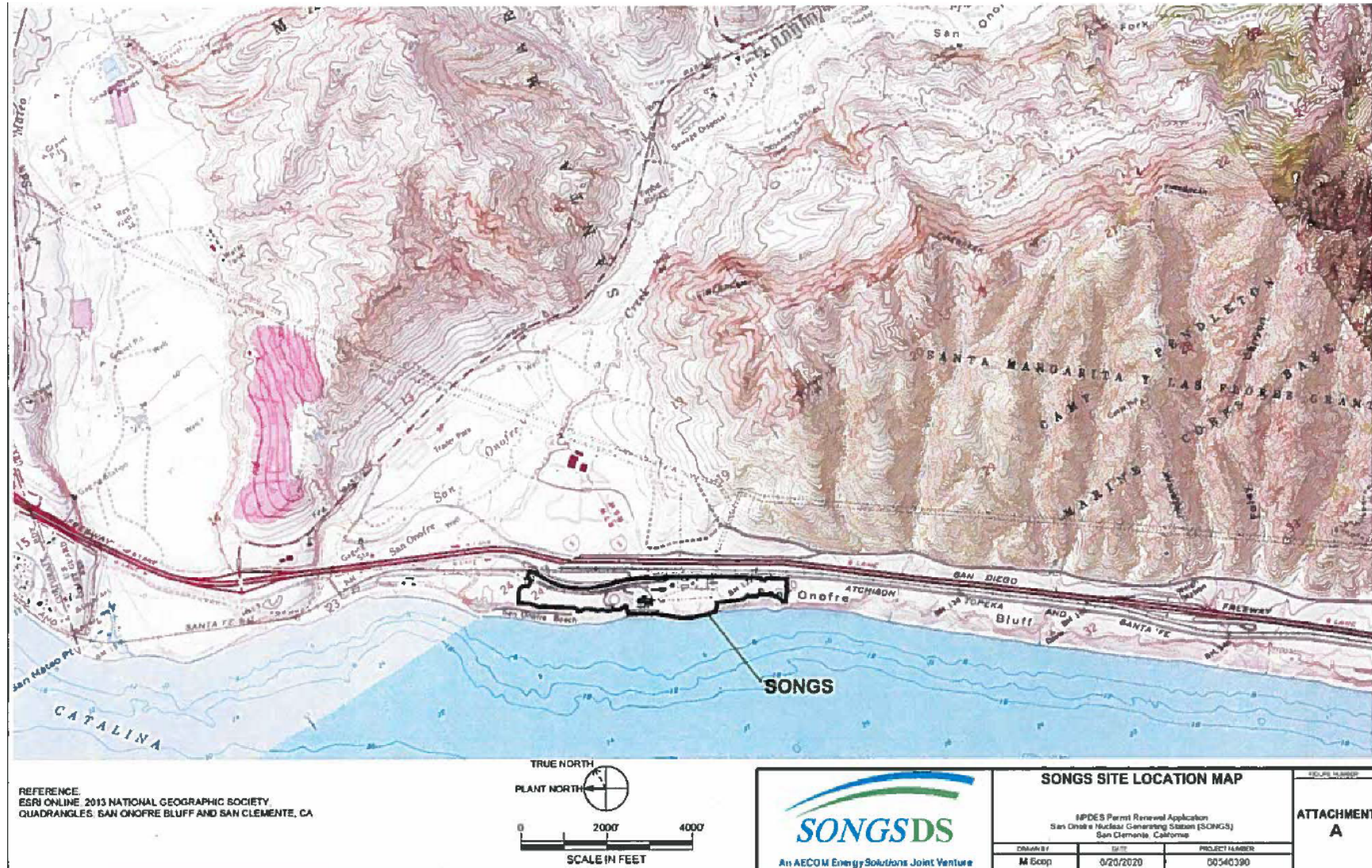
Numerical or narrative limits on constituents or characteristics of water designed to protect designated beneficial uses of the water. (Water Code section 13050(h)). California's water quality objectives are established by the State and Regional Water Boards in the Water Quality Control Plans.

Water Quality Standards

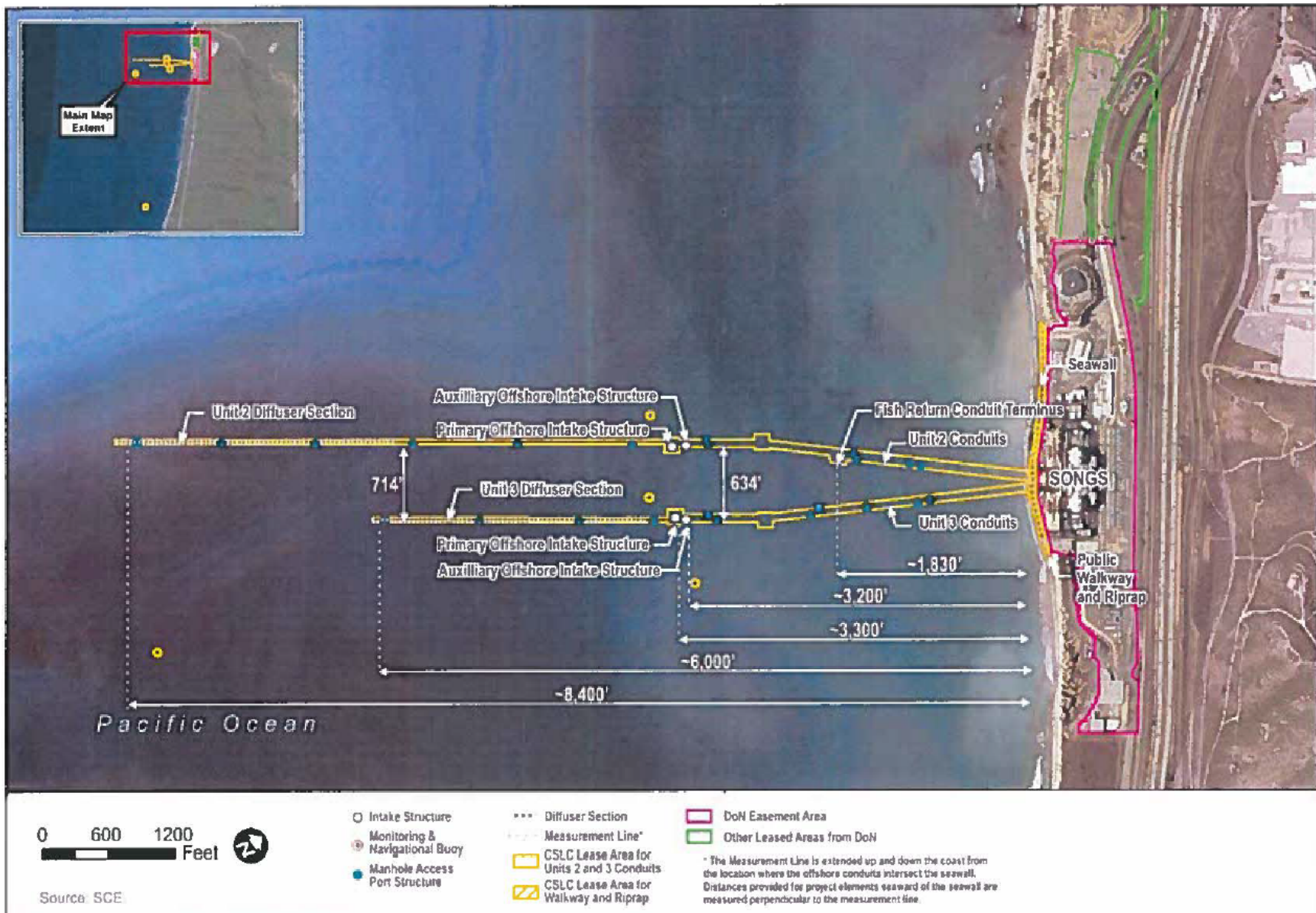
Provisions of State or federal law which consist of a designated use or uses for waters of the United States and water quality criteria for such waters based upon such uses. Water quality standards are to protect the public health or welfare, enhance the quality of water and serve the purposes of the federal CWA (40 CFR section 131.3(i)). Under State law, the Water Boards establish beneficial uses and water quality objectives in their water quality control plans or basin plans. Together with an antidegradation policy, these beneficial uses and water quality objectives serve as water quality standards under the CWA. In CWA parlance, state beneficial uses are called "designated uses" and state water quality objectives are called "criteria." Throughout this Order, the relevant term is used depending on the statutory scheme.

ATTACHMENT B – MAPS

Map 1 – San Onofre Nuclear Generating Station (SONGS) Site Location Map

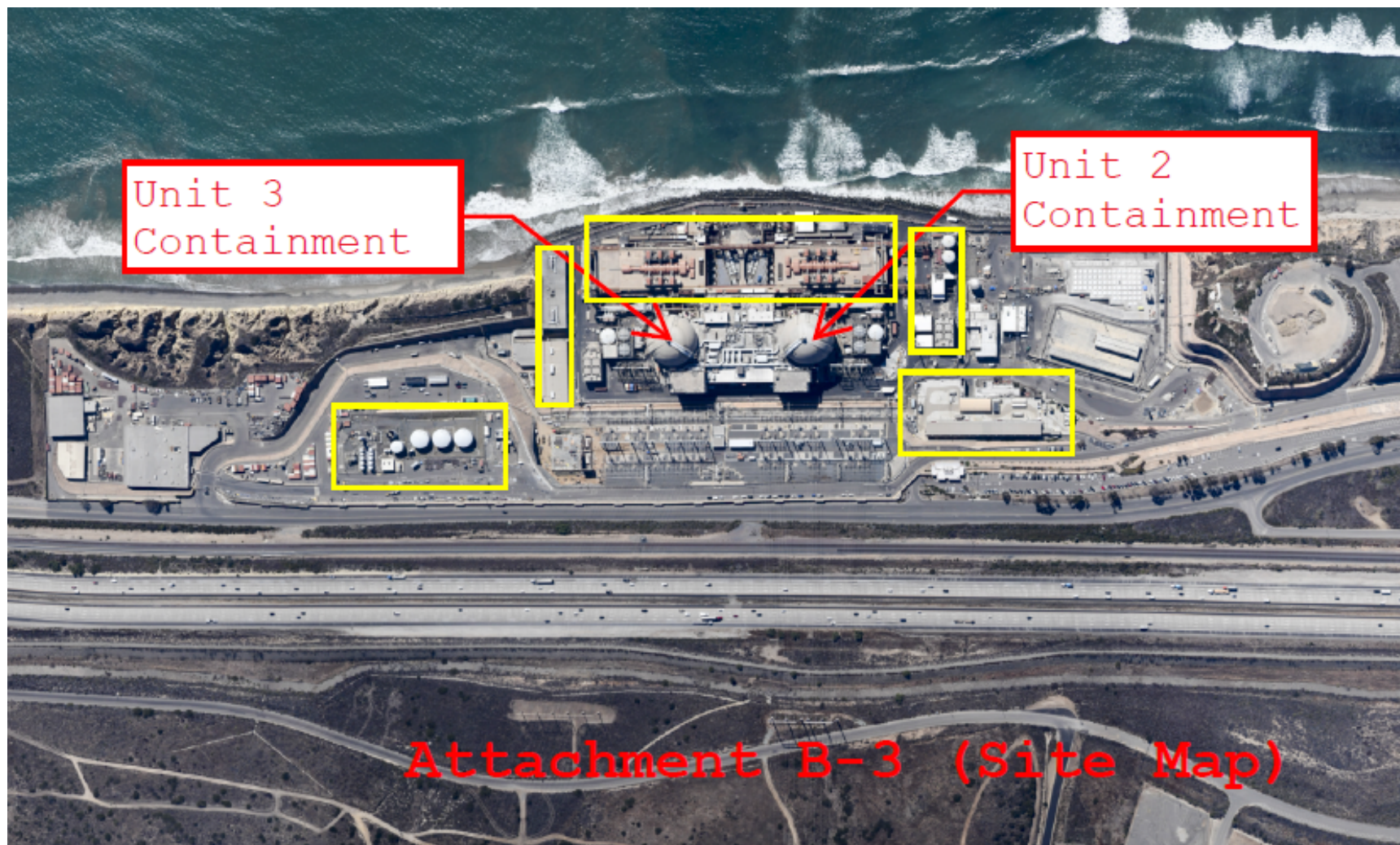


Map 2 – SONGS Aerial View

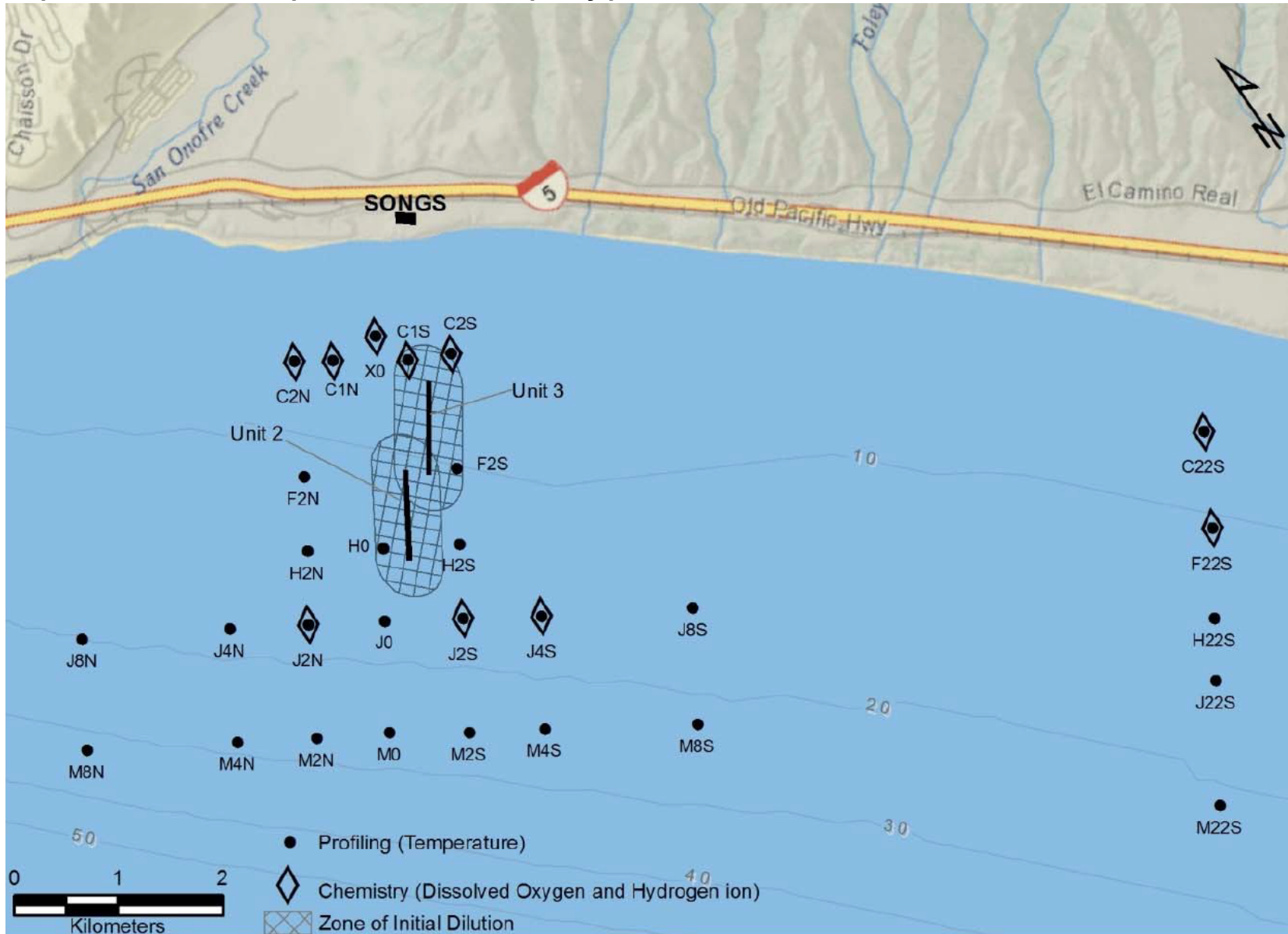


Map 3 – SONGS Site Map

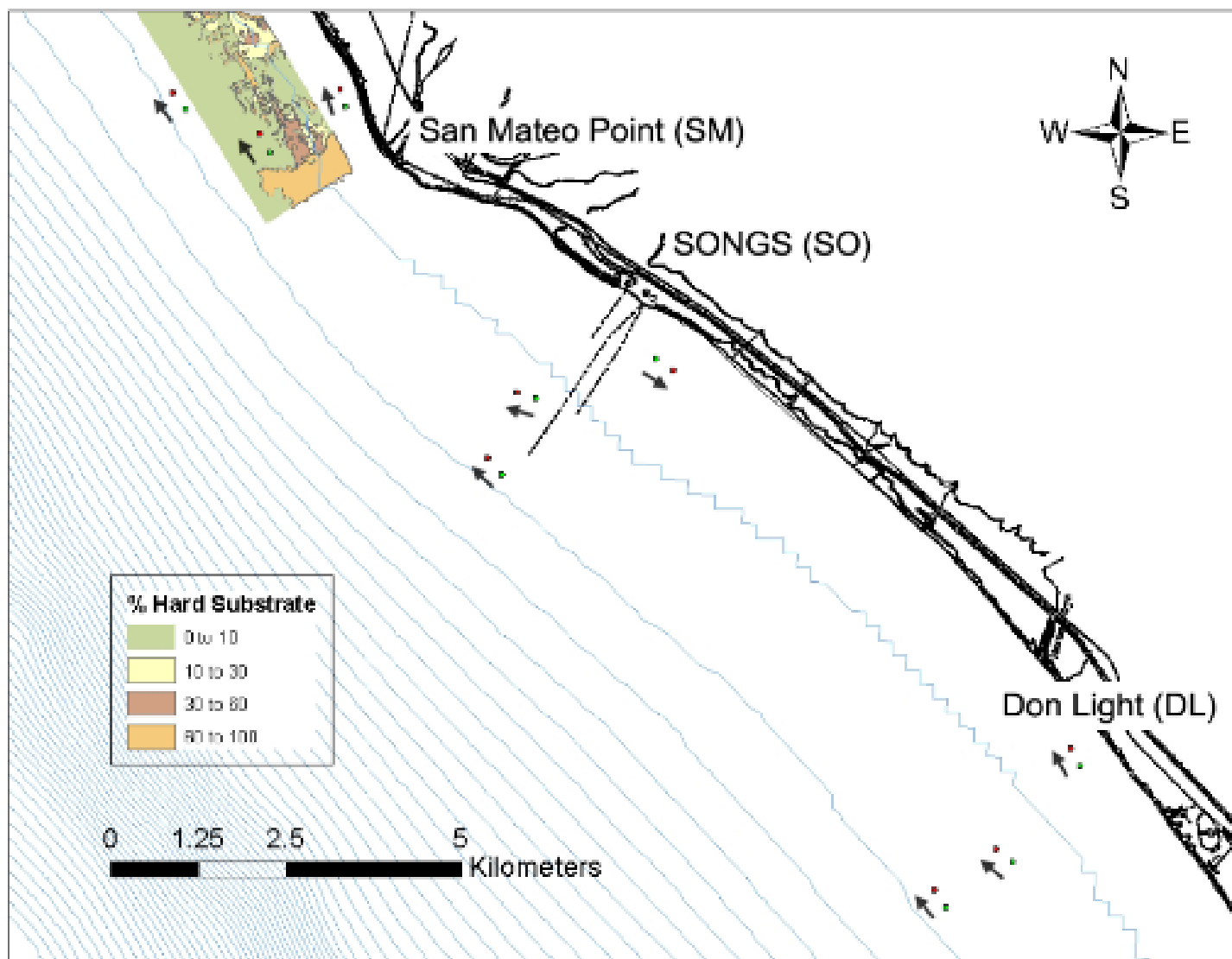
The areas in the yellow boxes have been dismantled or they are undergoing active demolition.



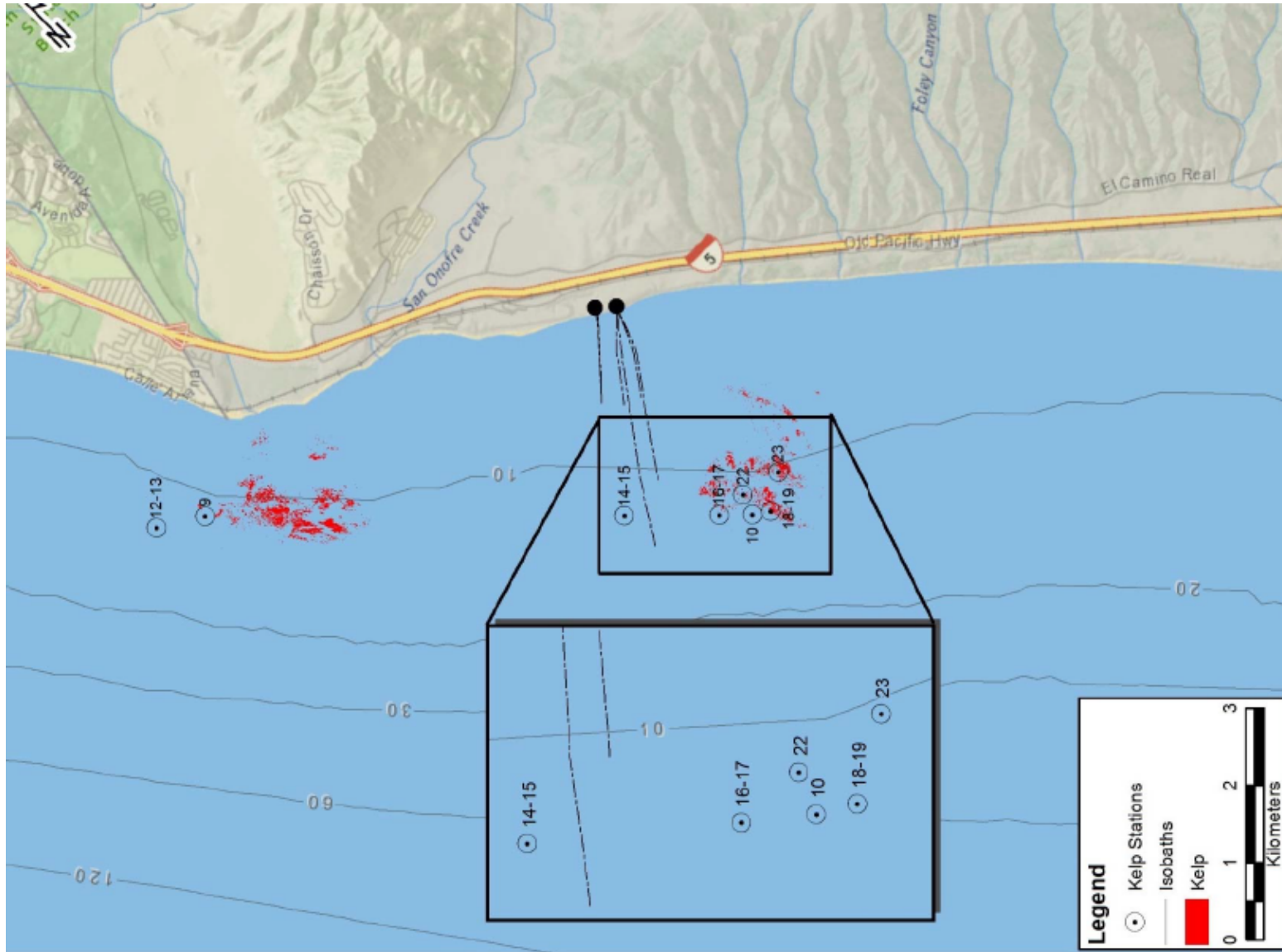
Map-4 - Location of temperature and water quality profiles offshore of SONGS



**Map 5 –
Location of
three trawling
sites (each site
with three
sampling
stations)
offshore of
San Mateo
Point, SONGS,
and Don Light.
Blue lines
represent 10-m
depth
contours.
Green and red
dots represent
the start and
end locations
of each trawl,
respectively,
with an arrow
indicating the
direction of
the tow.**

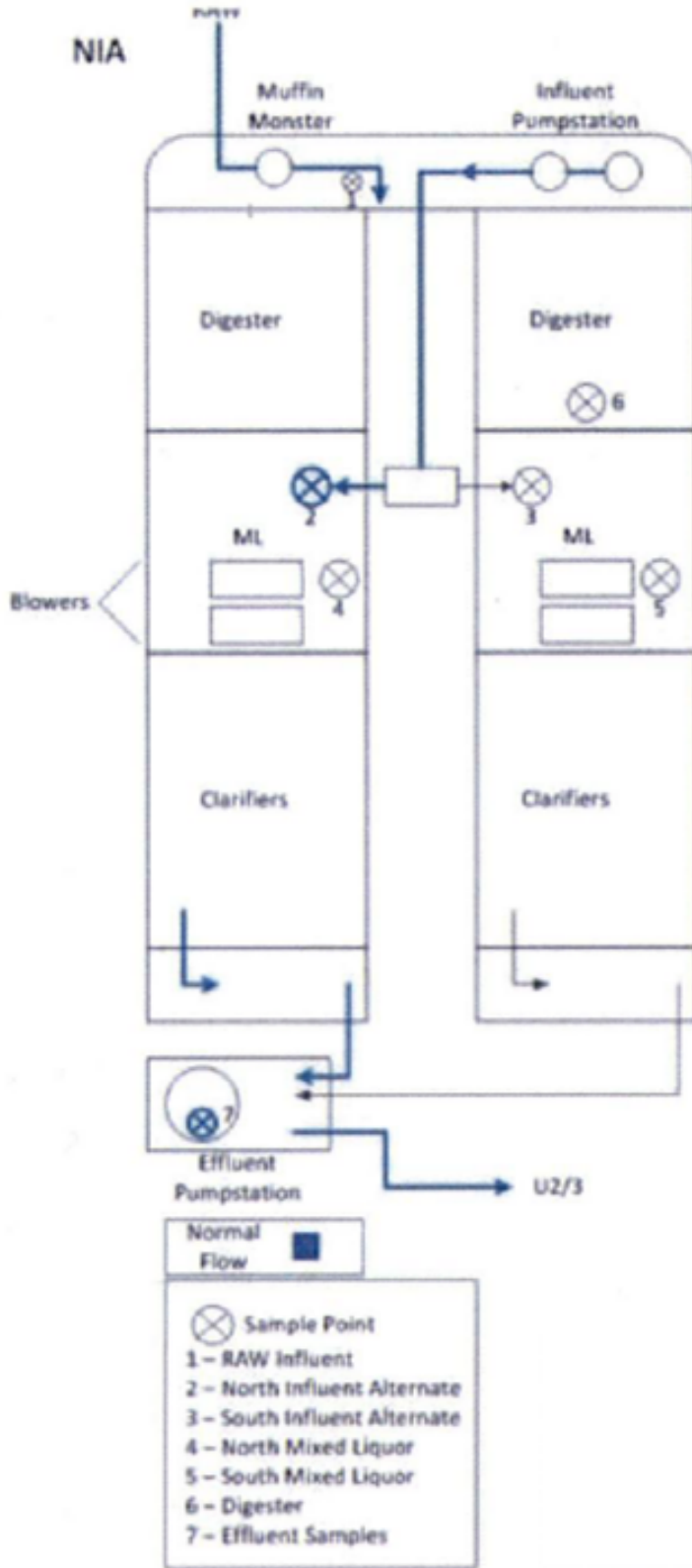


Map 6 – Location of six sampling stations (Stations 10, 14-15, 16-17, 18-19, 22, and 23) located in the San Onofre Kelp.



ATTACHMENT C – FLOW SCHEMATICS

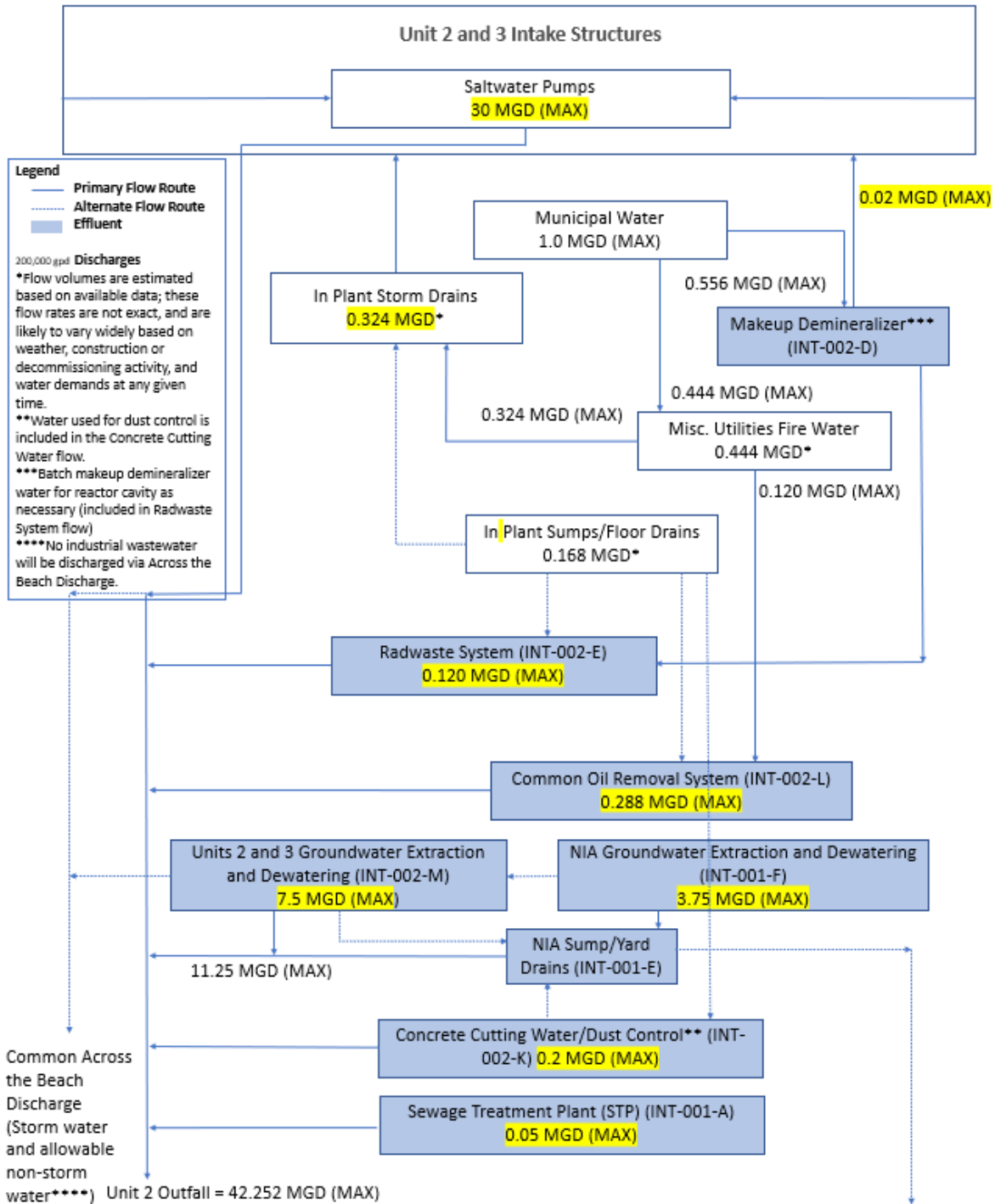
Flow Schematic 1 – North Industrial Area (NIA) Sewage Treatment Plant



Flow Schematic 2 – San Onofre Nuclear Generating Station (SONGS) Water Balance Diagram

Total low-volume waste stream, Monitoring Location INT-002 = 0.12 MGD (INT-002-E) + 0.02 MGD (INT-002-D) + 3.75 MGD (INT-001-F/INT-001-E) + 7.5 MGD (INT-002-M) + 0.2 MGD (INT-002-K) + 0.288 MGD (INT-002-L) = 11.878 MGD.

Total flow to Outfall 002, Monitoring Location EFF-002 = 0.05 MGD (INT-001-A) + 11.878 MGD (INT-002) + 0.324 MGD (stormwater) + 30 MGD (saltwater) = 42.252 MGD



Over the beach discharge from nonindustrial pathways in accordance with the Coastal Development Permit grading plan and CGP/SWPPP

ATTACHMENT D – STANDARD PROVISIONS

1. Standard Provisions – Permit Compliance

1.1. Duty to Comply

- 1.1.1. The Discharger must comply with all of the terms, requirements, and conditions of this Order. Any noncompliance constitutes a violation of the federal Clean Water Act (CWA) and the California Water Code (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) section 122.41(a); Water Code, sections 13261, 13263, 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 federal 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 section 122.41(a)(1).)

1.2. Need to Halt or Reduce Activity Not a Defense

It shall not be a defense for the 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 section 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 section 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 includes 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 the Discharger only when necessary to achieve compliance with the conditions of this Order. (40 CFR section 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 section 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 section 122.5(c).)

1.6. Inspection and Entry

The Discharger shall allow the San Diego Water Board, 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 United States Code (U.S.C.) section 1318(a)(4)(b); 40 CFR section 122.41(i); Water Code, sections 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. section 1318(a)(4)(b)(i); 40 CFR section 122.41(i)(1); Water Code, sections 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. section 1318(a)(4)(b)(ii); 40 CFR section 122.41(i)(2); Water Code, sections 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. section 1318(a)(4)(b)(ii); 40 CFR section 122.41(i)(3); Water Code, sections 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 federal CWA or the Water Code, any substances or parameters at any location. (33 U.S.C. section 1318(a)(4)(b); 40 CFR section 122.41(i)(4); Water Code, sections 13267, 13383.)

1.7. Bypass

1.7.1. Definitions

- 1.7.1.1. "Bypass" means the intentional diversion of waste streams from any portion of a treatment facility. (40 CFR section 122.41(m)(1)(i).)
- 1.7.1.2. "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 section 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 section 122.41(m)(2).)
- 1.7.3. **Prohibition of bypass.** Bypass is prohibited, and the San Diego Water Board may take enforcement action against the Discharger for bypass, unless (40 CFR section 122.41(m)(4)(i)):

- 1.7.3.1. Bypass was unavoidable to prevent loss of life, personal injury, or severe property damage (40 CFR section 122.41(m)(4)(i)(A));
- 1.7.3.2. 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 section 122.41(m)(4)(i)(B)); and
- 1.7.3.3. The Discharger submitted notice to the San Diego Water Board as required under Standard Provisions – Permit Compliance 1.7.5 below. (40 CFR section 122.41(m)(4)(i)(C).)
- 1.7.4. The San Diego Water Board may approve an anticipated bypass, after considering its adverse effects, if the San Diego Water Board determines that it will meet the three conditions listed in Standard Provisions – Permit Compliance 1.7.3 above. (40 CFR section 122.41(m)(4)(ii).)

1.7.5. **Notice**

- 1.7.5.1. 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. The notice shall be sent to the San Diego Water Board. As of December 2023, a notice shall also be submitted electronically to the initial recipient defined in Standard Provisions – Reporting 5.10 below. Notices shall comply with 40 CFR part 3, 40 CFR section 122.22, and 40 CFR part 127. (40 CFR section 122.41(m)(3)(i).)
- 1.7.5.2. Unanticipated bypass. The Discharger shall submit a notice of an unanticipated bypass as required in Standard Provisions - Reporting V.E below (24-hour notice). The notice shall be sent to the San Diego Water Board. As of December 2023, a notice shall also be submitted electronically to the initial recipient defined in Standard Provisions – Reporting 5.10 below. Notices shall comply with 40 CFR part 3, 40 CFR section 122.22, and 40 CFR part 127. (40 CFR section 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 section 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 section 122.41(n)(2).)

- 1.8.2. **Conditions necessary for a demonstration of upset.** The 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 section 122.41(n)(3)):
 - 1.8.2.1. An upset occurred and that the Discharger can identify the cause(s) of the upset (40 CFR section 122.41(n)(3)(i));
 - 1.8.2.2. The permitted facility was, at the time, being properly operated (40 CFR section 122.41(n)(3)(ii));
 - 1.8.2.3. The Discharger submitted notice of the upset as required in Standard Provisions – Reporting 5.5.2.2 below (24-hour notice) (40 CFR section 122.41(n)(3)(iii)); and
 - 1.8.2.4. The Discharger complied with any remedial measures required under Standard Provisions – Permit Compliance. (40 CFR section 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 have the burden of proof. (40 CFR section 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 section 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 section 122.41(b).)

2.3. Transfers

This Order is not transferable to any person except after notice to the San Diego Water Board. The San Diego 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 federal CWA and the Water Code. (40 CFR sections 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 section 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 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 sections 122.21(e)(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 San Diego Water Board Executive Officer at any time. (40 CFR section 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 section 122.41(j)(3)(i));
- 4.2.2. The individual(s) who performed the sampling or measurements (40 CFR section 122.41(j)(3)(ii));
- 4.2.3. The date(s) analyses were performed (40 CFR section 122.41(j)(3)(iii));
- 4.2.4. The individual(s) who performed the analyses (40 CFR section 122.41(j)(3)(iv));
- 4.2.5. The analytical techniques or methods used (40 CFR section 122.41(j)(3)(v)); and
- 4.2.6. The results of such analyses. (40 CFR section 122.41(j)(3)(vi).)

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

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

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

5. Standard Provisions – Reporting

5.1. Duty to Provide Information

The Discharger shall furnish to the San Diego Water Board, State Water Board, or USEPA within a reasonable time, any information which the San Diego 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 San Diego Water Board, State Water Board, or USEPA copies of records required to be kept by this Order. (40 CFR section 122.41(h); Water Code, sections 13267, 13383.)

5.2. Signatory and Certification Requirements

5.2.1. All applications, reports, or information submitted to the San Diego 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 section 122.41(k).)

5.2.2. All permit applications shall be signed by a responsible corporate officer. For the purpose of this section, a responsible corporate officer means: (i) A president, secretary, treasurer, or vice-president of the corporation in charge of a principal business function, or any other person who performs similar policy- or decision-making functions for the corporation, or (ii) the manager of one or more manufacturing, production, or operating facilities, provided, the manager is authorized to make management decisions which govern the operation of the regulated facility including having the explicit or implicit duty of making major capital investment recommendations, and initiating and directing other comprehensive measures to assure long term environmental compliance with environmental laws and regulations; the manager can ensure that the necessary systems are established or actions taken to gather complete and accurate information for permit application requirements; and where authority to sign documents has been assigned or delegated to the manager in accordance with corporate procedures. (40 CFR section 122.22(a)(1).)

5.2.3. All reports required by this Order and other information requested by the San Diego 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:

- 5.2.3.1. The authorization is made in writing by a person described in Standard Provisions – Reporting 5.2.2 above (40 CFR section 122.22(b)(1));
- 5.2.3.2. 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 section 122.22(b)(2)); and
- 5.2.3.3. The written authorization is submitted to the San Diego Water Board and State Water Board. (40 CFR section 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 San Diego 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 section 122.22(c).)
- 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 section 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 (NPDES Electronic Reporting Requirements) are met for that submission. (40 CFR section 122.22(e).)

5.3. Monitoring Reports

- 5.3.1. Monitoring results shall be reported at the intervals specified in the Monitoring and Reporting Program (Attachment E) in this Order. (40 CFR section 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 San Diego Water Board or State

Water Board. As of December 21, 2016, 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 section 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 San Diego Water Board or State Water Board. (40 CFR section 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 section 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 section 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. 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 2023, all reports related to combined sewer overflows, sanitary sewer overflows, or bypass events must be submitted to the San Diego Water Board and 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 San Diego 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 section 122.41(l)(6)(i).)

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

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

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

5.5.3. The San Diego 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 section 122.41(l)(6)(ii)(B).)

5.6. Planned Changes

The Discharger shall give notice to the San Diego 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 section 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 40 CFR section 122.29(b) (40 CFR section 122.41(l)(1)(i)); or

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 effluent limitations in this Order. (40 CFR section 122.41(l)(1)(ii).)

5.6.3. The alteration or addition could significantly change the nature or increase the quantity of pollutants discharged. This notification applies to pollutants that are subject neither to effluent limitations in this Order nor to notification requirements under 40 CFR section 122.42(a)(1) (see Additional Provisions—Notification Levels 7.1.1). (40 CFR section 122.41(l)(1)(ii).)

5.7. Anticipated Noncompliance

The Discharger shall give advance notice to the San Diego Water Board of any planned changes in the permitted facility or activity that may result in noncompliance with this Order's requirements. (40 CFR section 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 San Diego 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 section 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 San Diego Water Board, State Water Board, or USEPA, the Discharger shall promptly submit such facts or information. (40 CFR section 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 section 122.41(l)(9).)

6. Standard Provisions – Enforcement

The San Diego 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.

7. Additional Provisions – Notification Levels

Non-Municipal Facilities - Existing manufacturing, commercial, mining, and silvicultural Dischargers shall notify the San Diego Water Board as soon as they know or have reason to believe (40 CFR section 122.42(a)):

7.1. That any activity has occurred or will occur that would result in the discharge, on a routine or frequent basis, of any toxic pollutant that is not limited in this Order, if that discharge will exceed the highest of the following "notification levels" (40 CFR section 122.42(a)(1)):

7.1.1. 100 micrograms per liter ($\mu\text{g/L}$) (40 CFR section 122.42(a)(1)(i));

7.1.2. 200 $\mu\text{g/L}$ for acrolein and acrylonitrile; 500 $\mu\text{g/L}$ for 2,4 dinitrophenol and 2 methyl 4,6 dinitrophenol; and 1 milligram per liter (mg/L) for antimony (40 CFR section 122.42(a)(1)(ii));

7.1.3. Five (5) times the maximum concentration value reported for that pollutant in the Report of Waste Discharge (40 CFR section 122.42(a)(1)(iii)); or

7.1.4. The level established by the San Diego Water Board in accordance with section 122.44(f). (40 CFR section 122.42(a)(1)(iv).)

7. 2. That any activity has occurred or will occur that would result in the discharge, on a non-routine or infrequent basis, of any toxic pollutant that is not limited in this Order, if that discharge will exceed the highest of the following "notification levels" (40 CFR section 122.42(a)(2)):

7.2.1. 500 $\mu\text{g/L}$ (40 CFR section 122.42(a)(2)(i));

- 7.2.2.** 1 mg/L for antimony (40 CFR section 122.42(a)(2)(ii));
- 7.2.3.** Ten (10) times the maximum concentration value reported for that pollutant in the Report of Waste Discharge (40 C CFR section 122.42(a)(2)(iii)); or
- 7.2.4.** The level established by the San Diego Water Board in accordance with section 122.44(f). (40 CFR section 122.42(a)(2)(iv).)

ATTACHMENT E – MONITORING AND REPORTING PROGRAM

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ATTACHMENT E – MONITORING AND REPORTING PROGRAM (MRP)

Section 308 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. California Water Code (Water Code) section 13383 also authorizes the California Regional Water Quality Control Board, San Diego Region (San Diego Water Board) to establish monitoring, inspection, entry, reporting, and recordkeeping requirements. Pursuant to this authority, this MRP establishes conditions for the Southern California Edison Company (Discharger) to conduct routine or episodic self-monitoring of the discharges regulated under this Order at specified effluent and receiving water monitoring locations. The MRP requires the Discharger to report the results to the San Diego Water Board with information necessary to evaluate discharge characteristics and compliance status. While the San Diego Water Board is not required to consider MRP costs, it recognizes that monitoring and reporting costs can be a significant burden. Based on an email from the Discharger dated November 17, 2022, the monitoring and reporting costs are approximately \$399,500 annually. The MRP is reasonable given the needs and benefits of the reports.

The purpose of the MRP is to determine and ensure compliance with effluent limitations and other requirements established in this Order, assess treatment efficiency, characterize effluents, and characterize the receiving water and the effects of the discharge on the receiving water. The MRP also specifies requirements concerning the proper use, maintenance, and installation of monitoring equipment and methods, and the monitoring type intervals and frequency necessary to yield data that are representative of the activities and discharges regulated under this Order.

Each monitoring section contains an introductory paragraph summarizing why the monitoring is needed and the key management questions the monitoring is designed to answer. In developing the list of key management questions, the San Diego Water Board considered four basic types of information for each question:

- (1) Management Information Need – Why does the San Diego Water Board need to know the answer?
- (2) Monitoring Criteria – What monitoring will be conducted for deriving an answer to the question?
- (3) Expected Product – How should the answer be expressed and reported?
- (4) Possible Management Actions – What actions will be potentially influenced by the answer?

The framework for this monitoring program has three components that comprise a range of spatial and temporal scales: 1. core monitoring, 2. regional monitoring, and 3. special studies.

1. Core monitoring consists of the basic site-specific monitoring necessary to measure compliance with individual effluent limits and/or impacts to receiving water quality. Core monitoring is typically conducted in the immediate vicinity of the discharge by examining local scale spatial effects.

2. Regional monitoring provides information necessary to make assessments over large areas and serves to evaluate cumulative effects of all anthropogenic inputs. Regional monitoring data also assists in the interpretation of core monitoring studies. In the event that a regional monitoring effort takes place during the permit cycle in which the MRP does not specifically address regional monitoring, the San Diego Water Board may allow relief from aspects of core monitoring components in order to encourage participation pursuant to section 5 of this MRP.
3. Special studies are directed monitoring efforts designed in response to specific management or research questions identified through either core or regional monitoring programs. Often, they are used to help understand core or regional monitoring results, where a specific environmental process is not well understood, or to address unique issues of local importance.

1. General Monitoring Provisions

- 1.1. Samples and measurements taken as required herein shall be representative of the volume and nature of the monitoring discharge. All samples shall be taken at the monitoring points specified in section 2, Table E-1 and, unless otherwise specified, before the monitored flow joins or is diluted by any other waste stream, body of water, or substance. Monitoring points shall not be changed without notification to and the approval of the San Diego Water Board.
- 1.2. Appropriate flow measurement devices and/or engineering methods consistent with accepted scientific practices shall be selected and used to ensure the accuracy and reliability of measurements of the volume of monitored discharges. The devices shall be installed, calibrated and maintained to ensure that the accuracy of the measurement is consistent with the accepted capability of that type of device. Devices selected shall be capable of measuring flows with a maximum deviation of less than ± 10 percent from true discharge rates throughout the range of expected discharge volumes.
- 1.3. Monitoring must be conducted according to United States Environmental Protection Agency (USEPA) test procedures approved at 40 CFR part 136, *Guidelines Establishing Test Procedures for the Analysis of Pollutants Under the CWA* as amended, or an alternative test procedure (ATP) approved by USEPA, or by the San Diego Water Board when there are no methods specified for a pollutant at 40 CFR part 136.
- 1.4. Data produced and reports submitted pursuant to this Order shall be generated by a laboratory accredited by the State of California Environmental Laboratory Accreditation Program (ELAP). The laboratory must hold a valid certificate of accreditation for the analytical test method specified in 40 CFR part 136, an ATP approved by USEPA, or by the San Diego Water Board when there are no methods specified for a pollutant at 40 CFR part 136. The laboratory must include quality assurance/quality control data in all data reports required by this Order and submit electronic data as required by the San Diego Water Board. Data generated using field tests is exempt pursuant to Water Code Section 13176. Additional information on ELAP can be accessed at: https://www.waterboards.ca.gov/drinking_water/certlic/labs/index.shtml.

- 1.5. Records of monitoring information shall include information required under Standard Provision, Attachment D, section 4 of this Order.
- 1.6. The Discharger shall have, and implement, an acceptable written quality assurance (QA) plan for laboratory analyses. Duplicate chemical analyses must be conducted on a minimum of 10 percent of the samples or at least one sample per month, whichever is greater. A similar frequency shall be maintained for analyzing spiked samples. The Discharger should have a success rate equal or greater than 80 percent.
- 1.7. 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 Resources Control Board (State Water Board) at the following address:

 State Water Resources Control Board Quality Assurance Program Officer
 Office of Information Management and Analysis
 State Water Resources Control Board
 1001 I Street, Sacramento, CA 95814
- 1.8. Analysis for toxic pollutants, including chronic toxicity, with effluent limitations based on water quality objectives and criteria of the *Water Quality Control Plan for the San Diego Basin* (Basin Plan) and the *Water Quality Control Plan for Ocean Waters of California* (Ocean Plan) shall be conducted in accordance with procedures described in the Ocean Plan and restated in this MRP.
- 1.9. The Discharger shall ensure that analytical procedures used to evaluate compliance with effluent limitations established in this Order use minimum levels (MLs) no greater than the applicable effluent limitations and are consistent with the requirements of the Ocean Plan and 40 CFR part 136, or otherwise approved by USEPA and authorized by the San Diego Water Board. If no authorized ML value is below the effluent limitation, then the method must achieve an ML no greater than the lowest ML value provided in the Ocean Plan and/or 40 CFR part 136.

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. The north latitude and west longitude information in Table E-1 are approximate for administrative purposes.

Table E-1. Monitoring Station Locations

Discharge Point Name	Monitoring Location Name	Monitoring Location Description¹
--	INF-001-A	Influent: A location where a representative sample of the North Industrial Area (NIA) Sewage Treatment Plant Influent can be obtained.
--	INF-002	Influent: A location where a representative sample of the ocean water from the saltwater pump intake for Unit 2 can be obtained. (Previously INF-2-Cool)

Discharge Point Name	Monitoring Location Name	Monitoring Location Description¹
--	INF-003	Influent: A location where a representative sample of the ocean water from the saltwater pump intake for Unit 3 can be obtained. (Previously INF-3-Cool)
001-A	INT-001-A	NIA Internal Waste streams Routed to Discharge Point 002: A location where a representative sample of the NIA Sewage Treatment Plant Effluent can be obtained.
001-E	INT-001-E ²	NIA Internal Waste streams Routed to Discharge Point 002: A location where a representative sample of the NIA Yard Drains (sump) flow can be obtained.
001-F	INT-001-F ²	NIA Internal Waste streams Routed to Discharge Point 002: A location where a representative sample of the NIA Dewatering flow can be obtained.
--	INT-002 ²	Unit 2 Internal Waste Streams Routed to Discharge Point 002: Aliquot of all in-plant low-volume wastewater discharges for Unit 2. Unit 2 combined discharge monitoring shall be conducted at a point before all in-plant and/or low-volume waste streams comingle with ocean water.
002-D	INT-002-D ²	Unit 2 Internal Waste Streams Routed to Discharge Point 002: A location where a representative sample of the Makeup Demineralizer can be obtained.
002-E	INT-002-E ²	Unit 2 Internal Waste Streams Routed to Discharge Point 002: A location where a representative sample of the Radwaste System can be obtained.
002-K	INT-002-K ²	Unit 2 Internal Waste Streams Routed to Discharge Point 002: A location where a representative sample of the Concrete Cutting Water can be obtained.
002-L	INT-002-L ²	Unit 2 Internal Waste Streams Routed to Discharge Point 002: A location where a representative sample of the Common Oil Removal System can be obtained.
002-M	INT-002-M ²	Unit 2 Internal Waste Streams Routed to Discharge Point 002: A location where a representative sample of the Dewatering can be obtained.
002	EFF-002	Effluent to the Pacific Ocean: A location where a representative sample of the Combined Discharge to Discharge Point No. 002 can be obtained. Latitude 33° 20' 55.84" North, Longitude 117° 34' 13.5" West

Discharge Point Name	Monitoring Location Name	Monitoring Location Description ¹
--	Receiving Water	All receiving water sample stations are shown in Attachment B of this Order. Locations for the stations are based on the zero-line reference, with stations arranged in a grid pattern upcoast (N) and downcoast (S) of the zero line (Figure 2-2). Numerical designations are related to historic onshore-offshore monitoring transect locations upcoast (1, 2, 4 and 8) and downcoast (1, 2, 4, 8 and 22). Stations of approximately similar depth are designated by the same initial letter: C = 10 m, F = 12 m, H = 15 m, J = 20 m, and M = 25 m. Using this system, Station F2N represents the second transect line upcoast of the zero line at 12-m depth. The line of stations farthest downcoast—Stations C22S, F22S, H22S, J22S, and M22S—are the designated reference stations (aka control stations). These stations are 6,706 m downcoast of the zero line to provide a reference station for each depth.
--	M22S	Reference Station: 33° 18.038', 117° 31.566' Temperature only.
--	J22S	Reference Station: 33° 18.490', 117°, 31.212' Temperature only.
--	H22S	Reference Station: 33° 18.716', 117°, 31.034' Temperature only.
--	F22S	Reference Station: 33° 19.042', 117°, 30.773' Temperature, dissolved oxygen, and pH.
--	C22S	Reference Station: 33° 19.408', 117°, 30.522' Dissolved oxygen, pH., and continuous temperature monitoring.
--	C1S	Impact Station: 33° 21.643', 117°, 33.694' Temperature, dissolved oxygen, and pH.
--	C2S	Impact Station: 33° 21.556', 117°, 33.491' Dissolved oxygen, pH., and continuous temperature monitoring.
--	X0	Impact Station: 33° 21.807', 117°, 33.761' Temperature, dissolved oxygen, and pH.
--	C1N	Impact Station: 33° 21.826', 117°, 34.016' Temperature, dissolved oxygen, and pH.
--	C2N	Impact Station: 33° 21.918', 117°, 34.180' Temperature, dissolved oxygen, and pH.
--	F2S	Impact Station: 33° 21.134', 117°, 33.809' Continuous temperature monitoring only.

Discharge Point Name	Monitoring Location Name	Monitoring Location Description¹
--	F2N	Impact Station: 33° 21.484', 117°, 34.482' Temperature only.
--	H2N	Impact Station: 33° 21.211', 117° 34.690' Temperature only.
--	H0	Impact Station: 33° 21.033', 117°, 34.358' Temperature only.
--	H2S	Impact Station: 33° 20.859', 117°, 34.019' Temperature only.
--	J8S	Impact Station: 33° 20.051', 117°, 33.220' Temperature only.
--	J4S	Impact Station: 33° 20.400', 117°, 33.889' Temperature, dissolved oxygen, and pH.
--	J2S	Impact Station: 33° 20.586', 117°, 34.230' Temperature, dissolved oxygen, and pH.
--	J0	Impact Station: 33° 20.772', 117°, 34.570' Temperature only.
--	J2N	Impact Station: 33° 20.948', 117°, 34.904' Temperature, dissolved oxygen, and pH.
--	J4N	Impact Station: 33° 21.128', 117°, 35.251' Temperature only.
--	J8N	Impact Station: 33° 21.460', 117°, 35.911' Temperature only.
--	M8N	Impact Station: 33° 21.053', 117°, 36.219' Temperature only.
--	M4N	Impact Station: 33° 20.707', 117°, 35.555' Temperature only.
--	M2N	Impact Station: 33° 20.524', 117° 35.206' Temperature only.
--	M0	Impact Station: 33° 20.363', 117° 34.881' Temperature only.
--	M2S	Impact Station: 33° 20.165', 117° 34.543' Temperature only.
--	M4S	Impact Station: 33° 19.989', 117° 34.208' Temperature only.
--	M8S	Impact Station: 33° 19.627', 117° 33.545' Temperature only.

Discharge Point Name	Monitoring Location Name	Monitoring Location Description ¹
--	San Onofre (SO) trawl site	San Onofre (SO) trawl site, characterized by soft-bottom seafloor, the middle isobath is close to natural rock reef structure. Station SO1: 18.3-meters (60-feet) isobath Station SO2: 12.2-meters (40-feet) isobath Station SO3: 6.1-meters (20-feet) isobath
--	San Mateo Point (SM, northern reference site)	San Mateo Point (SM, northern reference site) located approximately 5 km north of SONGS, characterized by soft-bottom seafloor, with rocky reefs in the vicinity of San Mateo, situated on the east and west sides of the SONGS mitigation reef project. Station SM1: 18.3-meters (60-feet) isobath Station SM2: 12.2-meters (40-feet) isobath Station SM3: 6.1-meters (20-feet) isobath
--	Don Light (DL, southern reference site)	Don Light (DL, southern reference site) located approximately 8.5 km south of SONGS, characterized by soft-bottom seafloor, with rocky reefs in the vicinity of San Onofre. Station DL1: 18.3-meters (60-feet) isobath Station DL2: 12.2-meters (40-feet) isobath Station DL3: 6.1-meters (20-feet) isobath.

Notes for Table E-1

1. Latitude and Longitude coordinates are provided in NAD 83 Data.
2. The facility shut down in 2013. Since 2019, as different parts of the facility are decommissioned, this stream discharges intermittently or not at all.

3. Core Monitoring Requirements

3.1. Influent Monitoring Requirements

Influent monitoring is the collection and analysis of samples or measurements of wastewater prior to the treatment processes. Influent monitoring of a wastewater stream prior to entering the treatment plant is necessary to address the following question:

- (1) Is the influent inhibiting or disrupting treatment processes or operations?
- (2) Is San Onofre Nuclear Generating Station (SONGS or Facility) complying with permit conditions, including but not limited to total suspended solids (TSS) percent removal limitations?

The Discharger shall monitor the NIA Sewage Treatment Plant influent at Monitoring Location INF-001-A as described in Table E-2 below.

Table E-2. Influent Monitoring (INF-001-A)

Parameter	Units	Sample Type	Minimum Sampling Frequency	Required Analytical Test Method
TSS	milligram per liter (mg/L)	Grab	Monthly	As required under 40 CFR part 136.

3.2. Effluent Monitoring Requirements

Effluent monitoring is the collection and analysis of samples or measurements of effluents, after all treatment processes, to determine and quantify contaminants and to demonstrate compliance with applicable effluent limitations, standards, and other requirements of this Order.

Effluent monitoring is necessary to address the following questions:

- (1) Does the effluent comply with permit effluent limitations and other requirements of this Order, thereby ensuring that water quality standards are achieved in the receiving water?
- (2) What is the mass of constituents that are discharged daily, monthly, or annually?
- (3) Is the effluent concentration or mass changing over time?
- (4) Is the Facility being properly operated and maintained to ensure compliance with the conditions of this Order?

3.2.1. Monitoring Location INT-001-A – NIA Sewage Treatment Plant (Internal Outfall 001-A): The Discharger shall monitor NIA Sewage Treatment Plant effluent at Internal Outfall 001-A (at monitoring location INT-001-A) as described in Table E-3 below.

Table E-3. Internal Effluent Monitoring (INT-001-A)¹

Parameter	Units	Sample Type	Minimum Sampling Frequency	Required Analytical Test Method
Flow (Average and Daily Maximum)	million gallons per day (MGD)	Meter or Estimate	Daily	--
Oil and Grease	mg/L, pounds per day (lbs/day) ²	Grab	Monthly	As required under 40 CFR part 136.
TSS	mg/L, % ³	Grab	Monthly	As required under 40 CFR part 136.
pH	standard units	Grab	Monthly	As required under 40 CFR part 136.
Settleable Solids	milliliters per liter (ml/L)	Grab	Monthly	As required under 40 CFR part 136.
Turbidity	nephelometric turbidity units (NTU)	Grab	Monthly	As required under 40 CFR part 136.

Notes for Table E-3

1. See Attachment A for definitions of abbreviations and a glossary of common terms used in this Order.
2. The Discharger shall calculate and report the mass emission rate (MER) of the constituent for each sample taken. The MER shall be calculated in accordance with section 7.13 of this Order.
3. The percent shall be calculated according to section 7.9 of this Order, *Compliance Determination, Percent Removal*.

3.2.2. Monitoring Location INT-002 - Combined Low-Volume Waste Stream from Monitoring Locations INT-001-E, INT-001-F, INT-002-D, INT-002-E, INT-002-K, INT-002-L, and INT-002-M (Internal Outfall INT-002):

For the purposes of monitoring, the following wastewaters are considered low-volume waste streams: water draining to NIA Yard Drains (INT-001-E), NIA dewatering (INT-001-F), makeup demineralizer wastewater (INT-002-D), radwaste system wastewater (INT-002-E), concrete cutting water (INT-002-K), oil removal system wastewater (INT-002-L), and groundwater dewatering (INT-002-M).

A composite sample shall be taken collectively, as if from one source, from as many individual low-volume waste stream discharge sources as possible, that are collected as grab samples and composited on a flow-weighted basis. Individual low-volume waste stream discharges that account for no flow on the day of sample collection should not be included in a composite sample. The flow rate used to determine the proportion of each individual low-volume waste stream discharge in the composited sample shall be the actual flow rate (preferred) or the estimated flow rate for the day on which samples are collected. The composite sample representing combined individual low-volume waste stream discharges from the NIA and Unit 2 shall be monitored as described in Table E-4 below with the results reported as Monitoring Location INT-002. The Discharger shall report which low-flow waste streams are included in the composite sample.

Table E-4. Internal Effluent Monitoring – Combined Low-Volume Waste Stream Discharges¹

Parameter ¹	Units	Sample Type	Minimum Sampling Frequency	Required Analytical Test Method
TSS	mg/L, lbs/day ²	Flow Weighted Composite	Annually ³	As required under 40 CFR part 136.
Oil and Grease	mg/L, lbs/day ²	Flow Weighted Composite	Annually ³	As required under 40 CFR part 136.
pH	standards units	Flow Weighted Composite	Annually ³	As required under 40 CFR part 136.
Arsenic	µg/L, lbs/day ²	Flow Weighted Composite	Annually ³	As required under 40 CFR part 136.

Parameter¹	Units	Sample Type	Minimum Sampling Frequency	Required Analytical Test Method
Cadmium, Total Recoverable	µg/L, lbs/day ²	Flow Weighted Composite	Annually ³	As required under 40 CFR part 136.
Chromium (hexavalent), Total Recoverable ⁴	µg/L, lbs/day ²	Flow Weighted Composite	Annually ³	As required under 40 CFR part 136.
Copper, Total Recoverable	µg/L, lbs/day ²	Flow Weighted Composite	Annually ³	As required under 40 CFR part 136.
Lead, Total Recoverable	µg/L, lbs/day ²	Flow Weighted Composite	Annually ³	As required under 40 CFR part 136.
Mercury, Total Recoverable	µg/L, lbs/day ²	Flow Weighted Composite	Annually ³	As required under 40 CFR part 136.
Nickel, Total Recoverable	µg/L, lbs/day ²	Flow Weighted Composite	Annually ³	As required under 40 CFR part 136.
Selenium, Total Recoverable	µg/L, lbs/day ²	Flow Weighted Composite	Annually ³	As required under 40 CFR part 136.
Silver, Total Recoverable	µg/L, lbs/day ²	Flow Weighted Composite	Annually ³	As required under 40 CFR part 136.
Zinc, Total Recoverable	µg/L, lbs/day ²	Flow Weighted Composite	Annually ³	As required under 40 CFR part 136.
Cyanide, Total (as CN) ⁵	µg/L, lbs/day ²	Flow Weighted Composite	Annually ³	As required under 40 CFR part 136.
Ammonia (expressed as nitrogen)	µg/L, lbs/day ²	Flow Weighted Composite	Annually ³	As required under 40 CFR part 136.
Phenolic compounds ¹ (non-chlorinated)	µg/L, lbs/day ²	Flow Weighted Composite	Annually ³	As required under 40 CFR part 136.
Chlorinated phenolics ¹	µg/L, lbs/day ²	Flow Weighted Composite	Annually ³	As required under 40 CFR part 136.
Endosulfan ¹	µg/L, lbs/day ²	Flow Weighted Composite	Annually ³	As required under 40 CFR part 136.

Parameter¹	Units	Sample Type	Minimum Sampling Frequency	Required Analytical Test Method
Endrin	µg/L, lbs/day ²	Flow Weighted Composite	Annually ³	As required under 40 CFR part 136.
Hexachlorocyclohexane (HCH) ¹	µg/L, lbs/day ²	Flow Weighted Composite	Annually ³	As required under 40 CFR part 136.
Acrolein	µg/L, lbs/day ²	Flow Weighted Composite	Annually ³	As required under 40 CFR part 136.
Antimony	µg/L, lbs/day ²	Flow Weighted Composite	Annually ³	As required under 40 CFR part 136.
Bis(2-chloroethoxy)methane	µg/L, lbs/day ²	Flow Weighted Composite	Annually ³	As required under 40 CFR part 136.
Bis(2-chloroisopropyl)ether	µg/L, lbs/day ²	Flow Weighted Composite	Annually ³	As required under 40 CFR part 136.
Chlorobenzene	µg/L, lbs/day ²	Flow Weighted Composite	Annually ³	As required under 40 CFR part 136.
Chromium (III), Total Recoverable ⁴	µg/L, lbs/day ²	Flow Weighted Composite	Annually ³	As required under 40 CFR part 136.
di-n-butyl phthalate	µg/L, lbs/day ²	Flow Weighted Composite	Annually ³	As required under 40 CFR part 136.
Dichlorobenzenes ¹	µg/L, lbs/day ²	Flow Weighted Composite	Annually ³	As required under 40 CFR part 136.
Diethyl phthalate	µg/L, lbs/day ²	Flow Weighted Composite	Annually ³	As required under 40 CFR part 136.
Dimethyl phthalate	µg/L, lbs/day ²	Flow Weighted Composite	Annually ³	As required under 40 CFR part 136.
4,6-Dinitro-2-methylphenol	µg/L, lbs/day ²	Flow Weighted Composite	Annually ³	As required under 40 CFR part 136.
2,4-Dinitrophenol	µg/L, lbs/day ²	Flow Weighted Composite	Annually ³	As required under 40 CFR part 136.

Parameter¹	Units	Sample Type	Minimum Sampling Frequency	Required Analytical Test Method
Ethylbenzene	µg/L, lbs/day ²	Flow Weighted Composite	Annually ³	As required under 40 CFR part 136.
Fluoranthene	µg/L, lbs/day ²	Flow Weighted Composite	Annually ³	As required under 40 CFR part 136.
Hexachlorocyclopentadiene	µg/L, lbs/day ²	Flow Weighted Composite	Annually ³	As required under 40 CFR part 136.
Nitrobenzene	µg/L, lbs/day ²	Flow Weighted Composite	Annually ³	As required under 40 CFR part 136.
Thallium, Total Recoverable	µg/L, lbs/day ²	Flow Weighted Composite	Annually ³	As required under 40 CFR part 136.
Toluene	µg/L, lbs/day ²	Flow Weighted Composite	Annually ³	As required under 40 CFR part 136.
Tributyltin	µg/L, lbs/day ²	Flow Weighted Composite	Annually ³	As required under 40 CFR part 136.
1,1,1-Trichloroethane	µg/L, lbs/day ²	Flow Weighted Composite	Annually ³	As required under 40 CFR part 136.
Acrylonitrile	µg/L, lbs/day ²	Flow Weighted Composite	Annually ³	As required under 40 CFR part 136.
Aldrin	µg/L, lbs/day ²	Flow Weighted Composite	Annually ³	As required under 40 CFR part 136.
Benzene	µg/L, lbs/day ²	Flow Weighted Composite	Annually ³	As required under 40 CFR part 136.
Benzidine	µg/L, lbs/day ²	Flow Weighted Composite	Annually ³	As required under 40 CFR part 136.
Beryllium, Total Recoverable	µg/L, lbs/day ²	Flow Weighted Composite	Annually ³	As required under 40 CFR part 136.
Bis(2-chloroethyl)ether	µg/L, lbs/day ²	Flow Weighted Composite	Annually ³	As required under 40 CFR part 136.

Parameter¹	Units	Sample Type	Minimum Sampling Frequency	Required Analytical Test Method
Bis(2-ethylhexyl)phthalate	µg/L, lbs/day ²	Flow Weighted Composite	Annually ³	As required under 40 CFR part 136.
Carbon tetrachloride	µg/L, lbs/day ²	Flow Weighted Composite	Annually ³	As required under 40 CFR part 136.
Chlordane ¹	µg/L, lbs/day ²	Flow Weighted Composite	Annually ³	As required under 40 CFR part 136.
Chlorodibromomethane	µg/L, lbs/day ²	Flow Weighted Composite	Annually ³	As required under 40 CFR part 136.
Chloroform	µg/L, lbs/day ²	Flow Weighted Composite	Annually ³	As required under 40 CFR part 136.
Dichlorodiphenyltrichloroethane (DDT) ¹	µg/L, lbs/day ²	Flow Weighted Composite	Annually ³	As required under 40 CFR part 136.
1,4-Dichlorobenzene	µg/L, lbs/day ²	Flow Weighted Composite	Annually ³	As required under 40 CFR part 136.
3-3'-Dichlorobenzidine	µg/L, lbs/day ²	Flow Weighted Composite	Annually ³	As required under 40 CFR part 136.
1,2-Dichloroethane	µg/L, lbs/day ²	Flow Weighted Composite	Annually ³	As required under 40 CFR part 136.
1,1-Dichloroethylene	µg/L, lbs/day ²	Flow Weighted Composite	Annually ³	As required under 40 CFR part 136.
Dichlorobromomethane	µg/L, lbs/day ²	Flow Weighted Composite	Annually ³	As required under 40 CFR part 136.
Dichloromethane	µg/L, lbs/day ²	Flow Weighted Composite	Annually ³	As required under 40 CFR part 136.
1,3-Dichloropropene	µg/L, lbs/day ²	Flow Weighted Composite	Annually ³	As required under 40 CFR part 136.
Dieldrin	µg/L, lbs/day ²	Flow Weighted Composite	Annually ³	As required under 40 CFR part 136.

Parameter¹	Units	Sample Type	Minimum Sampling Frequency	Required Analytical Test Method
2,4-Dinitrotoluene	µg/L, lbs/day ²	Flow Weighted Composite	Annually ³	As required under 40 CFR part 136.
1,2-Diphenylhydrazine	µg/L, lbs/day ²	Flow Weighted Composite	Annually ³	As required under 40 CFR part 136.
Halomethanes ¹	µg/L, lbs/day ²	Flow Weighted Composite	Annually ³	As required under 40 CFR part 136.
Heptachlor	µg/L, lbs/day ²	Flow Weighted Composite	Annually ³	As required under 40 CFR part 136.
Heptachlor epoxide	µg/L, lbs/day ²	Flow Weighted Composite	Annually ³	As required under 40 CFR part 136.
Hexachlorobenzene	µg/L, lbs/day ²	Flow Weighted Composite	Annually ³	As required under 40 CFR part 136.
Hexachlorobutadiene	µg/L, lbs/day ²	Flow Weighted Composite	Annually ³	As required under 40 CFR part 136.
Hexachloroethane	µg/L, lbs/day ²	Flow Weighted Composite	Annually ³	As required under 40 CFR part 136.
Isophorone	µg/L, lbs/day ²	Flow Weighted Composite	Annually ³	As required under 40 CFR part 136.
N-Nitrosodimethylamine	µg/L, lbs/day ²	Flow Weighted Composite	Annually ³	As required under 40 CFR part 136.
N-Nitrosodi-n-propylamine	µg/L, lbs/day ²	Flow Weighted Composite	Annually ³	As required under 40 CFR part 136.
N-Nitrosodiphenylamine	µg/L, lbs/day ²	Flow Weighted Composite	Annually ³	As required under 40 CFR part 136.
Polynuclear aromatic hydrocarbons (PAH) ¹	µg/L, lbs/day ²	Flow Weighted Composite	Annually ³	As required under 40 CFR part 136.
Polychlorinated Biphenyl (PCB) ¹	µg/L, lbs/day ²	Flow Weighted Composite	Annually ³	As required under 40 CFR part 136.

Parameter ¹	Units	Sample Type	Minimum Sampling Frequency	Required Analytical Test Method
TCDD Equivalents ¹	µg/L, lbs/day ²	Flow Weighted Composite	Annually ³	As required under 40 CFR part 136.
1,1,2,2-Tetrachloroethane	µg/L, lbs/day ²	Flow Weighted Composite	Annually ³	As required under 40 CFR part 136.
Tetrachloroethylene	µg/L, lbs/day ²	Flow Weighted Composite	Annually ³	As required under 40 CFR part 136.
Toxaphene	µg/L, lbs/day ²	Flow Weighted Composite	Annually ³	As required under 40 CFR part 136.
Trichloroethylene	µg/L, lbs/day ²	Flow Weighted Composite	Annually ³	As required under 40 CFR part 136.
1,1,2-Trichloroethane	µg/L, lbs/day ²	Flow Weighted Composite	Annually ³	As required under 40 CFR part 136.
2,4,6-Trichlorophenol	µg/L, lbs/day ²	Flow Weighted Composite	Annually ³	As required under 40 CFR part 136.
Vinyl Chloride	µg/L, lbs/day ²	Flow Weighted Composite	Annually ³	As required under 40 CFR part 136.

Notes for Table E-4

1. See Attachment A for definitions of abbreviations and a glossary of common terms used in this Order.
2. The MERs shall be calculated in accordance with section 7.13 of this Order. The flow rate used for the MER calculation shall be the sum of the flow rates used to determine the proportion of each individual low-volume waste stream discharges in the composited sample.
3. The minimum frequency of monitoring for this constituent shall increase to twice the minimum frequency specified, if any analysis for this constituent yields a result higher than the applicable effluent limitation specified in this Order. The increased minimum frequency of monitoring shall remain in effect until the results of a minimum of four consecutive analyses for this constituent are below all applicable effluent limitations specified in this Order.
4. The Discharger may, at their option, meet this effluent limitation as a total chromium effluent limitation and monitor for total recoverable chromium in lieu of total recoverable chromium (III) or total recoverable chromium (hexavalent).
5. If the Discharger can demonstrate to the satisfaction of the San Diego Water Board (subject to approval of an ATP by USEPA) that an analytical method is available to reliably distinguish between strongly and weakly complexed cyanide, effluent limitations may be

evaluated with the combined measurement of free cyanide, simple alkali metals cyanides, and weakly complexed organometallic cyanide complexes. In order for the analytical method to be acceptable, the recovery of free cyanide from metal complexes must be comparable to that achieved by the approved method in 40 CFR part 136, as revised May 14, 1999.

3.2.3. Individual Low-volume Waste Stream Discharges from INT-001-E, INT-001-F, INT-002-D, INT-002-E, INT-002-K, INT-002-L, and INT-002-M:

For the purposes of monitoring, the following wastewaters are considered low-volume waste steam discharges: tire demineralizer wastewater, radwaste system wastewater, water draining to plant drains, intake structure sump water, concrete cutting water, oil removal system wastewater, and dewatering.

The Discharger shall monitor individual, low-volume waste steam discharges at INT-001-E, INT-001-F, INT-002-D, INT-002-E, INT-002-K, INT-002-L, INT-002-M as described in Table E-5 below.

Table E-5. Internal Effluent Monitoring – Individual Low-volume Waste Steam Discharges¹

Parameter	Units	Sample Type	Minimum Sampling Frequency	Required Analytical Test Method
Flow (Average and Daily Maximum)	MGD	Meter or Estimate	Continuous	--
TSS	mg/L, lbs/day ²	Grab	Monthly	As required under 40 CFR part 136.
Oil and Grease	mg/L, lbs/day ²	Grab	Monthly	As required under 40 CFR part 136.

Notes for Table E-5

1. See Attachment A for definitions of abbreviations and a glossary of common terms used in this Order.
2. The MERs shall be calculated in accordance with section 7.13 of this Order. The flow rate used for each MER calculation shall be the flow rate of the corresponding individual low-volume waste steam discharge at the time of sampling.

3.2.4. Discharge Point No. 002 (EFF-002): The Discharger shall monitor the discharge from Discharge Point No. 002 at Monitoring Location EFF-002 as described in Table E-6 below. If no effluent is discharged during the reporting period, the Discharger shall report the dates within the reporting period of no discharge.

Table E-6. Final Effluent Monitoring (EFF-002)¹

Parameter	Units	Sample Type	Minimum Sampling Frequency	Required Analytical Test Method
Flow (Average and Maximum Daily)	MGD	Recorder/Totalizer	Continuous	--

Parameter	Units	Sample Type	Minimum Sampling Frequency	Required Analytical Test Method
Total Residual Chlorine	µg/L	Grab	Weekly ^{2,3}	As required under 40 CFR part 136.
Turbidity	NTU	Grab	Monthly	As required under 40 CFR part 136.
pH	standard units	Grab	Monthly	As required under 40 CFR part 136.
Chronic Toxicity	Toxic Units Chronic (TUc)	Composite	Quarterly	As required under 40 CFR part 136.
Arsenic	µg/L, lbs/day	Grab	Quarterly ³	As required under 40 CFR part 136.
Cadmium, Total Recoverable	µg/L, lbs/day	Grab	Quarterly ³	As required under 40 CFR part 136.
Chromium (hexavalent), Total Recoverable ⁴	µg/L, lbs/day	Grab	Quarterly ³	As required under 40 CFR part 136.
Copper, Total Recoverable	µg/L, lbs/day	Grab	Quarterly ³	As required under 40 CFR part 136.
Lead, Total Recoverable	µg/L, lbs/day	Grab	Quarterly ³	As required under 40 CFR part 136.
Mercury, Total Recoverable	µg/L, lbs/day	Grab	Quarterly ³	As required under 40 CFR part 136.
Nickel, Total Recoverable	µg/L, lbs/day	Grab	Semiannually	As required under 40 CFR part 136.
Selenium, Total Recoverable	µg/L, lbs/day	Grab	Quarterly ³	As required under 40 CFR part 136.
Silver, Total Recoverable	µg/L, lbs/day	Grab	Quarterly ³	As required under 40 CFR part 136.

Parameter	Units	Sample Type	Minimum Sampling Frequency	Required Analytical Test Method
Zinc, Total Recoverable	µg/L, lbs/day	Grab	Semiannually	As required under 40 CFR part 136.
Cyanide, Total (as CN) ⁵	µg/L, lbs/day	Grab	Quarterly ³	As required under 40 CFR part 136.
Ammonia, Un-ionized (as Nitrogen)	mg/L, lbs/day	Grab	Quarterly ³	As required under 40 CFR part 136.
Phenolic compounds ¹ (non-chlorinated)	µg/L, lbs/day	Grab	Quarterly ³	As required under 40 CFR part 136.
Chlorinated phenolics ¹	µg/L, lbs/day	Grab	Quarterly ³	As required under 40 CFR part 136.
Endosulfan ¹	µg/L, lbs/day	Grab	Quarterly ³	As required under 40 CFR part 136.
Endrin	µg/L, lbs/day	Grab	Quarterly ³	As required under 40 CFR part 136.
HCH ¹	µg/L, lbs/day	Grab	Quarterly ³	As required under 40 CFR part 136.

Notes for Table E-6

1. See Attachment A for definitions of abbreviations and a glossary of common terms used in this Order.
2. Monitoring for total residual chlorine is only required if the Discharger is chlorinating the discharge.
3. The minimum frequency of monitoring for this constituent shall increase from quarterly to monthly, if any analysis for this constituent yields a result higher than the applicable effluent limitation specified in this Order. The increased minimum frequency of monitoring shall remain in effect until the results of at least four consecutive analyses for this constituent are below all applicable effluent limitations specified in this Order.
4. The Discharger may, at their option, meet this effluent limitation as a total chromium effluent limitation and monitor for total recoverable chromium in lieu of total recoverable chromium (III) or total recoverable chromium (hexavalent).
5. If a Discharger can demonstrate to the satisfaction of USEPA and the State Water Board that an analytical method is available to reliably distinguish between strongly and weakly complexed cyanide, effluent limitations may be evaluated with the combined measurement of free cyanide, simple alkali metals cyanides, and weakly complexed organometallic cyanide complexes. In order for the analytical method to be acceptable, the recovery of free

cyanide from metal complexes must be comparable to that achieved by the approved method in 40 CFR part 136.

3.3. Whole Effluent Toxicity (WET) Testing Requirements

The WET refers to the overall aggregate toxic effect of an effluent measured directly by an aquatic toxicity test(s). The control of WET is one approach this Order uses to control the discharge of toxic pollutants. WET tests evaluate the 1) aggregate toxic effects of all chemicals in the effluent including additive, synergistic, or antagonistic toxicity effects; 2) the toxicity effects of unmeasured chemicals in the effluent; and 3) variability in bioavailability of the chemicals in the effluent.

Monitoring to assess the overall toxicity of the effluent is required to answer the following questions:

- (1) Does the effluent comply with effluent limitations for toxicity thereby ensuring that water quality standards are achieved in the receiving water?
- (2) If the effluent does not comply with effluent limitations for toxicity, are unmeasured pollutants causing risk to aquatic life?
- (3) If the effluent does not comply with effluent limitations for toxicity, are pollutants in combinations causing risk to aquatic life?

3.3.1. Sample Volume and Holding Time

The total sample volume shall be determined by the specific toxicity test method used. Sufficient sample volume of the effluent shall be collected to perform the required toxicity test. 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.

3.3.2. Chronic Marine Species and Test Methods

The Discharger shall conduct the following chronic toxicity tests on effluent samples in accordance with species and test methods in *Short-Term Methods for Estimating the Chronic Toxicity of Effluent and Receiving Waters to West Coast Marine Estuarine Organisms* (EPA/600/R-95/136, 1995). Artificial sea salts or hypersaline brine shall be used to increase sample salinity if needed. In no case shall these species be substituted with another test species unless written authorization from the San Diego Water Board is received.

- 3.3.2.1. A static renewal toxicity test with the topsmelt, *Atherinops affinis* (Larval Survival and Growth Test Method 1006.01). If laboratory-held cultures of the topsmelt, *Atherinops affinis*, are not available for testing, then the Discharger shall conduct a static renewal toxicity test with the inland silverside, *Menidia beryllina* (Larval Survival and Growth Test Method 1006.01), found in the third edition of *Short-term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to Marine and Estuarine Organisms* (EPA-821-R-02-014, 2002; Table IA, 40 CFR part

136). Additional species may be used by the Discharger if approved by the San Diego Water Board.

- 3.3.2.2. A static non-renewal toxicity test with the purple sea urchin, *Strongylocentrotus purpuratus*/sand dollar, *Dendraster excentricus* (Fertilization Test Method 1008.0 or Larval Development Test Method); or a static non-renewal toxicity test with the red abalone, *Haliotis rufescens* (Larval Shell Development Test Method).
- 3.3.2.3. A static non-renewal toxicity test with the giant kelp, *Macrocystis pyrifera* (Germination and Growth Test Method 1009.0).

3.3.3. **Species Sensitivity Screening**

Species sensitivity screening shall be conducted during this Order's first required sample collection, or within 24 months of the most recent screening, whichever is later.

For each suite during the species sensitivity screening, the Dischargers 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 *Atherinops affinis*, a second and third sample shall be collected for use as test solution renewal water as the seven-day toxicity test progresses. The species exhibiting the highest TUc is considered the most sensitive species for that suite.

If the first suite of rescreening tests demonstrates that the same species is the most sensitive, then the rescreening does not need to include more than one suite of tests. If a different species is the most sensitive or if there is ambiguity, then the Dischargers shall proceed with suites of screening tests for a minimum of three, but not to exceed five suites.

Species sensitivity rescreening is required every 24 months. The Dischargers shall rescreen with the marine vertebrate species, a marine invertebrate species, and the alga species previously referenced, and continue to monitor with the most sensitive species.

The species used during routine monitoring shall be the most sensitive species from the most recent species sensitivity screening.

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 maximum daily effluent limitation (MDEL).

3.3.4. **Quality Assurance (QA) and Additional Requirements**

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

- 3.3.4.1. The discharge is subject to an MDEL for chronic toxicity based on TUc using the No Observed Effect Concentration (NOEC; also referred to as the No Observed Effect Level or NOEL) approach described in *Short Term Methods for Estimating*

the Chronic Toxicity of Effluents and Receiving Waters to West Coast Marine and Estuarine Organisms, EPA-821/600/R-95/136. TU_c is calculated by the following equation:

$$TU_c = 100 / NOEC$$

- 3.3.4.2. If the effluent toxicity test does not meet all test acceptability criteria (TAC) specified in the referenced test method, *Short-term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to West Coast Marine and Estuarine Organisms* (EPA/600/R-95/136, 1995), the test should be declared invalid, then the Discharger must resample and re-test within 14 days of test termination.
- 3.3.4.3. Dilution water and control water, including brine controls, shall be 1-micrometer-filtered uncontaminated natural seawater, hypersaline brine prepared using uncontaminated natural seawater, or laboratory water prepared and used as specified in the test methods manual. Dilution water and control water, including brine controls, shall be uncontaminated natural water, 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.
- 3.3.4.4. Reference toxicant testing shall be conducted in accordance with *Short-term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to West Coast Marine and Estuarine Organisms* (EPA/600/R-95/136, 1995). All reference toxicant test results should be reviewed and reported using the effects concentration at 25 percent (EC₂₅).
- 3.3.4.5. 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 this MRP and the rationale is explained in the Fact Sheet (Attachment F).

3.3.5. 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 called Report Preparation¹, and shall include:

- 3.3.5.1. The valid toxicity test results for the NOEC approach, reported in TU_c. 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.
- 3.3.5.2. Summary water quality measurements for each toxicity test (e.g., pH, dissolved oxygen, temperature, conductivity, hardness, salinity, chlorine, ammonia).
- 3.3.5.3. The statistical methods used to calculate the endpoints.

¹ Section 10 of *Short-Term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to the West Coast Marine and Estuarine Organisms*, August 1995, EPA/600/R-95-136, https://cfpub.epa.gov/si/si_public_file_download.cfm?p_download_id=524691

- 3.3.5.4. Statistical program output results, including graphical plots, for each toxicity test.
- 3.3.5.5. Graphical plots clearly showing the laboratory's performance for the reference toxicant for the previous 20 tests and the laboratory's performance for the control mean, control standard deviation, and control coefficient of variation for the previous 12-month period.
- 3.3.5.6. Any additional quality assurance/quality control (QA/QC) documentation or any additional chronic toxicity-related information, upon written request from the San Diego Water Board.

3.3.6. 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 San Diego Water Board for approval within 90 days of the effective date of this Order. If the San Diego Water Board does not disapprove the work plan within 60 days, the work plan shall become effective. The Discharger shall use *Generalized Methodology for Conducting Industrial Toxicity Reduction Evaluations* (EPA/600/2-88/070), or most current version, as guidance. The TRE Work Plan shall describe the steps that the Discharger intend to follow if toxicity is detected, and shall include, at a minimum:

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

3.3.7. Accelerated Monitoring Schedule for Maximum Daily Single Result

The maximum daily single result of greater than or equal to 11 TUc shall be used to determine if accelerated testing needs to be conducted.

Once the Dischargers become aware that the maximum daily single result is greater than or equal to 11 TUc, the Discharger shall notify the San Diego Water Board and implement an accelerated monitoring schedule within five calendar days of the receipt of the result. However, if the sample is contracted out to a commercial laboratory, the Discharger shall ensure that the San Diego Water Board is notified, and the first of six accelerated monitoring tests is initiated within seven calendar days of the Discharger becoming aware of the result. The accelerated monitoring schedule shall consist of six toxicity tests, conducted at approximately two-week intervals, over a twelve-week period; in preparation for the TRE process and associated reporting, these results shall also be reported using the EC25. If each of the accelerated toxicity tests results in less than 11 TUc, the Discharger shall return to routine monitoring for the next monitoring period. If one of the accelerated toxicity tests results in greater than or equal to 11 TUc, the Discharger shall immediately

implement the TRE Process conditions set forth below. During accelerated monitoring schedules, chronic toxicity tests results shall be used to determine effluent compliance for the chronic toxicity MDEL.

3.3.8. TRE Process

During the TRE Process, minimum effluent monitoring shall resume and results for chronic toxicity tests reported in TUC shall be used to determine effluent compliance for the chronic toxicity MDEL.

- 3.3.8.1. Preparation and Implementation of Detailed TRE Work Plan. The Discharger shall immediately initiate a TRE using, according to the type of treatment facility, *Generalized Methodology for Conducting Industrial Toxicity Reduction Evaluations* (EPA/600/2-88/070, 1989) and, within 15 days of receiving validated results, submit to the San Diego Water Board a Detailed TRE Work Plan, which shall follow the Initial Investigation TRE Work Plan revised as appropriate for this toxicity event. The TRE Work Plan shall include the following information, and comply with additional conditions set by the San Diego Water Board:
 - Further actions by the Discharger to investigate, identify, and correct the causes of toxicity;
 - Actions the Discharger will take to mitigate the effects of the discharge and prevent the recurrence of toxicity; and
 - A schedule for these actions, progress reports, and the final report.
- 3.3.8.2. 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); *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); *Toxicity Identification Evaluation: Characterization of Chronically Toxic Effluents, Phase I* (EPA/600/6-91/005, 1991); and *Marine Toxicity Identification Evaluation (TIE): Phase I Guidance Document* (EPA/600/R-96-054, 1996). The TIE should be conducted on the species demonstrating the most sensitive toxicity response.
- 3.3.8.3. Many recommended TRE elements parallel required or recommended efforts for source control, pollution prevention, and storm water control programs. Whenever possible, TRE efforts should be coordinated with such efforts. 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.
- 3.3.8.4. The Discharger shall continue to conduct the minimum effluent monitoring while the TRE and/or TIE process is taking place. Additional accelerated monitoring and TRE Work Plans are not required once a TRE is begun.

- 3.3.8.5. The San Diego 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. Upon approval from the San Diego Water Board, the TRE may be ended at any stage if routine monitoring finds there is no longer toxicity.
- 3.3.8.6. TRE/TIE results. The San Diego Water Board shall be notified no later than 30 days from completion of each aspect of TRE/TIE analyses. Prior to the completion of the final TRE/TIE report, the Discharger shall provide status updates in the monthly SMRs, indicating which TRE/TIE steps are underway, which steps have been completed, and the estimated time to completion of the final TRE/TIE report.
- 3.3.8.7. TRE/TIE Final Report. The final TRE/TIE report shall be submitted to the San Diego Water Board within 30 days of report completion. At minimum, the TRE/TIE Final Report should include the following:
- A description of the probable source and cause of the toxicity effluent limitation exceedances (if known);
 - A summary of the findings including a tabulation, evaluation, and interpretation of the data generated;
 - A list of corrective actions taken or planned by the Discharger to reduce toxicity so that the Discharger can achieve consistent compliance with the toxicity effluent limitation of this Order and prevent recurrence of exceedances of the limitation; and
 - If the exceedances of the toxicity effluent limitation have not been corrected, the anticipated time it is expected to continue and a time schedule for the steps planned to reduce, eliminate, and prevent recurrence of the exceedances.
- 3.3.8.8. The San Diego Water Board may consider the results of any TRE/TIE studies in an enforcement action.

3.4. Land Discharge Monitoring Requirements – Not Applicable

3.5. Recycling Monitoring Requirements – Not Applicable

4. Receiving Water Monitoring Requirements

The receiving water monitoring requirements set forth below are designed to measure the effects of the discharge from the Facility on the receiving ocean waters, including effects on coastal water quality, seafloor sediments, and marine life. The overall receiving water monitoring program is intended to answer the following questions:

- (1) Does the receiving water meet water quality standards?
- (2) Are the receiving water conditions getting better or worse over time?
- (3) What is the relative contribution of the Facility discharge to pollution in the receiving water?
- (4) What are the effects of the discharge on the receiving waters?

Receiving water monitoring in the vicinity of the discharge from the Facility shall be conducted as specified below. This program is intended to document conditions, within the zone of initial dilution (ZID), within the waste field where initial dilution is completed, at reference stations, and at other areas beyond the ZID where discharge impacts might be

reasonably expected. Station location, sampling, sample preservation, and analyses, when not specified, shall be by methods approved by the San Diego Water Board. The receiving water monitoring program may be modified by the San Diego Water Board at any time. The Discharger may also submit a list of proposed changes with supporting rationale to these monitoring requirements that it considers to be appropriate to the San Diego Water Board for approval.

All receiving water monitoring shall be conducted in accordance with restrictions and requirements established by the State of California Department of Fish and Wildlife and this Order. During monitoring events, sample stations shall be located using a land-based microwave positioning system or a satellite positioning system such as global positioning system (GPS).

In the event that the Discharger is unable to obtain a sample from a receiving water monitoring station(s) due to safety, legal, or other reasons, collection of samples at such station(s) can be omitted. If practicable, an effort should be made to return to the sampling station that was omitted and collect the sample during safer conditions within the same reporting period. In the event that a monitoring location is omitted, the Discharger shall submit a statement to the San Diego Water Board within the Annual Receiving Waters Monitoring Report containing, at a minimum, the following information:

- The monitoring station(s) that was omitted;
- The date the monitoring station was omitted; and
- A description of the circumstances for omitting the collection of data at the monitoring station.

4.1. Continuous Temperature Monitoring

Continuously recording thermographs will be employed at Stations C2S, F2S, and C22S (see Table E-1 and Attachment B of this Order). Measurements will be obtained from the surface, 5 meters, 10 meters, and near-bottom. Measurements will be reported as hourly data.

4.2. Turbidity

Quarterly aerial photographic surveys will be conducted in the area of the Unit 2 diffuser system. The aerial overflights may be merged with the kelp overflights required in section 4.4 of this MRP.

4.3. Trawling Surveys

To survey fish populations, trawling surveys for fish shall be conducted semiannually at three stations (see Table E-1 and Attachment B of this Order). Daylight sampling by otter trawl will be conducted at the 20-foot (6.1-meters), 40-foot (12.2-meters) and 60 feet (18.3-meters) isobaths at each station. Each trawl will be of five-minute duration. Collected fishes will be identified and enumerated, and sex determined for selected species. The results of the trawling surveys shall be reported annually in accordance with the due dates specified in Table E-8 for the Annual Receiving Waters Monitoring Report.

4.4. Kelp Densities

Fixed Quadrant Sampling: Individual giant kelp plants and the number of associated stipes greater than 2 m will be counted tri-annually at fixed quadrants associated with six stations (Stations 10, 14-15, 16-17, 18-19, 22, and 23) located in the San Onofre Kelp (see Attachment B of this Order). The composition of the substrate will be qualitatively described, and percent cover information will be collected at each of the fixed quadrant sites.

Random Quadrant Sampling: Semiannual sampling shall also be conducted at ten 10-m² circular quadrants randomly selected within 30-m radius of each of the six stations (Stations 10, 14-15, 16-17, 18-19, 22, and 23) located in the San Onofre Kelp (see Attachment B of this Order). The random sampling shall include the enumeration of giant kelp, and an estimate of the substratum composition (i.e., percent of sand, cobble, and boulder) within each of the random quadrants.

4.5. Temperature

Temperature profiles from the surface to the bottom will be measured quarterly at the following designated Impact and Control Stations (see Table E-1 and Attachment B of this Order): Impact Stations (X0, C1N, C2N, C1S, C2S, F2N, F2S, H0, H2N, H2S, J0, J2N, J4N, J8N, J2S, J4S, J8S, M0, M2N, M4N, M8N, M2S, M4S, and M8S) and Control Stations (C22S, F22S, H22S, J22S, and M22S).

4.6. Water Quality Measurements

Water Quality Measurements is necessary to answer the following questions:

- (1) Does the discharge of oxygen demanding waste cause the dissolved oxygen concentration to be depressed at any time more than 10 percent from that which occurs naturally?
- (2) Does the discharge of waste cause the pH to change at any time more than 0.2 units from that which occurs naturally to determine compliance with Receiving Water Limitations, section 5.1.3.2 of the Order?

Dissolved oxygen concentrations and pH will be measured quarterly at the surface of the following designated Impact and Control Stations (see Table E-1 and Attachment B of this Order): Impact Stations (X0, C1N, C2N, C1S, C2S, J2N, J2S, and J4S) and Control Stations (C22S and F22S).

4.7 Indicator bacteria monitoring

Indicator bacteria monitoring is necessary to answer the following questions:

- (1) Does the effluent comply with the water quality standards in the receiving water?
- (2) Does the sewage effluent reach water contact zones or commercial shellfish beds?

The Discharger shall conduct weekly monitoring for fecal coliform and enterococci. The Discharger shall submit to the San Diego Water Board within 180 days after the effective date of this Order, an Indicator Bacteria Monitoring Work Plan to implement the indicator bacteria monitoring program.

4.8 Sediment Monitoring

Sediment monitoring is necessary to answer the following questions:

- (1) Is the dissolved sulfide concentration of waters in sediments significantly increased above that present under natural conditions?
- (2) Is the concentration of substances set forth in Table 3 of the Ocean Plan, for protection of marine aquatic life, in marine sediments at levels which would degrade the benthic community?
- (3) Is the concentration of organic pollutants in marine sediments at levels that would degrade the benthic community?

Acid volatile sulfides, organophosphorus insecticides, Ocean Plan Table 3 metals, ammonia-nitrogen, polynuclear aromatic hydrocarbons, and chlorinated hydrocarbons shall be measured in sediments annually. The Discharger shall submit to the San Diego Water Board within 180 days after the effective date of this Order, a Sediment Monitoring Work Plan to implement the sediment monitoring program. The Sediment Monitoring Work Plan is not required if the Discharger is fulfilling the sediment monitoring required in this section by participating in a regional monitoring program, as described in this MRP, section 5.2, *Southern California Bight Monitoring Program Participation Requirements*.

4.9 Benthic Community Health Monitoring

Benthic community health monitoring is necessary to answer the following question:

- (1) Are benthic communities degraded as a result of the discharge?

The Discharger shall conduct benthic community health monitoring at least once during the permit term. The Discharger shall submit to the San Diego Water Board within 180 days after the effective date of this Order, a Benthic Community Health Monitoring Work Plan to implement the benthic community health monitoring program. The Benthic Community Health Monitoring Work Plan is not required if the Discharger is fulfilling the benthic community health monitoring required in this section by participating in a regional monitoring program, as described in this MRP, section 5.2, *Southern California Bight Monitoring Program Participation Requirements*.

4.10 Bioaccumulation Monitoring

Bioaccumulation monitoring is necessary to answer the following questions:

- (1) Does the concentration of pollutants in fish, shellfish, or other marine resources used for human consumption bioaccumulate to levels that are harmful to human health?
- (2) Does the concentration of pollutants in marine life bioaccumulate to levels that degrade marine communities?

The Discharger shall conduct bioaccumulation monitoring at least once during the permit term. Constituents to be monitored must include pesticides (at the discretion of the San Diego Water Board), Ocean Plan Table 3 metals, and polynuclear aromatic hydrocarbons. Bioaccumulation may be monitored by a mussel watch program or a fish tissue program. Resident mussels are preferred over transplanted mussels. Sand crabs

and/or fish may be added or substituted for mussels at the discretion of the San Diego Water Board. The Discharger shall submit to the San Diego Water Board within 180 days after the effective date of this Order, a Bioaccumulation Monitoring Work Plan to implement the bioaccumulation monitoring program. The Bioaccumulation Monitoring Work Plan is not required if the Discharger is fulfilling the bioaccumulation monitoring required in this section by participating in a regional monitoring program, as described in this MRP, section 5.2, Southern California Bight Monitoring Program Participation Requirements.

4.11. Reporting

A report containing detailed analyses of the previous year's receiving water monitoring data required in section 4 of this MRP and impingement/entrainment monitoring required in section 6.1 of this MRP shall be submitted to the San Diego Water Board by August 1 of each year. Each section of the report shall contain a graphical and written summary of historical data with the goal of displaying long term trends.

4.12. California Environmental Data Exchange Network

In addition to submitting SMRs, the Discharger shall also ensure that all the receiving water monitoring results are submitted to the California Environmental Data Exchange Network (CEDEN) or an equivalent database that is linked to CEDEN annually by August 1. Any data not accepted by CEDEN is not required to be submitted. A statement certifying that all applicable monitoring results have been timely uploaded into CEDEN or an equivalent database shall be submitted annually by August 1 of each year to coincide with submission of the Annual Receiving Waters Monitoring Report.

5. Regional Monitoring Requirements

Regional ocean water monitoring provides information about the sources, fates, and effects of anthropogenic contaminants in the coastal marine environment necessary to make assessments over large areas. The large-scale assessments provided by regional monitoring describe and evaluate cumulative effects of all anthropogenic inputs and enable better decision-making regarding protection of beneficial uses of ocean waters. Regional monitoring data assists in the interpretation of core monitoring studies by providing a more accurate and complete characterization of reference conditions and natural variability. Regional monitoring also leads to methods standardization and improved quality control through inter-calibration exercise. The coalitions implementing regional monitoring enable sharing of technical resources, trained personnel, and associated costs. Focusing these resources on regional issues and developing a broader understanding of pollutants effects in ocean waters enables the development of more rapid and effective response strategies. Based on all of these considerations the San Diego Water Board supports regional approaches to monitoring ocean waters.

The Discharger shall, as directed by the San Diego Water Board, participate with other regulated entities, other interested parties, and the San Diego Water Board in development and implementation of new and improved monitoring and assessment programs for ocean waters in the San Diego Region and discharges to those waters.

These programs shall be developed and implemented so as to answer the following questions:

- (1) What are the status and trends of conditions in ocean waters in the San Diego Region with regard to beneficial uses? For example:
 - i. Are fish and shellfish safe to eat?
 - ii. Is water quality safe for swimming?
 - iii. Are ecosystems healthy?
- (2) What are the primary stressors causing or contributing to conditions of concern?
- (3) What are the major sources of the stressors causing or contributing to conditions of concern?
- (4) Are the actions taken to address such stressors and sources effective (i.e., environmental outcomes)?

Development and implementation of new and improved monitoring and assessment programs for ocean waters will be guided by the following:

- The Ocean Plan;
- San Diego Water Board Resolution No. R9-2012-0069, *Resolution in Support of a Regional Monitoring Framework*;
- San Diego Water Board staff report entitled *A Framework for Monitoring and Assessment in the San Diego Region*; and
- Other guidance materials, as appropriate.

5.1. Kelp Bed Canopy Monitoring Requirements

Kelp consists of a number of species of brown algae. Along the central and southern California coast, giant kelp (*Macrocystis pyrifera*) is the largest species colonizing rocky, and in some cases sandy, subtidal habitats. Giant kelp is an important component of coastal and island communities in southern California, providing food and habitat for numerous animals. Monitoring of the kelp beds is necessary to answer the following questions:

- (1) What is the maximum areal extent of the coastal kelp bed canopies each year?
- (2) What is the variability of the coastal kelp bed canopy over time?
- (3) Are coastal kelp beds disappearing? If yes, what are factors that could contribute to the disappearance?
- (4) Are new coastal kelp beds forming?

The Discharger shall participate with other Southern California ocean dischargers in an ongoing regional survey of coastal kelp beds in the Southern California Bight. The intent of these surveys is to provide an indication of the health of these kelp beds, recognizing that the extent of kelp bed canopies may change due to a variety of influences.

Kelp beds shall be monitored by means of vertical aerial infrared photography to determine the maximum areal extent of the canopies of coastal kelp beds each year. Surveys shall be conducted as close as possible to when kelp bed canopies are at their greatest extent during the year. The entire San Diego Region coastline, from the international boundary to the San Diego Region/Santa Ana Region boundary shall be photographed on the same day.

Annually by October 1, the Discharger shall submit to the San Diego Water Board a report which summarizes the data, analyses, assessment, and images produced by the surveys. The report is a joint collaboration among multiple ocean dischargers in the Southern California (e.g., Regional 9 Kelp Survey Consortium member agencies). In addition to the kelp bed canopies, the images shall show onshore reference points, locations of all ocean outfalls and diffusers, artificial reefs, areas of known hard-bottom substrate (i.e., rocky reefs), and depth contours at intervals of 30-foot mean lower low water (MLLW). The report shall also be made available in a user-friendly format on a website that is readily available to the public.

The surveys shall be conducted on a “continuous improvement” basis, as needed improvements shall be made in monitoring, analysis, assessment, and/or documentation. For example, these could include:

- More sophisticated analysis of patterns, correlations, and cycles that may be related to the extent of kelp bed canopies; or
- Projects to improve understanding of influences on kelp beds or of how the extent of the canopies of various kelp beds has changed since the early 20th century.

5.2. Southern California Bight Monitoring Program Participation Requirements

The Discharger shall, as directed by the San Diego Water Board, participate in the Southern California Bight Regional Monitoring Program coordinated by the Southern California Coastal Water Research Project (SCCWRP), or any other coordinator named by the San Diego Water Board, pursuant to Water Code section 13383, and 40 CFR section 122.48. The intent of the Southern California Bight Regional Monitoring Program is to maximize the efforts of all monitoring partners using a more cost-effective monitoring design and to best utilize the pooled scientific resources of the Southern California Bight.

During these coordinated sampling efforts, a portion of the Discharger’s receiving water sampling and analytical effort, as defined in section 4 of this MRP, may be reallocated to provide a regional assessment of the impact of the discharge of wastewater to the Southern California Bight. In that event, the San Diego Water Board shall notify the Discharger in writing that a portion of the requirements to perform the receiving water sampling and analytical effort defined in section 4 of this MRP is suspended for the duration of the reallocation. Anticipated modifications to the monitoring program will be coordinated so as to provide a more comprehensive picture of the ecological and statistical significance of monitoring results and to determine cumulative impacts of various pollution sources. The level of resources in terms of sampling and analytical effort redirected from the receiving water monitoring program required under section 4 of this MRP shall approximately equal the level of resources provided to implement the regional monitoring and assessment program, unless the San Diego Water Board and the Discharger agree otherwise. The specific scope and duration of the receiving water monitoring program reallocation and redirection shall be determined in writing by the San Diego Water Board, in consultation with the Discharger.

6. Special Studies Requirements

The ocean water intake monitoring, and fish impingement/entrainment monitoring requirements set forth below are designed to ensure compliance with State and federal regulations. The overall intake monitoring program is intended to answer the following questions:

- (1) Does the intake water meet water quality standards?
- (2) What is the relative contribution of the Facility's thermal waste discharge to the receiving water?
- (3) Is the Facility in compliance with the requirements in the Policy on the Use of Coastal and Estuarine Waters for Power Plant Cooling (Once-Through Cooling or OTC Policy)?
- (4) What is the status of the Once-Through Cooling Water Compliance Schedule? Has the Discharger completed immediate and/or interim requirements?
- (5) Is the Facility in compliance with CWA section 316(b) requirements?

In addition to the Core Monitoring, Receiving Water Monitoring, and Regional Monitoring requirements (see sections 3 through 4 of this MRP), the Discharger shall comply with the following special study monitoring requirements:

6.1. Fish Impingement and Entrainment Monitoring

Since the intake flow rates have been drastically reduced due to decommissioning activities, impingement has not occurred. The Units 2 and 3 intake structures/forebays have been isolated from the ocean and dewatered. The Discharger has indicated that water still seeps into the intake structures/forebays and periodically needs to be pumped out. The Discharger has indicated that they plan to backfill the intake structures/forebays with slurry in the first half of 2023.

The results of the visual assessment shall be reported semiannually. If the visual assessment identifies that fish are impinged or entrained, then the Discharger shall record the following:

1. Total weight and number of each species of fish removed from the Units 2 and 3 intake pipes and screens;
2. Standard length and sex of select species in a representative sample removed from the traveling bar racks and screens. For fish length, where up to 125 individuals of a species are removed, the "representative sample" shall consist of all the individuals removed. Where more than 125 individuals of a species are removed, the "representative sample" shall consist of not less than 125 individuals. For determination of fish sex, the "representative sample" shall be the same as for fish length, except the number of individuals shall be 50.

A report describing the visual assessment and also containing detailed analysis of the previous year's fish entrainment monitoring data, if any, shall be submitted by August 1 of each year with the Annual Receiving Water Monitoring Report required in section 4.7 of this MRP. The report shall contain a narrative and graphical summary of all historical data with the goal of displaying long-term trends.

6.2. Monitoring Location INF-002 and INF-003– Ocean Water Intake Monitoring

Ocean water inflow shall be monitored and analyzed in accordance with the following schedule. The Discharger shall monitor the ocean water intake at INF-002 and INF-003 as described in Table E-7 below.

Table E-7. Influent Monitoring (INF-002 and INF-003)¹

Parameter	Units	Sample Type ²	Minimum Sampling Frequency	Required Analytical Test Method
Flow (Average and Maximum Daily)	MGD	Meter or estimate	Continuous	--
Turbidity	NTU	Grab	Monthly	As required under 40 CFR part 136.

Notes for Table E-7

1. See Attachment A for definitions of abbreviations and a glossary of common terms used in this Order.
2. A grab sample is an individual sample of at least 100 milliliters collected at a randomly selected time over a period not exceeding 15 minutes.

6.3. Climate Change Action Plan (CCAP)

The Dischargers shall prepare and submit a CCAP within three years of the effective date of this Order. The Dischargers may make use of existing climate-change-related plans to comply with this requirement.

Climate change research indicates the overarching driver of change is increased atmospheric carbon dioxide (CO₂) from human activity. The increased CO₂ emissions trigger changes to climatic patterns, which increase sea level and the intensity of coastal storm surges (Δ Sea Level) lead to more erratic local weather patterns (Δ Weather Patterns), increased incidents of flooding and wildfires, trigger a gradual warming of freshwater and ocean temperatures (Δ Water Temperature), and trigger changes to ocean water chemistry (Δ Water pH). The CCAP shall identify the magnitude and timing of projected regional impacts on the Facility, and the Discharger's ability to meet the requirements of this Order due to climate change if current trends continue. The CCAP shall also identify steps being taken or planned to address greenhouse gas emissions attributable to the decommissioning of the Facility.

The CCAP shall also identify steps being taken or planned to address flooding, sea level rise, and wildfire risks; volatile rain period impacts (both dry and wet weather); impacts on wastewater treatment operations and quality; the potential need to adjust NPDES permit conditions and the Dischargers' pollution control program; the financing needed to pay for planned actions; schedules to update the CCAP as more information on climate change and its effect become more available; and any other factors as appropriate. Any impacts or risks projected to jeopardize permit compliance must be addressed by a plan that includes scheduled risk assessments and mitigation measures as needed to maintain compliance.

7. Reporting Requirements

7.1. General Monitoring and Reporting Requirements

- 7.1.1. The Discharger shall comply with all Standard Provisions (Attachment D) related to monitoring, reporting, and recordkeeping.
- 7.1.2. The Discharger shall report all instances of noncompliance not reported under sections 5.5, 5.7, and 5.8 of the Standard Provisions (Attachment D) at the time monitoring reports are submitted.

7.2. Self-Monitoring Reports (SMRs)

- 7.2.1. The Discharger shall electronically submit SMRs using the State Water Board's California Integrated Water Quality System (CIWQS) program website (https://www.waterboards.ca.gov/water_issues/programs/ciwqs/). The CIWQS website will provide additional information for SMR submittal in the event there will be a planned or unplanned service interruption for electronic submittal. SMRs must be signed and certified as required by section 5 of the Standards Provisions (Attachment D). The Discharger shall maintain sufficient staffing and resources to ensure it submits SMRs that are complete and timely. This includes provision for training and supervision of individuals on how to prepare and submit SMRs.
- 7.2.2. The Discharger shall report in the SMR the results for all monitoring specified in this MRP under sections 3, 4, and 6. The Discharger shall submit 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 Discharger monitors any pollutant more frequently than required by this Order, the results of this monitoring shall be included in the calculations and reporting of the data submitted in the SMR.
- 7.2.3. Monitoring periods and reporting for required monitoring contained in sections 3 and 6.2 of this MRP 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	Permit effective date	All	First day of second calendar month following month of sampling.
Daily	Permit effective date	(Midnight through 11:59 PM) or any 24-hour period that reasonably represents a calendar day for purposes of sampling.	First day of second calendar month following month of sampling.

Sampling Frequency	Monitoring Period Begins On...	Monitoring Period	SMR Due Date
Weekly	Sunday following permit effective date or on permit effective date if on a Sunday	Sunday through Saturday	First day of second calendar month following month of sampling.
Monthly	First day of calendar month following permit effective date or on permit effective date if that date is first day of the month	1 st day of calendar month through last day of calendar month	First day of second calendar month following month of sampling.
Quarterly	Closest of January 1, April 1, July 1, or October 1 following (or on) permit effective date	January 1 through March 31 April 1 through June 30 July 1 through September 30 October 1 through December 31	May 1 August 1 November 1 February 1
Semiannually	Closest of January 1 or July 1 following (or on) permit effective date	January 1 through June 30 July 1 through December 31	August 1 February 1
Annually	Closest of January 1 (or on) permit effective date	January 1 through December 31	February 1

7.2.4. **Reporting Protocols.** The Discharger shall report with each sample result the applicable reported Minimum Level (reported ML, also known as the Reporting Level, or RL) and the current Method Detection Limit (MDL), as determined by the procedure in 40 CFR part 136.

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

- 7.2.4.1. Sample results greater than or equal to the reported ML shall be reported as measured by the laboratory (i.e., the measured chemical concentration in the sample).
- 7.2.4.2. Sample results less than the reported ML, 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 (\pm a percentage of the reported value), numerical ranges (low to high), or any other means considered appropriate by the laboratory.

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

- 7.2.4.4. Discharger is 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 Discharger to use analytical data derived from extrapolation beyond the lowest point of the calibration curve.
- 7.2.5. **Compliance Determination.** Compliance with effluent limitations for reportable pollutants shall be determined using sample reporting protocols defined above and in Attachment A of this Order. For purposes of reporting and administrative enforcement by the San Diego Water Board and State Water Board, the Discharger shall be deemed out of compliance with effluent limitations if the concentration of the reportable pollutant in the monitoring sample is greater than the effluent limitation and greater than or equal to the reported ML.
- 7.2.6. **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:
- 7.2.6.1. 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.
- 7.2.6.2. 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.
- 7.2.7. The Discharger shall submit SMRs in accordance with the following requirements:
- 7.2.7.1. The Discharger 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 Discharger 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 Discharger shall electronically submit the data in a tabular format as an attachment.
- 7.2.7.2. The Discharger shall attach a cover letter to the SMR. The information contained in the cover letter shall clearly identify violations of the waste discharge requirements; 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.
- 7.2.7.3. The Discharger shall add all violations, including violations of receiving water limitations, to CIWQS under the "Violations" tab.

7.2.7.4. Copies of all reports submitted by the discharger to the Nuclear Regulatory Commission pertaining to monitoring of radioactive materials in wastewaters released from the Facility shall be transmitted to the San Diego Water Board.

7.3. Discharge Monitoring Reports (DMRs)

The DMRs are USEPA reporting requirements. The Discharger shall electronically certify and submit DMRs together with SMRs using Electronic Self-Monitoring Reports (eSMR) module eSMR 2.5 or any upgraded version. Electronic DMRs submittal shall be in addition to eSMR submittal. Information about electronic DMRs submittal is available at the DMR website

[\(https://www.waterboards.ca.gov/water_issues/programs/discharge_monitoring/\)](https://www.waterboards.ca.gov/water_issues/programs/discharge_monitoring/).

7.4. Other Reports

The following reports are required under Special Provisions (sections 4.1, 6.1, and 6.3 of this Order), sections 1, 3, 4, 5, and 6 of this MRP, and the California Code of Regulations (CCR). The reports shall be submitted to the San Diego Water Board using the State Water Board’s CIWQS program website, unless otherwise noted. The reports must be signed and certified as required by section 5 of the Standards Provisions (Attachment D). The CIWQS website will provide additional information for SMR submittal in the event of a planned or unplanned service interruption for electronic submittal.

Table E-9. Other Reports

Report	Location of requirement	Due Date
Report of Waste Discharge (ROWD) (for reissuance)	Page 1 of the Order	No later than 180 days before the Order expiration date
DMR-QA Study	Section 1.7 of this MRP	Annually no later than December 31 ²
Initial Investigation TRE Work Plan	Section 3.3.7 of this MRP	Within 90 days of the effective of this Order
Indicator Bacteria Monitoring Work Plan	Section 4.7 of this MRP	Within 180 days after the effective date of this Order
Sediment Monitoring Work Plan	Section 4.8 of this MRP	Within 180 days after the effective date of this Order
Benthic Community Health Monitoring Work Plan	Section 4.9 of this MRP	Within 180 days after the effective date of this Order
Bioaccumulation Monitoring Work Plan	Section 4.10 of this MRP	Within 180 days after the effective date of this Order
Annual Receiving Water Monitoring Report	Section 4.11 of this MRP	Annually no later than August 1
California Environmental Data Exchange Network Data Submittal Certification	Section 4.12 of this MRP	Annually no later than August 1

Report	Location of requirement	Due Date
Kelp Bed Canopy Report	Section 5.1 of this MRP	Annually no later than October 1

Notes for Table E-9

1. Submit in person or by mail to the San Diego Water Board office (2375 Northside Drive, Suite 100, San Diego, CA 92108) or by email at SanDiego@waterboards.ca.gov.
2. See section 1.7. of this MRP for instructions on how to submit the study.

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ATTACHMENT F – FACT SHEET

As described in section 2.2 of this Order, the California Regional Water Quality Control Board, San Diego Region (San Diego Water Board) incorporates this Fact Sheet as findings of the San Diego 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 the State of California (State). 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. Permit Information

The following table summarizes administrative information related to the Facility.

Table F-1. Facility Information

Type of Information	Facility/Discharger Information
WDID	9 000002842
Discharger	Southern California Edison Company
Facility	San Onofre Nuclear Generating Station
Facility Address	5000 Pacific Coast Highway, San Clemente, CA 92672
Facility Contact, Title and Phone	Brian Metz, Environmental Manager, 714-273-6418
Authorized Person to Sign and Submit Reports	Douglas R. Bauder, Vice President, Decommissioning and Chief Nuclear Officer Brian Metz, Environmental Manager
Mailing Address	2244 Walnut Grove Avenue, Rosemead, CA 91770
Billing Address	P.O. Box 4030, San Clemente, CA 92673
Type of Facility	Industrial, Standard Industrial Classification (SIC) Code No. 4911
Major or Minor Facility	Major
Threat to Water Quality	1
Complexity	A
Pretreatment Program	N/A
Recycling Requirements	N/A
Facility Permitted Flow	42.252 million gallons per day (MGD)
Facility Design Flow	2,574 MGD
Watershed	Pacific Ocean
Receiving Water	Pacific Ocean
Receiving Water Type	Ocean waters

- 1.1. Southern California Edison Company (Discharger) is the principal owner and operator of the San Onofre Nuclear Generating Station (SONGS or Facility), a nuclear-fueled electrical power generating facility which permanently ceased power operations on June 7, 2013, and is undergoing decommissioning, decontamination, and dismantlement. The Discharger is the owner of 78.32% of SONGS, while San Diego Gas & Electric and City of Riverside own 20% and 1.68%, respectively. The Discharger, San Diego Gas & Electric, and City of Riverside (collectively referred to as the Participants) are engaged in the decommissioning, decontamination, and dismantlement of the Facility pursuant to regulatory requirements of the United States Nuclear Regulatory Commission (USNRC).

The Facility is located to the west of the Interstate-5 Freeway in northern San Diego County. The onshore portion of the Facility lies within the boundaries of the Marine Corps Base Camp Pendleton (MCBCP) under real estate agreements between the Participants and the U.S. Government, Department of Navy - Southwest Division Naval Facilities Engineering Command. The address of the Facility is 5000 Pacific Coast Highway, San Clemente, San Diego County, California, 92672.

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 Discharger herein.

- 1.2. The Facility discharges wastewater to the Pacific Ocean, a water of the United States. The Discharger was previously regulated by Order No. R9-2015-0073 and National Pollutant Discharge Elimination System (NPDES) Permit No. CA0109282 adopted on December 16, 2015, and expired on January 31, 2021. Attachment B provides maps of the area around the Facility. Attachment C provides flow schematics of the Facility.
- 1.3. The Discharger filed a Report of Waste Discharge (ROWD) and submitted an application for reissuance of its waste discharge requirements (WDRs) and NPDES permit on July 22, 2020. The application was deemed complete on August 18, 2020. The Discharger submitted an ROWD amendment on December 14, 2022. A compliance evaluation inspection was conducted on January 19, 2023.
- 1.4. 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. Accordingly, this Order limits the duration of the discharge authorization. However, pursuant to California Code of Regulations (CCR), 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.

2. Facility Description

SONGS Is a former nuclear-fueled electric power generating facility that has permanently ceased power operations and is currently undergoing decommissioning, decontamination, and dismantlement pursuant to USNRC

regulatory requirements. The Discharger formally notified the USNRC on June 12, 2013, that it had permanently ceased power operations at SONGS on June 7, 2013. The notification, called a Certification of Permanent Cessation of Power Operations, set the stage for the Discharger to begin preparations for decommissioning and dismantling the Facility.

The Facility is located at 5000 Pacific Coast Highway, San Clemente, CA. The Facility is located on the north San Diego County coast immediately adjacent to the Pacific Ocean, approximately two and one-half miles southeast of San Mateo Point, approximately two and one-half miles southeast of the City of San Clemente and approximately 12 miles northwest of the City of Oceanside.

The onshore portion of the Facility is approximately 4,500 feet long and 800 feet wide, comprising 84 acres. The property on which the Facility is built is owned by the Department of Navy - Southwest Division Naval Facilities Engineering Command. The Facility site also includes an additional California State Lands Commission (CSLC) offshore lease area comprised of 21 acres of tide and submerged lands in the Pacific Ocean. The adjoining offshore leased area is located southwest of the onshore portion of the Facility site and contains the SONGS Units 2 and 3 offshore intake and discharge conduits and associated appurtenances; navigational and environmental monitoring buoys; and riprap along the shore seaward of the ordinary high-water mark,

SONGS is comprised of three permanently closed separate power generating units, named the North Industrial Area (the NIA) (the NIA was formerly known as Unit 1), Unit 2, and Unit 3; along with administrative offices and related facilities referred to as the "Mesa". NIA is owned by the Discharger and San Diego Gas and Electric and was operated solely by the Discharger. Units 2 and 3 are primarily owned by the Discharger. San Diego Gas and Electric and the City of Riverside have a minority ownership share of Units 2 and 3. The Facility is operated solely by the Discharger. This Order addresses on-going discharges from the NIA, Unit 2, and Unit 3 while decommissioning, decontamination, and dismantlement activities of the Facility are underway.

Decommissioning refers to a regulatory process administered by the USNRC that involves safely removing the Facility from service followed by the eventual removal and disposal of radioactive components and materials from the site. Dismantlement of the Facility began the first quarter of 2020 and involves the deconstruction of above-grade structures associated with SONGS in compliance with USNRC requirements, as well as the partial removal of offshore undersea conduits and offshore buoys and anchors. The Decommissioning Plan for the Facility has three primary components:

- Activities related to a separate, already-approved project allowing for the installation, operation, and maintenance of the Independent Spent Fuel Storage Installation located on-site, from 2015 through 2035;
- Activities associated with dismantlement of onshore above-grade structures, meeting USNRC requirements for unrestricted use and the CSLC Lease

Offshore Activities which cover the SONGS Units 2 and 3 offshore intake and discharge conduits and associated structures from 2019 through 2028; and

- Additional activities projected to begin in approximately 2035 including transfer of stored spent nuclear fuel (SNF) to off-site storage, additional substructure removal, and final site restoration.

The NIA, located adjacent to Units 2 and 3, was a nuclear-fueled electrical power generating facility like Units 2 and 3. The NIA was in commercial operation from 1968 to 1992 and had a generating capacity of 436 megawatts. The Discharger began formal decommissioning of the NIA in September 1999. Units 2 and 3 were pressurized water reactor nuclear steam supply systems and are virtually identical. Unit 2 was in commercial operation from 1983 to 2013 and had a generating capacity of 1070 megawatts. Unit 3 was in commercial operation from 1984 to 2013 and had a generating capacity of 1080 megawatts.

The ROWD states “the [Facility] eliminates the last use of ocean water for ‘once-through cooling,’ but the continued intake of ocean water is needed for the ongoing operation of saltwater pumps to move wastewater discharge through the approximately one-mile-long offshore pipeline (outfall 002). As a result, ocean water intake requirements can be further reduced from 49 million gallons to 30 million gallons per day.” The ROWD also includes the Outfall Number 003; however, the Discharger’s ROWD amendment dated December 14, 2022, requested that Outfall Number 003 be removed.

The Facility has two independent intake structures to provide ocean water to Units 2 and 3 (Monitoring Locations INF-002 and INF-003). Ocean water is withdrawn from the Pacific Ocean through two submerged intake conduits, each extending approximately 3,100 feet offshore at a bottom depth of 30 feet. The submerged end of each conduit is fitted with a velocity cap to minimize the entrainment of motile fish into the system by converting the vertical flow to a lateral flow, thus triggering a flight response from fish.

2.1. Effluent Sources

2.1.1. NIA Sewage Treatment Plant – Discharge Point 001A, Monitoring Location INT-001-A

The NIA Sewage Treatment Plant is located within the NIA of SONGS and treats sewage from the plant site, including the newly constructed independent Spent Fuel Storage Installation Security Building. Most of the buildings at the Mesa have been removed or abandoned, and the connection between Mesa sewage treatment plant and the NIA Sewage Treatment Plant has been severed. Any remaining buildings will be turned over to the Department of the Navy who will assume direct responsibility for providing alternative future sewage treatment before the remaining buildings are reoccupied. This turnover of the Mesa property is expected to occur within the next 2 to 3 years. The Discharger expects to maintain the current maximum discharge flow of 0.05 MGD from the NIA Sewage Treatment Plant (**Monitoring Location INT-001-A**) to **Outfall Number 002 (Monitoring Location EFF-002)**.

Consistent with the previous Order, Order No. R9-2015-0073, the NIA Sewage Treatment Plant will continue to operate only one of two treatment trains since the digester requires sufficient waste quantities and flow to operate at optimal effectiveness and therefore flows will be consolidated into either of the two trains.

2.1.2. Radioactive Waste Management System (Radwaste) – Discharge Points 002-D(Mobile)/002-E, Monitoring Locations INT-002-D/INT-002-E

The Radioactive Waste Management System (Radwaste) includes the controlled releases of licensed radioactive liquid materials. Liquids potentially containing licensed radioactive materials are routed to the Radwaste processing system and radioactivity is removed through a series of paper filters, charcoal filters, and ion exchange (resin) filters. The water is sampled and analyzed for radioactivity prior to release through an additional radiation monitor. All radioactivity sampling, reporting, and regulatory oversight fall under the jurisdiction of the USNRC in accordance with the federal Atomic Energy Act.

In addition to the possible discharge of groundwater potentially containing licensed radioactive materials, SONGS must also discharge residual liquids stored in the reactor cavity, the spent fuel pool, piping, tanks, and pressure vessels that previously conveyed or stored water potentially containing licensed radioactive material. To safely remove the reactor, the reactor cavity will be flooded with water from the makeup demineralizer to complete the segmentation and removal. The approximate volume to be removed from the spent fuel pools and the reactor cavities is on the order of 3 million gallons, which will occur in approximate 120,000-gallon batch discharges.

The effluent from the spent fuel pool and the reactor cavity will be processed in batches as necessary to remove suspended materials and any suspended solid licensed radioactive material. Then the radioactive activity level of the processed liquid is measured. Based on the radioactive activity level, the necessary flow rate of ocean water/ saltwater required for dispersion through the discharge diffusers is evaluated pursuant to the SONGS Offsite Dose Calculation Manual (ODCM) guidance. The ODCM enumerates dose and concentration specifications, instrument requirements, as well as describes the methodology and parameters to be used in the calculation of offsite doses from radioactive liquid and airborne effluents. The flow condition of the ocean water/saltwater pump(s) to be used for the batch release is documented and the flow release is adjusted as necessary to ensure that the discharge of the combined flows meet the requirements of the ODCM and the USNRC Standards for Protection Against Radiation in title 10 of the Code of Regulations part 20 (10 CFR part 20). The concentration of boron is also calculated for each batch discharge to confirm it is less than outfall limit of 22.5 parts per million and accounting for naturally occurring boron in seawater. The current estimate for these flows is approximately 110 to 130 gallons per minute (gpm).

There are also sumps on-site that potentially contain licensed radioactive materials. These sumps typically collect pump seal water, storm water runoff from surfaces containing or covered with licensed radiological material or other

relatively low activity but still licensed material. Water from these site sources is sampled for oil and grease and treated if oil and grease could be present from a particular sump source. Those contaminants are disposed of off-site under the State hazardous waste permit as combined/mixed wastes. The effluent is then continuously monitored for radiological activity (**Monitoring Location INT-002-E**) and released only when sufficient ocean water/saltwater are available to accommodate dispersion through the discharge diffusers as per the credited and approved ODCM pathway (**Outfall Number 002 (Monitoring Location EFF-002)**). A maximum of 0.12 MGD of treated wastewater is expected from this process, which is approximately 40% less than the radwaste system flows allowed under the previous Order, Order No. R9-2015-0073.

As discussed above and shown on the Water Balance Diagram in Attachment C of this Order, the makeup demineralizer effluent (**Monitoring Location INT-002-D**) is routed through the reactor cavity and ultimately through the Radwaste System. Up to 0.02 MGD of the makeup demineralizer effluent may be routed to the Unit 2 and 3 Intake Structures.

2.1.3. In Plant Storm Drains – Discharge Point 001-E, Monitoring Location INT-001-E

There are three separate collection areas and two specific points of stormwater discharge to the outfall. Units 2 and 3 each have their own catchments and the NIA has another catchment.

According to the Water Balance Diagram in Attachment C of this Order, NIA Groundwater Extraction and Dewatering is monitored at **Monitoring Location INT-001-F** before flowing to the NIA Sump, which also collects stormwater. Effluent from the NIA sump is monitored at **Monitoring Location INT-001-E**. More information on Monitoring Location INT-001-F is in section 2.1.4 of this Fact Sheet. From the NIA Sump, the storm water, groundwater extraction, and dewatering are pumped to the Unit 2 outfall (**Outfall Number 002 (Monitoring Location EFF-002)**).

The “Unit 2” yard drain system (“In Plant Sumps/Floor Drains”, Water Balance Diagram in Attachment C of this Order) collects stormwater and miscellaneous surface drainage from the yard areas immediately adjacent to structures along the east road and the west road. The storm drain headers combine into a single 36-inch line that runs south along the west road and enters the Unit 2 intake structure that is transferred to the Unit 2 outfall (**Outfall Number 002 (Monitoring Location EFF-002)**) via the ocean water/saltwater pumps.

The “Unit 3” yard drain system is a mirror image of the Unit 2 system. The “Unit 3” yard drain system (“Intake Structure & Building Sumps”) collects stormwater (“In Plant Storm Drains”) and surface drainage from the switchyard, the former high flow makeup demineralizer area, the south yard area, the multi-purpose handling facility, parking lots 1 and 2, an offsite culvert crossing under Interstate 5, and access areas south of the plant (“Misc. Utilities Fire Water”, Water Balance Diagram in Attachment C of this Order). The multiple storm drain

headers combine into a single 72-inch line that runs north along the west road and enters the Unit 3 intake structure that is transferred to the Unit 2 outfall (**Outfall Number 002 (Monitoring Location EFF-002)**) ocean water/saltwater pumps.

The Units 2 and 3 subsurface drainage system is designed to accommodate the runoff from onsite areas and offsite areas west of Interstate Highway 5 and should accommodate resulting runoff from a precipitation intensity of up to three inches per hour. The storm drainpipes are sized based upon maximum flow rates of 520 cubic feet per second (cfs) from the 72-inch pipe coming into the Facility from under Interstate 5, approximately 27 cfs from Unit 2, and 26 cfs from Unit 3 for the 100-year storm event. This equates to a design capacity of 572 cfs or approximately 260,000 gpm. At that rate, in a 10-minute period, a volume of 2,500,000 gallons will pass through these two main storm water systems. On a daily average basis, a maximum of 0.324 MGD will be discharged as stormwater. These are the same estimates as the combined stormwater average flow presented in the previous Order, Order No. R9-2015-0073.

There are also some stormwater flows that do not discharge to the outfalls. Other stormwater flows at the Facility are generated from parking lots and are discharged to culverts leading directly to the beach. These stormwater discharges are not within the formerly industrialized area of the Facility.

Stormwater flows that discharge to the beach and that discharge to the Unit 2 outfall are addressed in the Facility Stormwater Pollution Prevention Plan (SWPPP) for decommissioning and dismantlement activities prepared in compliance with the *NPDES General Permit for Storm Water Discharges Associated with Construction and Land Disturbance Activities* (Construction General Permit), Order 2009-0009-DWQ, NPDES NO. CAS000002, (WDID 9 37C388840). The SWPPP includes stormwater control and monitoring activities during decommissioning, and post-decommissioning plans for site stabilization and stormwater discharge.

As the Facility is undergoing decommissioning and dismantlement, structures (and associated floor drains and sumps) are being removed, backfilled, and areas final graded and stabilized as outlined in the CDP Grading Plan and the SWPPP post-decommissioning plan. During decommissioning and dismantlement, depending on source and/or radiological levels of collected water, water may be directed to: 1) the “Common Oil Removal System” (**Monitoring Location INT-002-L**) before entering the Unit 2 storm drain system that is transferred to Unit 2 outfall (**Outfall Number 002 (Monitoring Location EFF-002)**) via the ocean water/saltwater pumps, 2) holding tanks for further treatment as “Concrete Cutting Water” (**Monitoring Location INT-002-K**) or “Radioactive Waste (Radwaste) System” (**Monitoring Location INT-002-E**), or 3) to a yard drain (“In Plant Storm Drains” [**Monitoring Location INT-001-E**] or a storm drain). More information on the “Common Oil Removal System”, “Concrete Cutting Water”, and “Radioactive Waste (Radwaste) System” is in Section 2.1.6, 2.1.5, and 2.1.2, respectively.

2.1.4. Groundwater Extraction and Dewatering Flows - Discharge Points 001-F/002-M, Monitoring Locations INT-001-F/INT-002-M

Groundwater extraction performed at the NIA following the dismantlement of Unit 1 was included in the current NPDES permit. This extraction is not currently being conducted but may be necessary in the future to contain the radioactive activity level and potential for off-site dispersion of groundwater potentially containing licensed radioactive material. Groundwater extraction would occur through one or more of the four extraction wells placed selectively to remove groundwater suspected of contributing to the higher radioactive activity levels at the NIA.

The groundwater radioactive activity levels at the NIA are monitored regularly with sampling from separate monitoring-wells. The extracted groundwater is pumped to the nearby NIA sump. The radioactive activity levels are observed in the NIA sump, the ocean water/saltwater pump flows are confirmed, and the NIA sump is metered out at a flow rate such that the discharge to the Unit 2 ocean outfall, when combined with the ocean water/saltwater pump flows, reduces the radioactive activity levels in the combined discharge to a value in compliance with the limits of the ODCM and requirements of 10 CFR part 20, *Standards for Protection Against Radiation*. All discharges of licensed radioactive materials are monitored continuously with feedback control to stop the discharge of licensed radioactive material if any flow rate or radioactive activity level poses a challenge to the ODCM limits for release. If utilized, up to 3.75 MGD of NIA groundwater potentially containing licensed radioactive material would be discharged from the NIA pumps. According to the Water Balance Diagram in Attachment C of this Order, NIA Groundwater Extraction and Dewatering effluent (**Monitoring Location INT-001-F**) flows to the NIA Sump (**Monitoring Location INT-001-E**) before reaching the outfall (**Outfall Number 002 (Monitoring Location EFF-002)**). More information on Monitoring Location INT-001-E is in section 2.1.3 of this Fact Sheet.

Similar licensed radioactive material in groundwater may be present under Unit 2 and Unit 3 and will be confirmed when structures are removed during the SONGS dismantlement and site characterization is completed. The groundwater extraction flow rates may increase in order to control the monitored radioactive activity levels and any off-site dispersion of groundwater containing licensed radioactive materials. Therefore, the combined extraction and dewatering discharge flows for NIA (Unit 1) of 3.75 MGD will be maintained. In addition, the water balance for decommissioning-related groundwater dewatering is explained in more detail later in this section.

Limited construction dewatering is expected to be required for the removal of below grade structures supporting Unit 2 and 3; however, the final scope of foundation removal and end state is not yet finalized. The depth of excavations and foundation removal will also be dependent on the on-site characterization results. All groundwater with field measurable levels of radioactive material will be discharged consistent with the practices already established for the NIA

extraction well discharge and will comply with ODCM requirements. The water balance includes a maximum of 7.5 MGD of dewatering to account for each of the Unit 2 and 3 flows that is expected to be similar to the dewatering discharge for the NIA.

Included in the groundwater dewatering estimate are short-term dewatering discharges. For example, following installation of isolation gates in the intake/forebay area that is below sea-level, approximately 7.5 million gallons of trapped intake seawater will need to be removed and returned to the ocean at an estimated flow rate of 3,000 to 4,000 gpm. Following the initial dewatering, seawater in-leakage would be on the order of 200 to 300 gpm. The plan is to discharge the un-impacted seawater to the Unit 2 outfall or to the ocean through the existing beach discharge (up to 7.824 MGD). No radwaste or sewage treatment wastewater would be released via the beach discharge pathway. Per the site grading plan only storm water will be routed through the beach discharge pathway at the end of the decommissioning project.

All included, the maximum discharge rate for future groundwater extraction and dewatering processes is 11.25 MGD, the same flow rate presented in the previous Order, Order No. R9-2015-0073.

2.1.5. Concrete Cutting Water/Dust Control - Discharge Point 002-K, Monitoring Location INT-002-K

Concrete cutting will be performed periodically as needed to support Facility dismantlement. Water not only helps cool and lubricate the cutting saw, but also helps control dust. This effluent will also include other general dust control wastewaters used during demolition activities. This process would be managed for compliance with the CGP and SWPPP, and may discharge a maximum of 0.2 MGD, consistent with the previous Order, Order No. R9-2015-0073. If pH adjustment/treatment of concrete cutting water is required to meet effluent limitations, Discharger may utilize a tank to capture and treat the concrete cutting water. Treated water will be resampled to evaluate whether pH limits are met prior to discharge.

2.1.6. Common Oil Removal System - Discharge Point 002-L, Monitoring Location INT-002-L

A Unit 2 and 3 common oil water separator receives flow from building sumps that collect nonradioactive plant water and intake structure sumps that collect ocean water released from system piping, bearings and pumps. The non-radioactive plant drains refer to drains from systems that do not normally contain radioactivity, but on occasion may contain trace amounts. Non-radioactive plant drains are routed through a radiation monitor and/or sampled and analyzed. The oil removal system separates the oil and grease and precipitates or settles out suspended sediments and discharges the separated water to the Unit 2 outfall. Segregated oil and grease are collected for offsite disposal.

According to the Water Balance Diagram in Attachment C of this Order, effluent from the "Unit 2" and "Unit 3" in plant sumps and floor drains flow to the

“Common Oil Removal System” (**Monitoring Location INT-002-L**) before entering the Unit 2 outfall. More information on the “Common Oil Removal System” is in section 2.1.3 of this Fact Sheet.

The common oil removal system discharges a maximum of 0.288 MGD consistent with the previous Order, Order No. R9-2015-0073.

2.1.7. Discontinued Discharges

Order No. R9-2015-0073 included Outfalls 002 and 003. The Discharger’s ROWD amendment dated December 14, 2022, states, “Unit 3 outfall has not been utilized since 2017; the current piping configuration routes everything over to the Unit 2 outfall. Therefore, [Southern California Edison Company] requests the elimination of Discharge No. 003 from the NPDES Permit.” The Discharger plans to dismantle this location as part of the SONGS decommissioning. As such, this Order removes Discharge Point 003 (Effluent Monitoring Location EFF-003) because this location is no longer operable.

This Order removes the following internal waste streams: INT-002-A / INT-003-A (metal cleaning wastes), INT-002-J / INT-003-J (Intake Structure Sump), INT-003-D (Rubber Tire Demineralizer), INT-003-E (Radwaste System), INT-003-K (Concrete Cutting Water), INT-003-L (Common Oil Removal System), and INT-003-M (Dewatering).

2.1.8. Total Flows

The total internal low-volume waste streams from INT-002-E (0.12 MGD), INT-002-D (0.02 MGD), INT-001-F/INT-001-E (3.75 MGD), INT-002-M (7.5 MGD), INT-002-K (0.2 MGD), and INT-002-L (0.288 MGD) is 11.878 MGD, a reduction from the previous Order’s total internal low-volume waste stream of 12.8 MGD.

The total flow from the internal low-volume waste streams (11.878 MGD, INT-002), NIA Sewage Treatment Plant (0.05 MGD, INT-001-A), stormwater (0.324 MGD), and saltwater pumps (30 MGD) is 42.252 MGD, a reduction from the previous Order’s total flow of 56.3 MGD.

2.2. Discharge Points and Receiving Waters

The internal waste streams from the NIA and Unit 2, the stormwater, and the saltwater discharge to the Pacific Ocean through Discharge Point No. 002.

The SONGS Unit 2 diffuser Discharge Point No. 002 is equipped with a 2,462-foot-long diffuser pipe, which starts at 5,888 feet offshore and extends to 8,350 feet offshore. The Unit 2 diffuser pipe ranges in depth from 39 feet to 49 feet. The offshore end of the Unit 2 diffuser pipe is located at latitude 33° 20' 55.84" North and longitude 117° 34' 13.5" West. The diffuser is equipped with 63 jet nozzles. The nozzles are alternated in the direction of 25 degrees upcoast and 25 degrees downcoast along the diffuser pipe. Further, the nozzles are directed at an angle of 20 degrees off the bottom and the nozzle openings are only two feet off the seafloor. The initial offshore momentum of the effluent from the jet nozzles promotes the mixing of the effluent with the receiving seawater.

The nearest Unit 2 diffuser jet nozzle is located approximately 2,700 feet away from either of the two intakes (in the longitudinal direction). The design of the Unit 2 diffusers ensures that heated effluent actively travels away from the diffusers and shoreline in a longitudinal direction. This also ensures that the discharge from the diffusers does not move in the lateral direction and get entrained in the Unit 2 and 3 intake structures.

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

Effluent limitations contained in the previous Order, Order No. R9-2015-0073, for discharges from the Facility and representative monitoring data obtained from February 2016 to July 2022 are as follows:

Table F-2. Historical Effluent Limitations and Monitoring Data at Monitoring Location INT-001-A^{1,2}

Parameter	Units	Average Monthly Effluent Limitation (AMEL)	Average Weekly Effluent Limitation (AWEL)	Instantaneous Maximum Effluent Limitation	Highest Average Monthly Discharge	Highest Average Weekly Discharge	Highest Instantaneous Maximum
Flow	MGD	--	--	--	0.006	--	--
Oil and Grease	milligram per liter (mg/L)	25	40	75	2	2	2
Oil and Grease	pounds per day (lbs/day)	21	--	--	0.2	--	--
Total Suspended Solids (TSS)	mg/L	--	--	3	--	--	3
Settleable Solids	milliliters per liter (ml/L)	1.0	1.5	3.0	0.1	0.1	0.1
Turbidity	nephelometric turbidity units (NTU)	75	100	225	8.2	8.2	8.2
pH	standard units	--	--	6.0 – 9.0 ⁴	--	--	6.5 – 8.3 ⁴

Notes for Table F-2

1. See Attachment A for definitions of abbreviations and a glossary of common terms used in this Order.
2. See Order No. R9-2015-0073, Tables E-2 and E-3 for the monitoring requirements and Table 5 for the effluent limitations.
3. Not more than 25% of influent TSS.
Calculated values not reported.
Reported TSS influent at INF-001-A from February 2016 to July 2022 was 176 to 11,600 mg/L.
Reported TSS effluent at INT-001-A from February 2016 to July 2022 was 0.1 to 24 mg/L.

4. Minimum and maximum value.

The previous Order, Order No. R9-2015-0073 includes effluent monitoring requirements for chemical and non-chemical metal cleaning wastes from Unit 2 (INT-002-A) and Unit 3 (INT-003-A) in Table E-4 and effluent limitations in Table 6. During the permit term of Order No. R9-2015-0073, no data was reported for the effluent for chemical and non-chemical metal cleaning wastes from Unit 2 (INT-002-A) and Unit 3 (INT-003-A). As discussed in section 2.1.7, metal effluent discharges have been discontinued. The Discharger’s monthly and annual reports stated that Monitoring Locations INT-002-A and INT-003-A had no discharge from 10/01/2017 to 7/31/2022.

Table F-3. Historical Effluent Limitations and Monitoring Data for the Combined Low-Volume Miscellaneous Discharge at INT-002 and INT-003^{1,2}

Parameter	Units	6-Month Median Effluent Limitation	30-Day Average Effluent Limitation	Maximum Daily Effluent Limitation (MDEL)	Highest Maximum Daily / Daily Discharge
TSS	mg/L	--	30	100	25
TSS	lbs/day	--	3200	10700	2.3
Oil and Grease	mg/L	--	15	20	4.06
Oil and Grease	lbs/day	--	1600	2100	0.86
pH	Standard units	--	--	Between 6.0 and 9.0 at all times	Reported values between 7.5 and 8.15
Arsenic	lbs/day	6.2	--	34.4	0.004030828
Cadmium, Total Recoverable	lbs/day	1.2	--	4.7	0.0000031
Chromium (hexavalent), Total Recoverable	lbs/day	2.3	--	9.4	0.0002661
Copper, Total Recoverable	lbs/day	1.4	--	12.0	0.08178492
Mercury, Total Recoverable	lbs/day	0.05	--	0.19	0.000326305
Selenium, Total Recoverable	lbs/day	17.6	--	70.5	0.000886
Silver, Total Recoverable	lbs/day	0.65	--	3.1	<0.0009
Zinc, Total Recoverable	lbs/day	14.9	--	85.4	0.041142822
Cyanide, Total (as Cyanide)	lbs/day	1.2	--	4.7	0.000367
Ammonia (as Nitrogen)	lbs/day	705	--	2820	2.29832316
Phenolic Compounds (non-chlorinated) ¹	lbs/day	35	--	141	<0.01171
Chlorinated Phenolics ¹	lbs/day	1.2	--	4.7	0.000025
Endosulfan ¹	lbs/day	0.01	--	0.02	0.0000319
Endrin	lbs/day	0.002	--	0.004	0.00000018

Parameter	Units	6-Month Median Effluent Limitation	30-Day Average Effluent Limitation	Maximum Daily Effluent Limitation (MDEL)	Highest Maximum Daily / Daily Discharge
Hexachlorocyclohexane (HCH) ¹	lbs/day	0.004	--	0.009	0.000000529
Acrolein	lbs/day	--	258	--	<0.00368
Antimony	lbs/day	--	1400	--	<0.000572
Bis(2-chloroethoxy) methane	lbs/day	--	5.2	--	<0.00038
Bis(2-chloroisopropyl) ether	lbs/day	--	1400	--	<0.00053
Chlorobenzene	lbs/day	--	670	--	<0.00043
Chromium (III), Total Recoverable	lbs/day	--	223000	--	0.000042
Di-n-butyl phthalate	lbs/day	--	4100	--	<0.0005055
Dichlorobenzenes ¹	lbs/day	--	6000	--	<0.00078
Diethyl phthalate	lbs/day	--	39000	--	<0.00031
Dimethyl phthalate	lbs/day	--	960000	--	<0.0008
4,6-Dinitro-2-methylphenol	lbs/day	--	260	--	<0.00709
2,4-Dinitrophenol	lbs/day	--	4.7	--	<0.00141
Ethylbenzene	lbs/day	--	4800	--	<0.00053
Fluoranthene	lbs/day	--	17.6	--	<0.00018
Hexachlorocyclopentadiene	lbs/day	--	68	--	<0.00709
Nitrobenzene	lbs/day	--	5.8	--	<0.00032
Thallium, Total Recoverable	lbs/day	--	2.3	--	<0.00312
Toluene	lbs/day	--	99800	--	<0.00068
Tributyltin	lbs/day	--	0.002	--	0.00000003
1,1,1-Trichloroethane	lbs/day	--	634000	--	<0.00032
Acrylonitrile	lbs/day	--	0.12	--	<0.00212
Aldrin	lbs/day	--	0.000026	--	<0.0000002
Benzene	lbs/day	--	6.9	--	<0.00066
Benzidine	lbs/day	--	0.000081	--	<0.00292
Beryllium, Total Recoverable	lbs/day	--	0.04	--	<0.00255
Bis(2-chloroethyl) ether	lbs/day	--	0.05	--	<0.00059
Bis(2-ethylhexyl) phthalate	lbs/day	--	4.1	--	<0.000878
Carbon tetrachloride	lbs/day	--	1.1	--	<0.00053
Chlordane ¹	lbs/day	--	0.000027	--	<0.00002
Chlorodibromomethane	lbs/day	--	10	--	0.008796052
Chloroform	lbs/day	--	153	--	0.003546795
Dichlorodiphenyltrichloroethane (DDT) ¹	lbs/day	--	0.0002	--	<0.0000036
1,4-Dichlorobenzene	lbs/day	--	21	--	<0.00051

Parameter	Units	6-Month Median Effluent Limitation	30-Day Average Effluent Limitation	Maximum Daily Effluent Limitation (MDEL)	Highest Maximum Daily / Daily Discharge
3,3'-Dichlorobenzidine	lbs/day	--	0.09	--	<0.00083
1,2-Dichloroethane	lbs/day	--	33	--	<0.00035
1,1-Dichloroethylene	lbs/day	--	1.0	--	<0.00009
Dichlorobromomethane	lbs/day	--	7.3	--	0.007802949
Dichloromethane	lbs/day	--	530	--	<0.00061
1,3-Dichloropropene	lbs/day	--	10.5	--	<0.00136
Dieldrin	lbs/day	--	0.000047	--	<0.0000001
2,4-Dinitrotoluene	lbs/day	--	3.1	--	<0.00063
1,2-Diphenylhydrazine	lbs/day	--	0.19	--	<0.00141
Halomethanes ¹	lbs/day	--	150	--	0.005816744
Heptachlor	lbs/day	--	0.000059	--	<0.0000002
Heptachlor Epoxide	lbs/day	--	0.000023	--	<0.0000001
Hexachlorobenzene	lbs/day	--	0.00025	--	<0.00049
Hexachlorobutadiene	lbs/day	--	16	--	<0.00079
Hexachloroethane	lbs/day	--	2.9	--	<0.00035
Isophorone	lbs/day	--	857	--	<0.0009
N-nitrosodimethylamine	lbs/day	--	8.6	--	<0.00709
N-nitrosodi-N-propylamine	lbs/day	--	0.45	--	<0.00082
N-nitrosodiphenylamine	lbs/day	--	2.9	--	<0.00017
Polynuclear aromatic hydrocarbons (PAHs) ¹	lbs/day	--	0.01	--	<0.00381
Polychlorinated biphenyls (PCBs) ¹	lbs/day	--	0.000022	--	<0.00397
TCDD equivalents ¹	lbs/day	--	0.0000000046	--	<0.0000002
1,1,2,2-Tetrachloroethane	lbs/day	--	2.7	--	<0.00059
Tetrachloroethylene	lbs/day	--	2.3	--	<0.00069
Toxaphene	lbs/day	--	0.00025	--	<0.0007
Trichloroethylene	lbs/day	--	32	--	<0.00043
1,1,2-Trichloroethane	lbs/day	--	11	--	<0.00048
2,4,6-Trichlorophenol	lbs/day	--	0.34	--	<0.00141
Vinyl chloride	lbs/day	--	42	--	<0.00066

Notes for Table F-3

1. See Attachment A for definitions of abbreviations and a glossary of common terms used in this Order.
2. The previous Order, Order No. R9-2015-0073 required the Discharger to monitor the combined low-volume miscellaneous discharge at NIA (Monitoring Locations INT-001-E and INT-001-F), Unit 2 (Monitoring Locations INT-002-D, INT-002-E, INT-002-J, INT-002-K, INT-002-L, and

INT-002-M), and Unit 3 (Monitoring Locations INT-003-D, INT-003-E, INT-003-J, INT-003-K, INT-003-L, and INT-003-M). and to report aliquot as Monitoring Locations INT-001 (NIA), INT-002 (Unit 2) and INT-003 (Unit 3) (see Order No. R9-2015-0073, Table E-6). The effluent limitations for the combined low-volume miscellaneous discharge are contained in Order No. R9-2015-0073, Table 8. In 2016, the INT-002 composite sample included INT-001E, INT-002-L, and INT-002-J; and the INT-003 composite sample included INT-003-J. From 2017 to 2020, the INT-002 composite sample included INT-001E and INT-002L; no data for INT-003. In 2021, INT-002 composite only included INT-001E; no data for INT-003.

Table F-4. Historical Effluent Limitations and Monitoring Data for the Individual Low-Volume Miscellaneous Discharge^{1,2}

Monitoring Location	Parameter	Units	AMEL	Daily Maximum Effluent Limitation	Highest Average Monthly Discharge	Highest Daily Maximum
INT-001-E	Flow	MGD	--	--	0.092	0.155
INT-001-E	TSS	mg/L	30	100	29.2	82
INT-001-E	Oil and Grease	mg/L	15	20	14.2	17.6
INT-002-D	Flow	MGD	--	--	0.001	0.0077
INT-002-D	TSS	mg/L	30	100	<0.4	<0.4
INT-002-D	Oil and Grease	mg/L	15	20	<13.4	19.4
INT-002-E	Flow	MGD	--	--	0.007	0.097
INT-002-E	TSS	mg/L	30	100	2.5	2.5
INT-002-E	Oil and Grease	mg/L	15	20	<5	<5
INT-002-J	Flow	MGD	--	--	0.07	0.07
INT-002-J	TSS	mg/L	30	100	10.9	10.9
INT-002-J	Oil and Grease	mg/L	15	20	<5	<5
INT-002-L	Flow	MGD	--	--	0.028	0.19
INT-002-L	TSS	mg/L	30	100	10.8	10.8
INT-002-L	Oil and Grease	mg/L	15	20	11.68	42
INT-003-J	Flow	MGD	--	--	0.07	0.07
INT-003-J	TSS	mg/L	30	100	27.9	27.9
INT-003-J	Oil and Grease	mg/L	15	20	<5	<5

Notes for Table F-4

1. See Attachment A for definitions of abbreviations and a glossary of common terms used in this Order.
2. The previous Order, Order No. R9-2015-0073 required the Discharger to monitor the individual, low-volume, miscellaneous discharges at NIA (001-E and 001-F), Unit 2 (002-D, 002-E, 002-J, 002-K, 002-L, and 002-M), and Unit 3 (003-D, 003-E, 003-J, 003-K, 003-L, and 003-M), with compliance measured at Monitoring Locations NIA (INT-001-E and INT-001-F), Unit 2 (INT-002-D, INT-002-E, INT-002-J, INT-002-K, INT-002-L, and INT-002-M), and Unit 3 (INT-003-D, INT-003-E, INT-003-J, INT-003-K, INT-003-L, and INT-

003-M) (see Order No. R9-2015-0073, Table E-8). The effluent limitations for the individual, low-volume, miscellaneous discharges are contained in Order No. R9-2015-0073, Table 9. During the permit term of Order No. R9-2015-0073, data was only reported for Monitoring Locations INT-001-E, INT-002-D, INT-002-E, INT-002-J, INT-002-L, and INT-003-J.

The previous Order, Order No. R9-2015-0073 contained Discharge Prohibition III.D, “The total combined discharge of wastewater, through Discharge Point No. 002 and Discharge Point No. 003, in excess of 56.3 million gallons per day (MGD) is prohibited.” The maximum reported total flow from Discharge Point Nos. 002 and 003 was 48.6 MGD.

Table F-5. Historical Effluent Limitations and Monitoring Data at Monitoring Locations EFF-002^{1,2}

Parameter	Units	MDEL	Instantaneous Maximum Effluent Limitation	Six-Month Median Effluent Limitation	Highest Maximum Daily	Highest Instantaneous Maximum	Highest Six-Month Median
Total Residual Chlorine	µg/L	88	660	22	0 ³	0 ³	0 ³
Turbidity	NTU	--	--	--	--	4.17	--
Chronic Toxicity	Pass/Fail	Pass	--	--	Pass	--	--
Residual Heat	°F	--	4	--	--	6 ⁵	--
Arsenic	µg/L	--	850	--	--	6.7	--
Cadmium, Total Recoverable	µg/L	--	110	--	--	<19.6	--
Chromium (hexavalent), Total Recoverable	µg/L	--	220	--	--	<0.75	--
Copper, Total Recoverable	µg/L	--	310	--	--	34	--
Lead, Total Recoverable	µg/L	--	220	--	--	3.06	--
Mercury, Total Recoverable	µg/L	--	4.4	--	--	0.23	--

Parameter	Units	MDEL	Instantaneous Maximum Effluent Limitation	Six-Month Median Effluent Limitation	Highest Maximum Daily	Highest Instantaneous Maximum	Highest Six-Month Median
Nickel, Total Recoverable	µg/L	--	550	--	--	13.2	--
Selenium, Total Recoverable	µg/L	--	1,700	--	--	284	--
Silver, Total Recoverable	µg/L	--	75	--	--	10.2	--
Zinc, Total Recoverable	µg/L	--	2,100	--	--	53.2	--
Cyanide	µg/L	--	110	--	--	2.5	--
Ammonia, Un-ionized (as Nitrogen)	mg/L	--	66	--	--	7.25	--
Non-Chlorinated Phenolic Compounds ¹	µg/L	--	3,300	--	--	<23	--
Chlorinated Phenolics ¹	µg/L	--	110	--	--	<4.27	--
Endosulfan ¹	µg/L	--	0.30	--	--	0.034	--
Endrin	µg/L	--	0.066	--	--	0.023	--
HCH ¹	µg/L	--	0.13	--	--	0.0055	--

Notes for Table F-5

1. See Attachment A for definitions of abbreviations and a glossary of common terms used in this Order.
2. The previous Order, Order No. R9-2015-0073 required the Discharger to monitor Discharge Point No. 002 at Monitoring Location EFF-002 (see Order No. R9-2015-0073, Table E-9). Order No. R9-2015-0073 Table 10 Final Effluent Limitations – Ocean Outfall Discharge Points Nos. 002 or 003 apply to Monitoring Location EFF-002.
3. All data reported as zero usually with the comment “No sample taken, no chlorination since August 2013”.
4. The maximum temperature of the discharge through Monitoring Location EFF-002 to the Pacific Ocean shall not exceed, at any time, the natural temperature of the receiving water by more than 20°F.
5. Reported as “Temp Diff b/n Intake and Discharge” on April 18, 2016.

Table F-6. Historical Effluent Limitations and Monitoring Data at Monitoring Location EFF-003^{1,2}

Parameter	Units	MDEL	Instantaneous Maximum Effluent Limitation	Six-Month Median Effluent Limitation	Highest Maximum Daily	Highest Instantaneous Maximum	Highest Six-Month Median
Total Residual Chlorine	µg/L	88	660	22	No reported data	--	--
Turbidity	NTU	--	--	--	--	1.5	--
Chronic Toxicity	Pass/Fail	Pass	--	--	Pass	--	--
Residual Heat	°F	--	3	--	--	4 ⁴	--
Arsenic	µg/L	--	850	--	--	6.9	--
Cadmium, Total Recoverable	µg/L	--	110	--	--	<0.4	--
Chromium (hexavalent), Total Recoverable	µg/L	--	220	--	--	<0.27	--
Copper, Total Recoverable	µg/L	--	310	--	--	140	--
Lead, Total Recoverable	µg/L	--	220	--	--	11	--
Mercury, Total Recoverable	µg/L	--	4.4	--	--	0.26	--
Nickel, Total Recoverable	µg/L	--	550	--	--	4	--
Selenium, Total Recoverable	µg/L	--	1,700	--	--	<5.2	--
Silver, Total Recoverable	µg/L	--	75	--	--	<0.7	--
Zinc, Total Recoverable	µg/L	--	2,100	--	--	31	--
Cyanide	µg/L	--	110	--	--	<20	--

Parameter	Units	MDEL	Instantaneous Maximum Effluent Limitation	Six-Month Median Effluent Limitation	Highest Maximum Daily	Highest Instantaneous Maximum	Highest Six-Month Median
Ammonia, Un-ionized (as Nitrogen)	mg/L	--	66	--	--	8	--
Non-Chlorinated Phenolic Compounds	µg/L	--	3,300	--	--	<8.26	--
Chlorinated Phenolics	µg/L	--	110	--	--	<4.27	--
Endosulfan ¹	µg/L	--	0.30	--	--	0.034	--
Endrin	µg/L	--	0.066	--	--	0.002	--
HCH ¹	µg/L	--	0.13	--	--	0.014	--

Notes for Table F-6

1. See Attachment A for definitions of abbreviations and a glossary of common terms used in this Order.
2. The previous Order, Order No. R9-2015-0073 required the Discharger to monitor Discharge Point No. 003 at Monitoring Location EFF-003 (see Order No. R9-2015-0073, Table E-9). Order No. R9-2015-0073 Table 10 Final Effluent Limitations – Ocean Outfall Discharge Points Nos. 002 or 003 apply to Monitoring Location EFF-003.
3. The maximum temperature of the discharge through Monitoring Location EFF-003 to the Pacific Ocean shall not exceed, at any time, the natural temperature of the receiving water by more than 20°F.
4. Reported as “Temp Diff b/n Intake and Discharge” on May 12, 2016.

Table F-7. Historical Monitoring Data at Monitoring Locations INF-002 and INF-003^{1,2}

Monitoring Location	Parameter	Units	Highest Maximum Daily
INF-002	Flow (Average Daily)	MGD	14.832
INF-002	Flow (Maximum Daily)	MGD	35.771
INF-002	Turbidity (Instantaneous Maximum)	NTU	13.9
INF-002	Temperature (Average Daily)	°F	73
INF-002	Temperature (Maximum Daily)	°F	74
INF-003	Flow (Average Daily)	MGD	22.32
INF-003	Flow (Maximum Daily)	MGD	14.688
INF-003	Turbidity (Instantaneous Maximum)	NTU	24.5
INF-003	Temperature (Average Daily)	°F	64

Monitoring Location	Parameter	Units	Highest Maximum Daily
INF-003	Temperature (Maximum Daily)	°F	63

Notes for Table F-7

1. See Attachment A for definitions of abbreviations and a glossary of common terms used in this Order.
2. The previous Order, Order No. R9-2015-0073 required the Discharger to monitor at Monitoring Locations INF-002 and INF-003 (see Order No. R9-2015-0073, Table E-10).

2.4. Compliance Summary

As of September 23, 2022, the Discharger has reported the following alleged violations of Order No. R9-2015-0073:

- 2.4.1. In accordance with Attachment E, section X.B.4, the laboratory used by the San Onofre Nuclear Generating Station (Discharger) is required to meet the minimum levels (MLs) specified in Appendix II of the *Water Quality Control Plan for Ocean Waters of California* (Ocean Plan). The laboratory reports documented a minimum detection limit (MDL) that is greater than the ML specified in Appendix II of the Ocean Plan for seven constituents in the semi-annual SMR.
- 2.4.2. Order No. R9-2015-0073, Table 9 includes an MDEL of 20 mg/L for oil and grease for individual low-volume waste streams. On July 16, 2019, and September 26, 2022, at one of the individual low-volume waste streams (monitoring location INT-002-L), the discharger reported an oil and grease daily maximum of 42 and 59.4 mg/L, respectively, exceeding the limitation.
- 2.4.3. Order No. R9-2015-0073, Table 9 includes a 30-day average limitation of 15 mg/L for oil and grease for individual low-volume waste streams. On September 26, 2022, at one of the individual low-volume waste streams (monitoring location INT-002-L), the discharger reported an oil and grease 30-day average of 59.4 mg/L, exceeding the limitation.
- 2.4.4. Order No. R9-2015-0073, Table 9 includes a 30-day average limitation of 30 mg/L for TSS for individual low-volume waste streams. On September 26, October 5, October 6, October 24, and October 25, 2022, at one of the individual low-volume waste streams (monitoring location INT-002-L), the calculated 30-day average for TSS was 95.5, 52.0, 47.8, 38.6, and 33.0 mg/L, respectively, exceeding the limitation.
- 2.4.5. Order No. R9-2015-0073, discharge prohibition III.A states “The discharge of waste in a manner or to a location that has not been specifically described to the San Diego Water Board and for which valid WDRs are not in force are prohibited.” The Discharger reported a discharge of partially treated sewage on March 25, 2020, from 0530 to 0730 from the NIA sewage treatment plant in violation of discharge prohibition III.A. The total volume of partially treated sewage was between 6,000 to 7,000 gallons. “During the release, the partially treated effluent was diluted by a factor greater than the minimum 10:1 dilution required by [Order No. R9-2015-0073].”

2.4.6. Order No. R9-2015-0073, Attachment E, Table E-9 requires a minimum sampling frequency of once per week for temperature. In January 2022, the Discharger reported deficient monitoring, stating “Temperature readings were not collected during three weekend run times.”

2.5. Planned Changes

The Discharger is continuing the decommissioning of the Facility. The discharges described in section 2.1 of this Fact Sheet are required for the continued operation and the dismantlement of site facilities at SONGS. While some of these effluent flow volumes are known, others like groundwater extraction and dewatering volumes will not be fully known until the depths of excavation/structure removal and site characterization are finalized.

During dismantlement, each effluent source except storm water (and possibly groundwater extraction) will be eliminated as a point source discharge, and storm water will be managed under the Construction General Permit. Eventually, upon completion of site restoration, the storm water point-source will be replaced with a dispersed set of non-point source discharges to the ocean via the common across the beach discharge. In addition, more of the storm water will be retained on site via infiltration when site hardscape is replaced with more permeable materials. Until that time, the Discharger will continue to maintain the Unit 2 point-source discharge (Discharge Point No. 002) regulated by the conditions of this Order.

As stated in section 2.1.1 of this Fact Sheet, the connection between Mesa sewage treatment plant and the NIA Sewage Treatment Plant has been severed. Remaining buildings in the Mesa area will be turned over to the Department of the Navy who will assume direct responsibility for providing alternative future sewage treatment before the remaining buildings are reoccupied. This turnover of the Mesa property is expected to occur within the next 2 to 3 years.

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 location described in Table 1 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 is exempt from the provisions of Chapter 3 of 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 San Diego Water Board adopted a Water Quality Control Plan for the San Diego Basin (Basin Plan) on September 8, 1994, that designates beneficial uses, establishes water quality objectives, and contains implementation programs and policies to achieve those objectives for the Pacific Ocean and other receiving waters addressed through the plan. Subsequent revisions to the Basin Plan have also been adopted by the San Diego Water Board and approved by the State Water Resources Control Board (State Water Board). Beneficial uses applicable to the Pacific Ocean specified in the Basin Plan are summarized in Table F-8. To protect the beneficial uses, the Basin Plan establishes water quality objectives and a program of implementation. Requirements of this Order implement the Basin Plan.

Table F-8. Basin Plan Beneficial Uses

Discharge Point	Receiving Water Name	Beneficial Use(s)
002	Pacific Ocean	<ul style="list-style-type: none"> • Industrial service supply (IND); • Navigation (NAV); • Water contact recreation (REC-1); • Non-contact recreation (REC-2); • Commercial and sport fishing (COMM); • Preservation of biological habitats of special significance (BIOL); • Wildlife habitat (WILD); • Rare, threatened, or endangered species (RARE); • Marine habitat (MAR); • Aquaculture (AQUA); • Migration of aquatic organisms (MIGR); • Spawning, reproduction, and/or early development (SPWN); and • Shellfish harvesting (SHELL).

3.3.2. California Ocean Plan. The State Water Board adopted the *Water Quality Control Plan for Ocean Waters of California* (Ocean Plan) in 1972 and amended it in 1978, 1983, 1988, 1990, 1997, 2000, 2005, 2009, 2012, 2015, and 2018. The State Water Board adopted the latest amendment on August 7, 2018, the USEPA approved the amendments on March 22, 2019, and it became effective on March 22, 2019. The Ocean Plan is applicable, in its entirety, to point source discharges to the ocean. The Ocean Plan identifies beneficial uses of ocean waters of the State to be protected as summarized in Table F-9. To protect the

beneficial uses, the Ocean Plan establishes water quality objectives and a program of implementation. Requirements of this Order implement the Ocean Plan.

Table F-9. Ocean Plan Beneficial Uses

Discharge Point	Receiving Water	Beneficial Uses
002	Pacific Ocean	<ul style="list-style-type: none"> • IND; • REC-1; • REC-2, including aesthetic enjoyment; • NAV; • COMM; • Mariculture; • Preservation and enhancement of designated Areas of Special Biological Significance (ASBS); • Rare and endangered species; • MAR; • Fish migration; • Fish spawning; and • SHELL.

3.3.3. **Antidegradation Policy.** Federal regulation 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 San Diego Water Board’s Basin Plan implements, and incorporates by reference, both the State and federal antidegradation policies. The permitted discharge must be consistent with the antidegradation provision of 40 CFR section 131.12 and State Water Board Resolution 68-16.

3.3.4. **Anti-Backsliding Requirements.** Sections 402(o) and 303(d)(4) of the federal 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.

3.3.5. **Endangered Species Act Requirements.** This Order does not authorize 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 (Fish and Game Code, sections 2050 to 2097) or the federal Endangered Species Act (16 United States Code (U.S.C.) sections 1531 to 1544). This Order requires compliance with effluent limitations, receiving water limits, and other requirements to protect the beneficial uses of waters of the

State, including protecting rare and endangered species. The Discharger is responsible for meeting all requirements of the applicable Endangered Species Act.

- 3.3.6. **Thermal Plan and CWA Section 316(a).** The State Water Board adopted the Water Quality Control Plan for Control of Temperature in the Coastal and Interstate Waters and Enclosed Bays and Estuaries of California (Thermal Plan) on January 7, 1971. The State Water Board amended this plan on September 18, 1975. This plan contains temperature objectives for coastal waters.

As stated in the previous Order, Order No. R9-2015-0073, the Discharger is no longer discharging elevated thermal waste and no longer performs heat treatments to control biofouling. The ROWD states that the Facility's Units 2 and 3 permanently ceased operation and the Facility no longer requires circulating cooling waters. The Discharger's monitoring report indicates that the effluent (Monitoring Location EFF-002) was no more than 6 °F above intake seawater (Monitoring Location INF-002). The Discharger last reported data for Monitoring Location EFF-003 in June 2016 because the discharge for this location ended at that time. The Facility no longer has the capability to produce heated waters and is undergoing further decommissioning that will remove structures that contained heated water. As such, the San Diego Water Board has determined that the Thermal Plan no longer applies to this Order.

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

In April 2018, USEPA-approved the list of impaired water bodies, prepared by the State Water Board pursuant to federal CWA section 303(d), which are not expected to meet applicable water quality standards after implementation of technology-based effluent limitations (TBELs) for point sources. This 303(d) list includes the Pacific Ocean shoreline within the San Clemente Hydrologic Area at Poche Beach, San Clemente City Beach at Pier and North Beach, and South Capistrano Beach as impaired for enterococcus and total coliform.

The San Clemente Hydrologic Area is included in Resolution No. R9-2010-0001, *A Resolution Amending the Water Quality Control Plan for the San Diego Basin (9) to Incorporate Revised Total Maximum Daily Loads [TMDLs] for Indicator Bacteria, Project I – Twenty Beaches and Creeks in the San Diego Region (Including Tecolote Creek)* (TMDL Basin Plan Amendment), adopted on February 10, 2010. The TMDL Basin Plan Amendment was subsequently approved by the State Water Board on December 14, 2010, the Office of Administrative Law (OAL) on April 4, 2011, and the USEPA on June 22, 2011. Under state law, the TMDL Basin Plan Amendment became fully effective on April 4, 2011, the date of OAL approval.

The discharge from the Facility is outside the defined receiving waters of the TMDL Basin Plan Amendment and is therefore not subject to any applicable waste load allocations or regulatory actions based on the TMDL Basin Plan Amendment. Due to the relatively low volume of treatment plant effluent within the combined discharge, degradation to the receiving water is not anticipated.

3.5. Other Plans, Policies and Regulations

3.5.1. CWA Section 316(b) – Impingement and Entrainment

CWA section 316(b) requires that the location, design, construction, and capacity of cooling water intake structures reflect the Best Technology Available (BTA) for minimizing adverse environmental impacts related to entrainment (drawing organisms into the cooling water system) and impingement (trapping organisms against the intake screens).

On May 4, 2010, the State Water Board adopted a Policy on the Use of Coastal and Estuarine Waters for Power Plant Cooling (Once-Through Cooling or OTC Policy). The administrative record for the OTC Policy was approved by the Office of Administrative Law (OAL) on September 27, 2010. The OTC Policy became effective on October 1, 2010.

The OTC Policy establishes technology-based standards to implement federal CWA section 316(b) and reduce the harmful effects associated with cooling water intake structures on marine and estuarine life. The OTC Policy applies to existing power plants that currently have the ability to withdraw water from the State's coastal and estuarine waters using a single-pass system, also known as once-through cooling. Closed-cycle wet cooling has been selected as the BTA.

As stated in section 2 of this Fact Sheet, the cooling water intake structures are still in place and in use. Although the ocean water is no longer used for "one-through cooling", the ocean water intake structures are needed for ongoing operation of ocean water/saltwater pumps to move wastewater discharges through the offshore pipelines.

The Policy requires compliance under two alternatives:

- Track 1, where an owner or operator of an existing power plant must reduce intake flow rate at each unit, at a minimum, to a level commensurate with that which can be attained by a closed-cycle wet cooling system. A minimum 93 percent reduction in intake flow rate for each unit is required for Track 1 compliance, compared to the unit's design intake flow rate. The through-screen intake velocity must not exceed 0.5 foot per second. The installation of closed cycle dry cooling systems meets the intent and minimum reduction requirements of this compliance alternative, or
- Track 2, where an owner or operator of an existing power plant demonstrates to the State Water Board's satisfaction that compliance with Track 1 is not feasible, the owner or operator of an existing power plant must reduce impingement mortality and entrainment of marine life for the facility, on a unit-by-unit basis, to a comparable level to that which would be achieved under Track 1, using operational or structural controls, or both.

The State Water Board previously required the Discharger to perform special studies specified in section 3.D.(1) of the OTC Policy. By letter dated January 9, 2015, the State Water Board waived the requirement to perform the special

studies given the decision to permanently shut down the Facility and to immediately reduce intake flows by approximately 96 percent.

- 3.5.2. **Storm Water.** As stated in section 2.1.3 of this Fact Sheet, the Facility has a SWPPP that was prepared in compliance with the Construction General Permit.
- 3.5.3. **United States Nuclear Regulatory Commission.** Section 301 of the CWA establishes a broad prohibition against the discharge of pollutants except in compliance with the CWA's permit requirements; and section 502 of the CWA defines "pollutant" to include, among other things, radioactive materials [33 U.S.C. 1362 (6)]. The USEPA, which implements the CWA's prohibition on unauthorized discharges, requires a permit for every discharge of pollutants from a point source to waters of the United States through the NPDES permit program. In its implementing regulations for the NPDES Program (40 CFR part 122), the USEPA also defines "pollutant" in 40 CFR section 122.2 to include radioactive materials, but expressly excludes radioactive materials that are regulated under the Atomic Energy Act (AEA) of 1954. Radioactive materials covered by the AEA are those encompassed in its definition of source, byproduct, or special nuclear materials. The difference in the mandate of the CWA and the USEPA's implementing procedures in 40 CFR part 122 regarding the regulation of radioactive materials by the NPDES program was addressed by the U. S. Supreme Court in 1976, when citizens groups, concerned about potential discharges of radioactive effluents from nuclear facilities in Colorado, sought clarification of the definition of "pollutant." The U.S. Supreme Court found that since the first AEA was passed, control over the production and use of atomic energy has rested with the Atomic Energy Commission, which became the USNRC in 1972. The AEA gives authority to the USNRC to regulate three types of radioactive materials: (1) source material, (2) special nuclear material, and (3) byproduct material. Production of atomic energy for industrial and commercial purposes may be undertaken only in accordance with licenses issued by the USNRC, which address potential releases of these nuclear materials into the environment. [*Train v. Colorado Public Interest Research Group, Inc., et al.*, 426 U.S. 1 (1976)] The Court agreed with the USEPA that the USEPA did not have authority to control radioactive materials that are regulated under the AEA through the NPDES permit program. This Order, therefore, does not regulate radioactive materials to the extent that such materials are the responsibility of the USNRC pursuant to the AEA. Radioactive materials associated with the fuel source of a nuclear-powered electrical generating station, like the Facility, are source material, special nuclear material, or byproduct material, as defined by the AEA, and therefore, not subject to regulation by this Order.

4. Rationale for Effluent Limitations and Discharge Specifications

The federal 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 permits include applicable technology-based limitations and standards; and 40 CFR section 122.44(d) requires that permits include water quality-based effluent limitations (WQBELs) to attain and maintain applicable numeric and narrative water quality criteria to protect the beneficial uses of the receiving water. Where applicable technology-based limitations and standards and WQBELs both result in effluent limitations, the more protective numeric limitation shall be applied.

4.1. Discharge Prohibitions

This Order retains the discharge prohibitions from the previous Order, Order No. R9-2015-0073, as described below. Discharges from the Facility to surface waters in violation of prohibitions contained in this Order are violations of the federal CWA and therefore are subject to third party lawsuits. Discharges from the Facility to land in violation of prohibitions contained in this Order are violations of the Water Code and are not subject to third party lawsuits under the federal CWA because the Water Code does not contain provisions allowing third party lawsuits.

- 4.1.1. Order No. R9-2015-0073 contained Discharge Prohibition III.A (The discharge of waste in a manner or to a location that has not been specifically described to the San Diego Water Board and for which valid WDRs are not in force are prohibited.). This prohibition is retained in this Order as Discharge Prohibition 3.1.
- 4.1.2. Order No. R9-2015-0073 contained Discharge Prohibition III.B (The discharge of oil or any residuary product of petroleum to waters of the state, except in accordance with waste discharge requirements or other provisions of division 7 of the Water Code, is prohibited.). This prohibition is retained in this Order as Discharge Prohibition 3.2.
- 4.1.3. Order No. R9-2015-0073 contained Discharge Prohibition III.C (The discharge of polychlorinated biphenyl (PCB) compounds, such as those commonly used for transformer fluid, is prohibited.). This prohibition is retained in this Order as Discharge Prohibition 3.3 and is a restatement of the applicable effluent limitations guidelines for steam electric power plants at 40 CFR section 423.13(a). (Refer to section 4.2.2.2.1., National Effluent Limitation Guidelines and Standards, of this Fact Sheet for more information)
- 4.1.4. Order No. R9-2015-0073 contained Discharge Prohibition III.D (The total combined discharge of wastewater, through Discharge Point No. 002 and Discharge Point No. 003, in excess of 56.3 million gallons per day (MGD) is prohibited.). This prohibition is retained in this Order as Discharge Prohibition 3.4 but updated from Order No. R9-2015-0073 to reflect the maximum possible discharge from the Facility to Discharge Point No. 002 as described by the Discharger's ROWD.
- 4.1.5. Order No. R9-2015-0073 contained Discharge Prohibition III.E (The discharge of total residual oxidants that are used to control fouling within the main condenser cooling system, such as chlorine or bromine, is prohibited though either

discharge point for more than two hours per day unless the Discharger has demonstrated to the San Diego Water Board Executive Officer's satisfaction in advance of the discharge that a discharge lasting for more than two hours is required for macroinvertebrate control.). This prohibition is a restatement of the applicable effluent limitations guidelines for steam electric power plants at 40 CFR section 423.13(b)(2). This prohibition is retained in this Order as Discharge Prohibition 3.5 but was modified to include applicable effluent limitations guidelines for steam electric power plants at 40 CFR sections 423.12(b)(8) and 423.13(b)(2). (Refer to sections 4.2.2.2.1.4. and 4.2.2.2.2.3. National Effluent Limitation Guidelines and Standards, of this Fact Sheet for more information).

- 4.1.6. Order No. R9-2015-0073 contained Discharge Prohibition III.F (The discharge of NIA Sewage Treatment Plant effluent without also discharging cooling water, at a ratio of at least 10:1, cooling water to wastewater, is prohibited.). This prohibition is retained in this Order as Discharge Prohibition 3.6 but is updated from Order No. R9-2015-0073 to reflect the Discharger's discontinued use of cooling water. (Refer to Discharge Prohibition 3.6 of this Order.)
- 4.1.7. Order No. R9-2015-0073 contained Discharge Prohibition III.G (The discharge of wastewater not in compliance with the Discharge Prohibitions contained in chapter 4 of the Basin Plan, incorporated in this Order as if fully set forth herein and summarized in Attachment G, is prohibited.). This prohibition requires the discharger to comply with the Discharge Prohibitions of the Basin Plan. This prohibition is retained in this Order as Discharge Prohibition 3.7.
- 4.1.8. Order No. R9-2015-0073 contained Discharge Prohibition III.H (The discharge of wastewater not in compliance with the Discharge Prohibitions contained in the Water Quality Control Plan - Ocean Waters of California 2012 (Ocean Plan), incorporated in this Order as if fully set forth herein and summarized in Attachment G, is prohibited.). This prohibition is required by the Ocean Plan which specifies the plan is applicable in its entirety to point source discharges to the ocean. This prohibition is retained in this Order as Discharge Prohibition 3.8 but updated to reference the most recent Ocean Plan.
- 4.1.9. Order No. R9-2015-0073 contained Discharge Prohibition III.I (The discharge shall not cause a violation of any applicable water quality standards for receiving waters adopted by the San Diego Water Board or the State Water Board as required by the federal CWA and regulations adopted thereunder. If more stringent applicable water quality standards are promulgated or approved pursuant to section 303 of the federal CWA, and amendments thereto, the San Diego Water Board will revise and modify this Order in accordance with such more stringent standards.) Section V, Receiving Water Limitations covers the obligation to not violate water quality standards. Thus, this prohibition was not retained in this Order.

4.2. Technology-Based Effluent Limitations

4.2.1. Scope and Authority

Section 301(b) of the federal CWA and implementing USEPA permit regulations at 40 CFR section 122.44 require that permits include conditions meeting applicable technology-based requirements at a minimum, and any more stringent effluent limitations necessary to meet applicable water quality standards. The discharge authorized by this Order must meet minimum federal technology-based requirements based on Effluent Limitations Guidelines and Standards for the Steam Electric Point Source Category in 40 CFR part 423.

The CWA requires that technology-based effluent limitations are established based on several levels of controls:

- Best practicable treatment control technology (BPT) represents the average of the best existing performance by well-operated facilities within an industrial category or subcategory. BPT standards apply to toxic, conventional, and non-conventional pollutants.
- Best available technology economically achievable (BAT) represents the best existing performance of treatment technologies that are economically achievable within an industrial point source category. BAT standards apply to toxic and non-conventional pollutants.
- Best conventional pollutant control technology (BCT) represents the control from existing industrial point sources of conventional pollutants including BOD, TSS, fecal coliform, pH, and oil and grease. The BCT standard is established after considering a two-part reasonableness test. The first test compares the relationship between the costs of attaining a reduction in effluent discharge and the resulting benefits. The second test examines the cost and level of reduction of pollutants from the discharge from publicly owned treatment works to the cost and level of reduction of such pollutants from a class or category of industrial sources. Effluent limitations must be reasonable under both tests.
- New source performance standards (NSPS) represent the best available demonstrated control technology standards. The intent of NSPS guidelines is to set limitations that represent state-of-the-art treatment technology for new sources.

The CWA requires USEPA to develop Effluent Limitation Guidelines (ELGs) representing application of BPT, BAT, BCT, and NSPS. Section 402(a)(1) of the CWA and 40 CFR section 125.3 authorize the use of best professional judgment (BPJ) to derive technology-based effluent limitations on a case-by-case basis where ELGs are not available for certain industrial categories and/or pollutants of concern. Where BPJ is used, the Water Board must consider specific factors outlined in 40 CFR section 125.3.

4.2.2. Applicable Technology-Based Effluent Limitations

4.2.2.1. **Applicability of TBELs to Discharges from the NIA Sewage Treatment Plant.** In 1976, the San Diego Water Board issued to the Discharger an NPDES Permit, Order No. 76-11, which included effluent limitations for discharges from the wastewater treatment plant to the Pacific Ocean, consistent with federal effluent limitations applicable to publicly-owned treatment plants (POTWs). The Discharger petitioned Order No. 76-11 to the State Water Board contending that the permit incorrectly imposed federal effluent limitations applicable to POTWs onto their privately-owned wastewater treatment plant without evidence that the more restrictive requirements were necessary for the protection of the beneficial uses identified for the Pacific Ocean. The State Water Board determined that the San Diego Water Board acted appropriately, and the Discharger appealed the decision to the California Supreme Court. The California Supreme Court concluded that the San Diego Water Board’s findings in Order No. 76-11 did not provide sufficient evidence to justify adoption of federal secondary treatment requirements on a privately-owned treatment works. As ordered by the judgment, the San Diego Water Board adopted Order No. 82-14, an NPDES permit replacing Order No. 76-11. This Order retains the effluent limitations for treated domestic wastewater from the previous Order as shown in Table F-10 below. However, the corrected mass based effluent limitation for oil and grease for the flow of 0.05 MGD (10.4 lbs/day) has been included in this Order.

Table F-10. Effluent Limitations from Order No. R9-2015-0073 for Treated Domestic Wastewater

Parameter	Unit	AMEL	AWEL	Instantaneous Minimum Effluent Limitation	Instantaneous Maximum Effluent Limitation
Oil and Grease	mg/L	25	40	--	75
Oil and Grease	lbs/day	21 ¹	--	--	--
TSS	%	²	--	--	--
Settleable Solids	ml/L	1.0	1.5	--	3.0
Turbidity	NTUs	75	100	--	225
pH	standard units	--	--	6.0	9.0

Note for Table F-10

1. Mass based effluent limitations were calculated based on a maximum discharge flow rate of 0.05 MGD. The corrected mass based effluent limitation for oil and grease for the flow of 0.05 MGD (10.4 lbs/day) has been included in this Order.
2. Not more than 25% of influent TSS (i.e., average monthly percent removal of TSS shall not be less than 75 percent.)

The MER limitation in the previous Order was based on the internal waste stream flow limitation of 0.05 MGD at Monitoring Location INT-001-A. This

Order carries over this implicit flow limitation as an AMEL of 0.05 MGD for the NIA Sewage Treatment Plant. Also, the Discharger’s ROWD stated that the Facility expects to maintain the current 0.05 MGD maximum discharge flow shown in the current NPDES permit.

4.2.2.2. **National Effluent Limitation Guidelines and Standards.** Pursuant to section 306(b)(1) of the CWA, USEPA has established standards of performance for the steam electric power point source category (40 CFR section 423.10). Standards of performance for existing facilities (instead of new source performance standards) are applicable to all units of the Facility because their construction was completed or commenced prior to publication of regulations on November 19, 1982, which proposed standards of performance for the industry. The following are applicable technology-based standards of performance (BPT and BAT) applicable to the Facility based on the ELGs for existing sources at 40 CFR part 423. The guidelines do not include standards of performance based on BCT.

4.2.2.2.1. **Standards of Performance Based on BPT**

4.2.2.2.1.1. The pH of all discharges, except once-through cooling water, shall be within the range of 6.0 – 9.0 [40 CFR section 423.12(b)(1)]. Refer to Table 3 of this Order.

4.2.2.2.1.2. Low-volume wastes are defined as those wastewater sources for which specific limitations are not established by the ELGs at 40 CFR part 423. The quantity of pollutants discharged from low-volume waste sources shall not exceed the mass quantity determined by multiplying the flow of the low-volume waste sources times the concentration as specified in Table F-11 [40 CFR section 423.12(b)(3)].

Table F-11. Effluent Limitation Guidelines for Low-volume Waste

Pollutant	Daily Maximum (mg/L)	30 Day Average (mg/L)
TSS	100	30
Oil and Grease	20	15

At the permitting authority’s discretion, the quantity of pollutant allowed to be discharged may be expressed as concentration-based limitations instead of the mass-based limitations required above. [40 CFR section 423.12(b)(12)]. Section 122.45(f)(2) of 40 CFR allows pollutants that are limited in terms of mass to additionally be limited in terms of other units of measurement. This Order includes effluent limitations expressed in terms of mass and concentration.

The previous Orders (Order Nos. R9-2005-0005, R9-2005-0006, and R9-2015-0073) established mass-based and concentration-based limitations to the combined low-volume waste stream. Order No. R9-2015-0073 calculated the mass-based limitations using a flow rate of 12.8 MGD. This Order uses the reduced flow rate of 11.878 MGD (for more information,

see section 2.1.8. of this Fact Sheet) to calculate the mass-based limitations.

The previous Orders also established concentration-based limitations to the individual low-volume waste stream due to the changing flow-volumes. These limitations were carried over to this Order.

Refer to Tables 3 and 4 of this Order.

4.2.2.2.1.3. Order No. R9-2015-0073 contained ELGs for metal cleaning wastes. As stated in section 2 of this Fact Sheet, metal cleaning has been discontinued. Thus, ELGs for metal cleaning waste has not been carried over from Order No. R9-2015-0073. [40 CFR section 423.12(b)(5)]

4.2.2.2.1.4. Neither free available chlorine nor total residual chlorine may be discharged from any unit for more than two hours in any one day and not more than one unit in any plant may discharge free available or total residual chlorine at any one time unless the utility can demonstrate to the Regional Administrator or State, if the State has NPDES permit issuing authority, that the units in a particular location cannot operate at or below this level or chlorination. [40 CFR section 423.12(b)(8)] (Refer to section 4.1.5., Discharge Prohibitions, of this Fact Sheet.)

4.2.2.2.2. Standards of Performance Based on BAT

4.2.2.2.2.1. There shall be no discharge of PCB compounds such as those commonly used for transformer fluid [40 CFR section 423.13(a)]. (Refer to section 4.1.3., Discharge Prohibitions, of this Fact Sheet.)

4.2.2.2.2.2. The quantity of pollutants discharged in once-through cooling water from the discharge point shall not exceed the quantity determined by multiplying the flow of once-through cooling water from the discharge point times the concentration as specified below. [40 CFR section 423.13(b)(1)]. Refer to Table 5, footnote 3 of this Order.

Table F-12. Effluent Limitation Guidelines for Low-volume Waste

Pollutant	Maximum concentration (mg/L)
Total Residual Chlorine	0.20

4.2.2.2.2.3. Total residual chlorine may not be discharged from any single generating unit for more than two hours per day unless the Discharger demonstrates to the permitting authority that discharge for more than two hours per day is required for macroinvertebrate control [40 CFR section 423.13(b)(2)]. The duration of each chlorination cycle shall not exceed 25 minutes. (See section 4.1.5., Discharge Prohibitions, of this Fact Sheet.)

4.3. Water Quality-Based Effluent Limitations (WQBELs)

4.3.1. Scope and Authority

Federal CWA section 301(b) and 40 CFR section 122.44(d) require that permits include limitations more stringent than applicable federal technology-based requirements where necessary to achieve applicable water quality standards.

Section 122.44(d)(1)(i) of 40 CFR requires that permits 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 the federal 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 40 CFR section 122.44(d)(1)(vi).

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 Ocean 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 Ocean Plan.

4.3.2. Applicable Beneficial Uses and Water Quality Criteria and Objectives

The Basin Plan and Ocean Plan designate beneficial uses, establish water quality objectives, and contain implementation programs and policies to achieve those objectives for ocean waters.

4.3.2.1. **Basin Plan.** The beneficial uses specified in the Basin Plan applicable to the Pacific Ocean are summarized in section 3.3.1 of this Fact Sheet.

The Basin Plan water quality objective for dissolved oxygen applicable to ocean waters is stated as follows: "The dissolved oxygen concentration in ocean waters shall not at any time be depressed more than 10 percent from that which occurs naturally, as the result of the discharge of oxygen demanding waste materials." (Basin Plan (2021), p.3-11.)

The Basin Plan states, "The pH value shall not be changed at any time more than 0.2 pH units from that which occurs naturally." (Basin Plan (2021), p. 3-11.)

4.3.2.2. **Ocean Plan.** The beneficial uses specified in the Ocean Plan for the Pacific Ocean are summarized in section 3.3.2 of this Fact Sheet. The Ocean Plan also includes water quality objectives for the ocean receiving water for bacterial characteristics, physical characteristics, chemical characteristics, biological characteristics, and radioactivity.

Table 3 of the Ocean Plan includes the following water quality objectives for toxic pollutants and whole effluent toxicity (WET):

- Six-month median, daily maximum, and instantaneous maximum objectives for 19 chemicals and chemical characteristics, including total chlorine residual, for the protection of marine aquatic life.
- 30-day average objectives for 20 non-carcinogenic chemicals for the protection of human health. These have been applied as AMELs.
- 30-day average objectives for 42 carcinogenic chemicals for the protection of human health. These have been applied as AMELs.
- Daily maximum objectives for acute and chronic toxicity.

4.3.2.3. **Thermal Plan.** The Thermal Plan establishes water quality objectives for discharges of Thermal and Elevated Temperature Waste to Coastal and Interstate Waters and Enclosed Bays and Estuaries. Thermal waste is defined as “Cooling water and industrial process water used for the purpose of transporting heat.” Elevated temperature waste is defined as “Liquid, solid, or gaseous material including thermal waste discharge at a temperature higher than the natural temperature of receiving water. As stated in section 3.3.6., the Thermal Plan does not apply to this Order. As such, effluent limitations for thermal wastes have not been carried over to this Order.

4.3.3. **Determining the Need for WQBELs**

Consistent with Order No. R9-2015-0073, this Order follows the special procedures in section III.C.8.d. of the Ocean Plan for Powerplants and Heat Exchange Dischargers for determining compliance with Table 3 objectives of the Ocean Plan. Effluent concentration values (C_e) shall be determined through the use of equation 1 in the Ocean Plan considering the minimal probable initial dilution of the combined effluent (in-plant waste streams plus ocean water). These concentration values shall then be converted to mass emission limitations as indicated in equation 3 of the Ocean Plan. The mass emission limits will then serve as requirements applied to all in-plant waste streams (known as “low volume waste sources” in 40 CFR part 423) taken together which discharge into the ocean water flow, except that limits for total chlorine residual, acute (if applicable per section (3)(c)) and chronic toxicity, and instantaneous maximum concentrations in Table 3 of the Ocean Plan shall apply to, and be measured in, the combined final effluent, as adjusted for dilution with ocean water. The Table 3 objective for radioactivity in the Ocean Plan shall apply to the undiluted combined final effluent.

Pursuant to 40 CFR 423.11(b), “The term low volume waste sources means, taken collectively as if from one source, wastewater from all sources except those for which specific limitations or standards are otherwise established in this part. Low volume waste sources include, but are not limited to, the following: Wastewaters from ion exchange water treatment systems, water treatment evaporator blowdown, laboratory and sampling streams, boiler blowdown, floor drains, cooling tower basin cleaning wastes, recirculating house service water systems, and wet scrubber air pollution control systems

whose primary purpose is particulate removal. Sanitary wastes, air conditioning wastes, and wastewater from carbon capture or sequestration systems are not included in this definition.” In this Order, the low volume waste sources are described in sections 2.1.2. through 2.1.6. of this Fact Sheet.

The San Diego Water Board evaluated the need for effluent limitations for non-conventional and toxic pollutant parameters, based on water quality objectives in Table 3 of the Ocean Plan. The evaluation was performed in accordance with 40 CFR section 122.44(d) and guidance for statistically determining the “reasonable potential” for a discharged pollutant to exceed an objective, as outlined in the revised *Technical Support Document for Water Quality-based Toxics Control* (TSD; EPA/505/2-90-001, 1991) and the Ocean Plan Reasonable Potential Analysis (RPA) Amendment that was adopted by the State Water Board on April 21, 2005. The statistical approach combines knowledge of effluent variability (as estimated by a coefficient of variation) with the uncertainty due to a limited amount of effluent data to estimate a maximum effluent value at a high level of confidence. This estimated maximum effluent value is based on a lognormal distribution of daily effluent values. Projected receiving water values (based on the estimated maximum effluent value or the reported maximum effluent value and minimum probable initial dilution) can then be compared to the appropriate objective to determine potential for an exceedance of that objective and the need for an effluent limitation. According to the Ocean Plan amendment, the RPA can yield three endpoints: 1) Endpoint 1, an effluent limitation is required and monitoring is required; 2) Endpoint 2, an effluent limitation is not required and the San Diego Water Board may require monitoring; and 3) Endpoint 3, the RPA is inconclusive, monitoring is required, and an existing effluent limitation may be retained or a permit reopener clause may be included to allow inclusion of an effluent limitation if future monitoring warrants the inclusion. Endpoint 3 is typically the result when there are fewer than 16 data points and all are censored data (i.e., below quantitation or method detection levels (MDLs) for an analytical procedure).

The implementation provisions for Table 3 of the Ocean Plan specify that the minimum probable initial dilution is the lowest average initial dilution within any single month of the year. Dilution estimates are to be based on observed waste flow characteristics, observed receiving water density structure, and the assumption that no currents, of sufficient strength to influence the initial dilution process, flow across the discharge structure. Before establishing a dilution credit for a discharge, it must first be determined if, and how much, receiving water is available to dilute the discharge.

The minimum initial dilution factor (D_m) determined for use in the previous Order, Order No. R9-2015-0073, was 10 to 1. This 10 to 1 dilution factor has been used for the discharges from this Facility since 1989. There is no information or study available to indicate that the D_m of 10 to 1 based on the 1989 analysis of dilution is no longer valid in the vicinity of the discharge. Therefore, the D_m of 10 to 1 will be retained from Order No. R9-2015-0073 and applied to WQBELs established herein.

Conventional pollutants were not considered as part of the RPA. TBELs for these pollutants are included in this Order as described in section 4.2 of this Fact Sheet.

Using the RPcalc 2.0 software tool developed by the State Water Board for conducting RPAs, the San Diego Water Board has conducted the RPA for the combined low-volume waste stream compliance point (e.g., miscellaneous discharge) at Monitoring Location INT-002 in Table F-13 below and for the ocean outfall Discharge Point No. 002 at Monitoring Location EFF-002 in Table F-14 below. A narrative limit statement to comply with all Ocean Plan objectives requirements is provided for any parameters not displaying reasonable potential. The Discharger is required to monitor for these constituents as stated in the Monitoring and Reporting Program (MRP, Attachment E) of this Order to gather data for use in RPAs for future permit reissuances.

Effluent data provided in the Discharger's monitoring reports for the Facility's combined low-volume waste stream compliance point (e.g., miscellaneous discharge) at Monitoring Location INT-002 from 2017 to 2021, appear to be representative of the current combined low-volume waste stream discharge and were used in the RPA (data obtained on December 13, 2022). A minimum probable initial dilution of 10:1 was considered in this evaluation.

A summary of the RPA results is provided in Table F-13:

Table F-13. RPA Results Summary, Combined Low-Volume Waste Stream (Monitoring Location INT-002)

Parameter	Units	N ¹	MEC ^{2,3}	Most Stringent Criteria	Background	RPA Endpoint ⁴
Arsenic	µg/L	5	2.17	8 ⁵	3 ⁶	2
Cadmium, Total Recoverable	µg/L	5	0.11	1 ⁵	0	3
Chromium (hexavalent), Total Recoverable	µg/L	5	1.1	2 ⁵	0	2
Copper, Total Recoverable	µg/L	5	10.2	3 ⁵	2 ⁶	1
Lead, Total Recoverable	µg/L	5	0.45	2 ⁵	0	3
Mercury, Total Recoverable	µg/L	5	<0.02	0.04 ⁵	0.0005 ⁶	3
Nickel, Total Recoverable	µg/L	5	12.9	5 ⁵	0	1
Selenium, Total Recoverable	µg/L	5	16.8	15 ⁵	0	1
Silver, Total Recoverable	µg/L	5	<0.28	0.7 ⁵	0.16 ⁶	3
Zinc, Total Recoverable	µg/L	12	161	20 ⁵	8 ⁶	1
Cyanide	µg/L	5	13	1 ⁵	0	1
Ammonia	µg/L	5	1050	600 ⁵	0	1
Phenolic Compounds	µg/L	5	<0.99	30 ⁵	0	3
Chlorinated Phenolics	µg/L	5	<0.74	1 ⁵	0	3
Endosulfan	µg/L	5	0.12	0.009 ⁵	0	1

Parameter	Units	N ¹	MEC ^{2,3}	Most Stringent Criteria	Background	RPA Endpoint ⁴
Endrin	µg/L	12	<0.0007	0.002 ⁵	0	3
HCH	µg/L	5	<0.0038	0.004 ⁵	0	3
Acrolein	µg/L	5	<0.89	220 ⁷	0	3
Antimony	µg/L	5	5.97	1,200 ⁷	0	2
Bis (2-chloroethoxyl) methane	µg/L	5	<0.059	4.4 ⁷	0	3
Bis(2-chloroisopropyl)ether	µg/L	5	<0.041	1,200 ⁷	0	3
Chlorobenzene	µg/L	5	<0.21	570 ⁷	0	3
Chromium (III), Total Recoverable	µg/L	5	1.32	190,000 ⁷	0	3
Di-n-butyl phthalate	µg/L	5	<0.068	3,500 ⁷	0	3
Dichlorobenzenes	µg/L	5	<0.18	5,100 ⁷	0	3
Diethyl phthalate	µg/L	5	<0.095	33,000 ⁷	0	3
Dimethyl phthalate	µg/L	5	<0.063	820,000 ⁷	0	3
4,6-Dinitro-2-methylphenol	µg/L	5	<0.86	220 ⁷	0	3
2,4-Dinitrophenol	µg/L	5	<0.97	4 ⁷	0	3
Ethylbenzene	µg/L	5	<0.14	4,100 ⁷	0	3
Fluoranthene	µg/L	5	<0.043	15 ⁷	0	3
Hexachlorocyclopentadiene	µg/L	5	<0.034	58 ⁷	0	3
Nitrobenzene	µg/L	5	<0.064	4.9 ⁷	0	3
Thallium, Total Recoverable	µg/L	5	<0.18	2 ⁷	0	3
Toluene	µg/L	5	<0.077	85,000 ⁷	0	3
Tributyltin	µg/L	5	0.003	0.0014 ⁷	0	3
1,1,1-Trichloroethane	µg/L	5	<0.094	540,000 ⁷	0	3
Acrylonitrile	µg/L	5	<0.83	0.1 ⁷	0	3
Aldrin	µg/L	5	<0.0007	0.000022 ⁷	0	3
Benzene	µg/L	5	<0.13	5.9 ⁷	0	3
Benzidine	µg/L	5	<0.74	0.000069 ⁷	0	3
Beryllium, Total Recoverable	µg/L	5	<0.033	0.033 ⁷	0	3
Bis(2-chloroethyl) ether	µg/L	5	<0.038	0.045 ⁷	0	3
Bis(2-ethylhexyl) phthalate	µg/L	5	<0.86	3.5 ⁷	0	3
Carbon tetrachloride	µg/L	5	<0.2	0.9 ⁷	0	3
Chlordane	µg/L	5	<0.0048	0.000023 ⁷	0	3
Chlorodibromomethane	µg/L	5	<0.089	8.6 ⁷	0	3
Chloroform	µg/L	5	<0.18	130 ⁷	0	3
DDT	µg/L	3	<0.0083	0.00017 ⁷	0	3
1,4-Dichlorobenzene	µg/L	5	<0.24	18 ⁷	0	3
3,3-Dichlorobenzidine	µg/L	5	<1.2	0.0081 ⁷	0	3
1,2-Dichloroethane	µg/L	5	<0.22	28 ⁷	0	3
1,1-Dichloroethylene	µg/L	5	<0.07	0.9 ⁷	0	3

Parameter	Units	N ¹	MEC ^{2,3}	Most Stringent Criteria	Background	RPA Endpoint ⁴
Dichlorobromomethane	µg/L	5	<0.084	6.2 ⁷	0	3
Dichloromethane (Methylene Chloride)	µg/L	5	<0.19	450 ⁷	0	3
1,3-Dichloropropene (1,3-dichloropropylene)	µg/L	2	<0.2	8.9 ⁷	0	3
Dieldrin	µg/L	5	<0.0005	0.00004 ⁷	0	3
2,4-Dinitrotoluene	µg/L	5	<0.029	2.6 ⁷	0	3
1,2-Diphenylhydrazine	µg/L	5	<0.045	0.16 ⁷	0	3
Halomethanes	µg/L	5	<0.67	130 ⁷	0	3
Heptachlor	µg/L	5	<0.0007	0.00005 ⁷	0	3
Heptachlor Epoxide	µg/L	5	<0.0004	0.00002 ⁷	0	3
Hexachlorobenzene	µg/L	5	<0.0012	0.00021 ⁷	0	3
Hexachlorobutadiene	µg/L	5	<0.051	14 ⁷	0	3
Hexachloroethane	µg/L	5	<0.052	2.5 ⁷	0	3
Isophorone	µg/L	5	<0.053	730 ⁷	0	3
N-nitrosodimethylamine	µg/L	3	<0.13	7.3 ⁷	0	3
N-nitrosodi-N-propylamine	µg/L	3	<0.034	0.38 ⁷	0	3
N-nitrosodiphenylamine	µg/L	5	<0.046	2.5 ⁷	0	3
PAHs	µg/L	5	<0.053	0.0088 ⁷	0	3
PCBs	µg/L	5	<0.039	0.000019 ⁷	0	3
TCDD equivalents	µg/L	5	9.6E-08	3.9E-09 ⁷	0	3
1,1,2,2-Tetrachloroethane	µg/L	5	<0.064	2.3 ⁷	0	3
Tetrachloroethylene (Tetrachloroethene)	µg/L	5	<0.25	2 ⁷	0	3
Toxaphene	µg/L	5	<0.013	0.00021 ⁷	0	3
Trichloroethylene (Trichloroethene)	µg/L	5	<0.16	27 ⁷	0	3
1,1,2-Trichloroethane	µg/L	5	<0.12	9.4 ⁷	0	3
2,4,6-Trichlorophenol	µg/L	5	<0.035	0.29 ⁷	0	3
Vinyl Chloride	µg/L	5	<0.14	36 ⁷	0	3

Notes for Table F-13

1. Number of data points available for the RPA.
2. If there is a detected value, the highest reported value is summarized in the table. If there are no detected values, the lowest MDL is summarized in the table.
3. Note that the reported Maximum Effluent Concentration (MEC) does not account for dilution. The RPA does account for dilution; therefore, it is possible for a parameter with an MEC in exceedance of the most stringent criteria not to present a reasonable potential (i.e., Endpoint 2).
4. End Point 1 – Reasonable potential determined, limit required, monitoring required.
End Point 2 – Discharge determined not to have reasonable potential; monitoring may be established.

End Point 3 – RPA was inconclusive, carry over previous limitations if applicable, and establish monitoring.

5. Based on the six-Month Median in the Table 3 of the Ocean Plan.
6. Background concentrations contained in Table 5 of the Ocean Plan.
7. Based on the 30-Day Average in Table 3 of the Ocean Plan.

Endpoint 1

Reasonable potential to cause or contribute to an exceedance of water quality objectives contained within the Ocean Plan (i.e., Endpoint 1) was determined for copper, nickel, selenium, zinc, cyanide, ammonia, and endosulfan. Effluent limitations have been retained in this Order from the previous Order, Order No. R9-2015-0073 for copper, selenium, zinc, cyanide, ammonia, and endosulfan. The RPA for the previous Order, Order No. R9-2015-0073, resulted in endpoint 2 for nickel and the removal of effluent limitations for nickel in Order No. R9-2015-0073. This Order adds the effluent limitations for nickel.

Endpoint 2

Endpoint 2 was determined for arsenic, chromium (hexavalent), and antimony. The effluent limitations for these parameters can be removed; however, monitoring will still be required to determine if an effluent limitation is required in the future.

Endpoint 3

For parameters for which Endpoint 3 was concluded, reasonable potential was inconclusive. For parameters for which Endpoint 3 was concluded and previous effluent limitations had been established in Order No. R9-2015-0073, effluent limitations have been retained in this Order. The RPA for the previous Order, Order No. R9-2015-0073, resulted in endpoint 2 for nickel and lead and the removal of effluent limitations for nickel and lead in Order No. R9-2015-0073. As stated above, Order No. R9-2015-0073 did not contain any performance goals.

Effluent data provided in the Discharger's monitoring reports for the Facility's final discharge to the ocean at Discharge Point No. 002 (Monitoring Location EFF-002) from September 2016 to September 2022, appear to be representative of the current discharge and were used in the RPA (data obtained on December 13, 2022). From February 1, 2016, to June 9, 2016, low-volume waste steam discharges could flow to either Discharge Point No. 002 or 003. On June 10, 2016, flows ceased to Discharge Point No. 003 and total flows from the Facility dropped from approximately 45 MGD to approximately 22 MGD, averaging 14 MGD in the past year from August 2021 to July 2022. Thus, data from February 2016 to June 2016 were not used in this RPA. A minimum probable initial dilution of 10:1 was considered in this evaluation.

A summary of the RPA results is provided in Table F-14:

Table F-14. RPA Results Summary, Final Effluent (Monitoring Location EFF-002)

Parameter	Units	N ¹	MEC ^{2,3}	Most Stringent Criteria	Background	RPA Endpoint ⁴
Arsenic	µg/L	12	61.1	8 ⁵	3 ⁶	1
Cadmium, Total Recoverable	µg/L	12	<0.2	1 ⁵	0	3
Chromium (hexavalent), Total Recoverable	µg/L	12	<0.005	2 ⁵	0	3
Copper, Total Recoverable	µg/L	12	32	3 ⁵	2 ⁶	1
Lead, Total Recoverable	µg/L	12	3.06	2 ⁵	0	3
Mercury, Total Recoverable	µg/L	12	<0.01	0.04 ⁵	0.0005 ⁶	3
Nickel, Total Recoverable	µg/L	12	13.2	5 ⁵	0	2
Selenium, Total Recoverable	µg/L	12	284	15 ⁵	0	1
Silver, Total Recoverable	µg/L	12	10.2	0.7 ⁵	0.16 ⁶	1
Zinc, Total Recoverable	µg/L	12	53.2	20 ⁵	8 ⁶	2
Cyanide	µg/L	12	2.53	1 ⁵	0	3
Total Chlorine Residual	µg/L	-- ⁷	-- ⁷	2 ⁵	0	3 ⁷
Ammonia	µg/L	12	7250	600 ⁵	0	1
Acute Toxicity	TUa	N/A ⁸	N/A ⁸	0.3 ⁹	0	N/A ⁸
Chronic Toxicity	Pass/Fail	22	"pass"	1 ⁹	0	2
Phenolic Compounds	µg/L	13	<0.97	30 ⁵	0	3
Chlorinated Phenolics	µg/L	12	<0.28	1 ⁵	0	3
Endosulfan	µg/L	12	<0.0007	0.009 ⁵	0	3
Endrin	µg/L	12	<0.0007	0.002 ⁵	0	3
HCH	µg/L	7	0.0055	0.004 ⁵	0	43

Notes for Table F-14

1. Number of data points available for the RPA.
2. If there is a detected value, the highest reported value is summarized in the table. If there are no detected values, the lowest MDL is summarized in the table.
3. Note that the reported MEC does not account for dilution. The RPA does account for dilution; therefore, it is possible for a parameter with an MEC in exceedance of the most stringent criteria not to present a reasonable potential (i.e., Endpoint 2).
4. End Point 1 – Reasonable potential determined, limit required, monitoring required.
End Point 2 – Discharge determined not to have reasonable potential; monitoring may be established.
End Point 3 – RPA was inconclusive, carry over previous limitations if applicable, and establish monitoring.
5. Based on the six-Month Median in the Table 3 of the Ocean Plan.
6. Background concentrations contained in Table 5 of the Ocean Plan.
7. Order No. R9-2015-0073 stated, "Monitoring for Total Residual Chlorine is only required if the Facility is chlorinating their discharge." Insufficient data provided to evaluate RPA for chlorine. All data reported as zero usually with the comment "No sample taken, no chlorination since August 2013".

8. Order No. R9-2015-0073 did not contain effluent limitations, performance goals, or effluent monitoring for acute toxicity.
9. Based on the Daily Maximum in Table 3 of the Ocean Plan.

Endpoint 1

Reasonable potential to cause or contribute to an exceedance of water quality objectives contained within the Ocean Plan (i.e., Endpoint 1) was determined for arsenic, copper, selenium, silver, and ammonia and effluent limitations have been retained in this Order from the previous Order, Order No. R9-2015-0073.

Endpoint 2

Endpoint 2 was determined for nickel, zinc, and chronic toxicity. The effluent limitations for nickel and zinc can be removed; however, monitoring will still be required to determine if an effluent limitation is required in the future. For chronic toxicity, this Order retains the final effluent limitations for chronic toxicity based on best professional judgement. There is a possibility of synergistic effects from the former nuclear power plant to contribute to chronic toxicity.

Endpoint 3

For parameters for which Endpoint 3 was concluded, reasonable potential was inconclusive. For parameters for which Endpoint 3 was concluded and previous effluent limitations had been established in Order No. R9-2015-0073, effluent limitations have been retained in this Order. As stated above, Order No. R9-2015-0073 did not contain any performance goals.

Bacterial Indicators

This Order does not include effluent limitations for bacterial indicators for the following reasons:

- Discharge Point No. 002 is located 5,888 feet offshore at a depth of 39 feet.
- The minimum probable dilution factor is 10:1.
- The San Diego Water Board is not aware of any shellfish harvesting within Discharge Point No. 002.
- The reported daily discharge from the NIA Sewage Treatment Plant is 0.03 MGD or less, a small fraction of the total discharge.

The MRP (Attachment E) is designed to obtain additional information for these constituents to determine if reasonable potential exists for these constituents in future permit renewals and/or updates.

4.3.4. WQBEL Calculations

- 4.3.4.1. From the Table 3 water quality objectives of the Ocean Plan, effluent limitations are calculated according to the following equation for all pollutants, except for acute toxicity (if applicable) and radioactivity:

$C_e = C_o + D_m (C_o - C_s)$ where,
 C_e = the effluent limitation ($\mu\text{g/L}$)
 C_o = the water quality objective to be met at the completion of initial dilution ($\mu\text{g/L}$)
 C_s = background seawater concentration
 D_m = minimum probable initial dilution expressed as parts seawater per part wastewater

4.3.4.2. As discussed in section 4.3.3 above, this Order carries over the D_m of 10:1 from the previous Order, Order No. R9-2015-0073.

4.3.4.3. Table 5 of the Ocean Plan establishes background concentrations for some pollutants to be used when determining reasonable potential (represented as “ C_s ”). In accordance with Table 3 implementing procedures of the Ocean Plan, C_s equals zero for all pollutants not established in Table 5 of the Ocean Plan. The background concentrations provided in Table 5 of the Ocean Plan are summarized in Table F-15 below:

Table F-15. Pollutants Having Background Concentrations

Pollutant	Background Seawater Concentration
Arsenic	3 $\mu\text{g/L}$
Copper, Total Recoverable	2 $\mu\text{g/L}$
Mercury, Total Recoverable	0.0005 $\mu\text{g/L}$
Silver, Total Recoverable	0.16 $\mu\text{g/L}$
Zinc, Total Recoverable	8 $\mu\text{g/L}$

4.3.4.4. As an example, effluent limitations for total chlorine residual were determined as follows.

Water quality objectives from the Ocean Plan for total chlorine residual are:

Table F-16. Example Parameter Water Quality Objectives

Parameter	Units	Six-Month Median	Daily Maximum	Instantaneous Maximum
Total Chlorine Residual	$\mu\text{g/L}$	2	8	60

Using the equation from section 4.3.4.1., effluent limitations are calculated as follows for total chlorine residual.

$$C_e = 2 + 10 (2 - 0) = 22 \text{ (six-Month Median)}$$

$$C_e = 8 + 10 (8 - 0) = 88 \text{ (Daily Maximum)}$$

$$C_e = 60 + 10 (60 - 0) = 660 \text{ (Instantaneous Maximum)}$$

Based on the implementing procedures described above, effluent limitations have been calculated for Facility discharge.

4.3.4.5. Section 122.45(f)(1) of the 40 CFR requires effluent limitations be expressed in terms of mass, with some exceptions, and 40 CFR section 122.45(f)(2) allows pollutants that are limited in terms of mass to additionally be limited in

terms of other units of measurement. However, section III.C.4.j of the Ocean Plan requires that mass limitations be established for all parameters in Table 3 of the Ocean Plan. This Order includes effluent limitations expressed in terms of mass and concentration. In addition, pursuant to the exceptions to mass limitations provided in 40 CFR section 122.45(f)(1), some effluent limitations are not expressed in terms of mass, such as pH and temperature, and when the applicable standards are expressed in terms of concentration (e.g., California Toxics Rule criteria and maximum contaminant levels) and mass limitations are not necessary to protect the beneficial uses of the receiving water.

Mass-based effluent limitations were calculated using the following equation:

$$MER = 8.34 \times Q \times C$$

where MER is in lbs/day, 8.34 is a conversion factor, Q is the permitted flow in MGD, and C is the pollutant concentration in mg/L.

- 4.3.4.6. As stated in section 4.3.3. of this Fact Sheet, consistent with section III.C.8.d. of the Ocean Plan, the mass emission limitations based on the water quality objectives from Table 3 of the Ocean Plan serve as requirements applied to combined low-volume waste stream (Monitoring Location INT-002), except for total chlorine residual, chronic toxicity, and instantaneous maximum concentrations.

For the internal effluent limitations, combined low-volume waste stream, Order No. R9-2015-0073 calculated the mass-based limitations using a flow rate of 12.8 MGD. This Order uses the reduced flow rate of 11.878 MGD (for more information, see section 2.1.8. of this Fact Sheet) to calculate the mass-based limitations based on the flow rates provided in the Discharger's ROWD.

The WQBELs established in this Order for the low-volume waste sources are contained in section 4.1, Table 3 of this Order.

- 4.3.4.7. As stated in section 4.3.3. of this Fact Sheet, consistent with section III.C.8.d. of the Ocean Plan, limitations for total chlorine residual, chronic toxicity, and instantaneous maximum concentrations from Table 3 of the Ocean Plan serve as requirements applied to the final effluent (Monitoring Location EFF-002). The previous Order, Order No. R9-2015-0073 included concentration-based effluent limitation for the final effluent, which are carried over to this Order. Consistent with 40 CFR sections 122.45(f)(1) and (2), this Order adds mass emission limitations for the combined final effluent using the flow rate of 42.252 MGD (for more information, see section 2.1.8. of this Fact Sheet).

The WQBELs established in this Order for the combined final effluent are contained in section 4.1, Table 5 of this Order.

4.3.5. Whole Effluent Toxicity (WET)

- 4.3.5.1. The WET testing protects receiving waters from the aggregate toxic effect of a mixture of pollutants in the effluent.

- 4.3.5.2. For chronic toxicity, the previous Order, Order No. R9-2015-0073 established a “pass” / “fail” effluent limitation and quarterly monitoring. During the term of Order No. R9-2015-0073, the chronic toxicity results were “pass”. Using the RPA procedures from the Ocean Plan, the effluent does not have reasonable potential to cause an exceedance of the narrative water quality objective for chronic toxicity (i.e., Endpoint 2). However, as stated in section 4.3.3 of this Fact Sheet, this Order retains the effluent limitation for chronic toxicity based on best professional judgement given the possibility of synergistic effects from the former nuclear power plant.

This Order establishes an effluent limitation for chronic toxicity based on the chronic toxicity water quality objective in the 2019 Ocean Plan. The effluent limitation shall be implemented using *Short-term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to West Coast Marine and Estuarine Organisms* (EPA/600/R-95/136, 1995). Chronic toxicity expressed as

$$TU_c = 100 / NOEC$$

where NOEC (No Observed Effect Concentration; also referred to as the No Observed Effect Level or NOEL) is expressed as the maximum percent effluent or receiving water that causes no observable effect on a test organism.

This Order contains a reopener to require the San Diego Water Board to modify the effluent limitations for toxicity, if necessary, to make it consistent with any new policy, law, or regulation.

- 4.3.5.3. Order No. R9-2015-0073 did not contain any acute toxicity effluent limitations, performance goals, or monitoring requirements. A chronic toxicity test is conducted over a short or a longer period of time and may measure mortality, reproduction, and growth. A chemical at a low concentration could have chronic effects but no acute effects until the chemical was at a higher concentration. Thus, chronic toxicity is a more stringent requirement than acute toxicity. To ensure the aggregated impacts of pollutants present within the Discharger’s effluent does not result in the presence of toxicity within the receiving water, this Order maintains effluent limitations for chronic toxicity.

4.4. Final Effluent Limitation Considerations

4.4.1. Satisfaction of Anti-Backsliding Requirements

NPDES permits must conform with Anti-backsliding requirements discussed in section 3.3.4 of this Fact Sheet. 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 less stringent. This Order complies with all applicable federal and State Anti-backsliding regulations. The effluent limitations in this Order are at least as stringent as the effluent limitations in Order No. R9-2015-0073.

Section 402(o)(2)(B)(i) of the CWA provides an exception to Anti-backsliding requirements when new information is obtained that would have justified the application of a less stringent standard at the time of permit issuance. New data was obtained by the San Diego Water Board since adoption of Order No. R9-2015-0073 that qualifies for this exception.

As stated in section 2.1.7 of this Fact Sheet, metal cleaning effluents that previously discharged to internal outfalls 002-A/003-A (Monitoring Locations INT-002-A / INT-003-A) have been discontinued at the Facility. The Facility notified the San Diego Water Board that this activity was discontinued and will not occur in the future because of the decommissioning of this Facility. Based on this new information, this Order removes the effluent limitations for metal cleaning effluents. As such, removal of this effluent limitation is consistent with the Anti-backsliding requirements of the CWA and federal regulations.

Effluent limitations for arsenic, chromium (hexavalent), and antimony at monitoring location INT-002, and nickel and zinc at monitoring location EFF-002 have been discontinued and are not carried forward in this Order. This is because the RPA conducted using new monitoring data collected during the previous permit term determined that the discharge does not have reasonable potential to cause or contribute to exceedance of water quality objectives. As specified in section 4.3.3. of this Fact Sheet, the RPA for arsenic, chromium (hexavalent), antimony, nickel, and zinc (at the specified outfalls) resulted in endpoint 2 as defined in the Ocean Plan. Endpoint 2 indicates that the parameters do not have reasonable potential to cause or contribute to an exceedance of water quality objectives. In such cases, the Ocean Plan does not require effluent limitations. As such, removal of the effluent limitations for these parameters is consistent with the Anti-backsliding requirements of the CWA because the new information obtained led to a new RPA result.

As stated in section 3.3.6. of this Fact Sheet, the San Diego Water Board has determined that the Thermal Plan no longer applies to this Order. The effluent limitation for residual heat was based on the Thermal Plan. The Facility has informed the San Diego Water Board that it no longer produces heated water and the structures that stored warm waters will be dismantled as part of the decommissioning of the power plant. Based on this new information, the effluent limitation for residual heat no longer applies to this Order and has not been carried over to this Order. As such, removal of this effluent limitation is consistent with the Anti-backsliding requirements of the CWA and federal regulations.

4.4.2. Satisfaction of Antidegradation Policies

The WDRs for the Discharger must conform with antidegradation requirements discussed in section 3.3.3 of this Fact Sheet. The antidegradation policies require that beneficial uses and the water quality necessary to maintain those beneficial uses in the receiving waters of the discharge shall be maintained and protected, and, if existing water quality is better than the quality required to maintain beneficial uses, the existing water quality shall be maintained and protected unless allowing a lowering of water quality is necessary to accommodate

important economic and social development or consistent with maximum benefit to the people of California. Based on this Order's requirements, no degradation of the receiving water should occur. As such, this Order complies with the antidegradation provision of 40 CFR section 131.12 and State Water Board Resolution No. 68-16.

This Order does not include WQBELs for arsenic, chromium (hexavalent), and antimony at monitoring location INT-002, and nickel and zinc at monitoring location EFF-002, as the discharge does not have reasonable potential to cause an exceedance of water quality objectives for those parameters at the specified outfalls based on new monitoring data. The removal of effluent limitations by itself should not result in a change to the physical nature of the effluent discharged and should not impact beneficial uses nor cause a reduction of the water quality of the receiving water.

In addition, monitoring is required for Ocean Plan parameters without effluent limitations. The San Diego Water Board may use the monitoring results for arsenic, chromium (hexavalent), and antimony at monitoring location INT-002, and nickel and zinc at monitoring location EFF-002 to determine whether to reopen this Order to add effluent limitations.

This Order does not include a WQBEL for residual heat at monitoring location EFF-002, because as stated in section 3.3.6. of this Fact Sheet, the Facility no longer has the capability to produce heated waters and is undergoing further decommissioning that will remove structures that contained heated water. Removal of this WQBEL should not by itself cause degradation to water quality because the WQBEL was removed in response to the Facility no longer producing heated waters. The Facility will dismantle these structures through decommissioning.

4.4.3. Stringency of Requirements for Individual Pollutants

This Order contains both TBELs and WQBELs for individual pollutants. The TBELs consist of restrictions on TSS, oil and grease, settleable solids, turbidity, pH, total residual chlorine. Restrictions on these pollutants are discussed in section 4.2 of this Fact Sheet. This Order's technology-based pollutant restrictions implement the minimum, applicable federal technology-based requirements. These limitations are not more stringent than required by the federal CWA.

WQBELs have been derived to implement water quality objectives that protect beneficial uses. Both the beneficial uses and the water quality objectives have been approved pursuant to federal law and are the applicable federal water quality standards. The procedures for calculating the individual WQBELs are based on the Ocean Plan, which was approved by USEPA on February 14, 2006, and has since been further amended. All beneficial uses and water quality objectives contained in the Basin Plan 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 federal 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 federal CWA.

4.5 Discharge Specifications

The Ocean Plan includes section III.A.2, *General Requirements for Management of Waste Discharge to the Ocean*. In section 4.2 of this Order, these requirements are incorporated for the discharge of waste to the ocean from the Facility.

4.6. Land Discharge Specifications – Not Applicable

4.7. Recycling Specifications – Not Applicable

5. Rationale for Receiving Water Limitations

Receiving water limitations of this Order are derived from the water quality objectives for ocean waters established by the Basin Plan and the Ocean Plan.

Prior to 2009, the San Diego Water Board interpreted the Bacterial Characteristics Water-contact Standards of the Ocean Plan to apply only in the zone bounded by the shoreline and a distance 1,000 feet from the shoreline or the 30-foot depth contour, whichever is further from the shoreline, and within kelp beds. The Ocean Plan provides that these Bacteriological Standards also apply in designated areas outside this zone used for water contact sports, as determined by the Regional Water Boards (i.e., all waters designated with the REC-1 beneficial use). These designated areas must be specifically defined in the Basin Plan. Because the San Diego Water Board has designated the ocean waters with the REC-1 beneficial use in the Basin Plan, the Ocean Plan Bacterial Standards apply throughout State territorial marine waters in the San Diego Region, which extend from surface to bottom, out to three nautical miles from the shoreline. This interpretation has been confirmed by USEPA and added to this Order.

The Ocean Plan Bacteria Standards were amended in February 2019 and include new standards for fecal coliform and enterococci. As a result, this Order includes receiving water limitations for fecal coliform and enterococci based on the 2019 Ocean Plan Bacteria Standards.

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 the Standard Provisions (Attachment D).

Sections 122.41(a)(1) and (b) through (n) of 40 CFR 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 sections 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

This Order may be re-opened and modified, revoked and reissued, or terminated for cause in accordance with the provisions of 40 CFR parts 122, 123, 124, and 125. The San Diego Water Board may reopen the permit to modify permit conditions and requirements. Causes for modification include, but are not limited to, revisions to effluent limitations, receiving water requirements, monitoring and reporting requirements; participation in the Southern California Coastal Water Research Project (SCCWRP) monitoring program or other regional or water body monitoring coalition as determined by the San Diego Water Board; revisions to sludge use or disposal practices; or adoption of new or revised regulations, water quality control plans, or policies by the State Water Board or the San Diego Water Board, including revisions to the Basin Plan or Ocean Plan.

The previous Order, Order No. R9-2015-0073 stated “This Order may be re-opened and modified at the San Diego Water Board’s discretion in response to a request to allow sewage from the Mesa facility to be routed to the NIA Sewage Treatment Plant once the U.S. Marine Corps takes possession of the Mesa facility. By email dated November 7, 2022, the Discharger stated, “the plans for the U.S. Marine Corps will not utilize or transfer any water to the NIA sewage treatment plant.” Thus, this reopener provision was not carried over from Order No. R9-2015-0073 to this Order.

6.2.2. Special Studies and Additional Monitoring Requirements

6.2.2.1. Spill Reporting Requirements

To determine compliance with Discharge Prohibition 3.1 and provide appropriate notification to the general public for the protection of public health, spill reporting requirements have been established in section 6.3.2.1 of this Order.

6.2.2.2. Receiving Water Violation Assessment

In the event of a violation of any receiving water limitation established within this Order, the San Diego Water Board may require the Discharger to perform a special assessment. The purpose of the special assessment shall be to investigate the nature and cause of the receiving water violation and identify measures needed to ensure future compliance with receiving water limitations. The Discharger shall submit the required assessment to the San Diego Water Board within 90 days of receipt of the San Diego Water Board notification of the need to perform a Receiving Water Violation Assessment. The results of the assessment will assist the Discharger and the San Diego

Water Board in determining permit compliance and appropriate corrective actions for the protection of water quality and designated beneficial uses.

6.2.3. Best Management Practices and Pollution Prevention

Requirements to continue to operate the Facility in accordance with the Discharger's Best Management Practices (BMPs) Plan has been carried over from the previous Order, Order No. R9-2015-0073 to this Order. The requirements for BMPs are authorized by CWA sections 304(e) and 402(p), for toxic pollutants and hazardous substances, and for the control of stormwater discharges.

6.2.4. Construction, Operation, and Maintenance Specifications

6.2.4.1. This Order carries over provisions from the previous Order, Order No. R9-2015-0073 to ensure that new treatment facilities and expansions of existing treatment facilities are completely constructed and operable prior to initiation of the discharge from the new or expanded facilities.

6.2.4.2. This Order carries over a provision from the previous Order, Order No. R9-2015-0073 to ensure the Facility is protected against the impact of storm events.

6.2.4.3. This Order adds a provision to ensure the Facility is protected against regional impacts due to climate change (e.g., sea level rise and floods).

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

6.2.6. Other Special Provisions

6.2.6.1. **Special Studies.** The State Water Board previously required the Discharger to perform special studies specified in section 3.D.(1) of the OTC Policy. By letter dated January 9, 2015, the State Water Board waived the requirement to perform the special studies given the decision to permanently shut down the Facility and to immediately reduce intake flows by approximately 96 percent. In the letter, the State Water Board also determined that the Discharger has demonstrated compliance with the OTC Policy's Track 1 requirements due to the drastic reduction in flow.

6.2.6.2. **Large Organism Exclusion Devices (LOEDs).** Although the Facility is no longer generating power, the Discharger has indicated it will continue to utilize ocean water during the decommissioning process, and the reduced intake water is needed for the operation of the onsite spent nuclear fuel pools, and also to comply with this Order for effluent discharges, primarily sewage. By letter dated January 9, 2015, the State Water Board states that as long as the Facility continues ocean water intake, the Facility is still subject to applicable requirements of the OTC Policy, including the installation of LOEDs no later than December 31, 2016. The previous Order, Order No. R9-2015-0073 required the Discharger to achieve full compliance with LOED requirements by December 31, 2016. In a report dated September 2, 2016, the Discharger stated that the LOED installation was completed August 4, 2016.

In a letter dated November 30, 2022, the Dischargers requested a waiver of LOED requirements stating that the LOEDs have design and maintenance issues and the Facility had only one entrainment since 2013. However, the OTC Policy does not contemplate a waiver process. As such, this Order requires that the LOED be maintained in accordance with the OTC Policy's goal of protecting organisms from being trapped in the intake water because the intake structure still exists.

- 6.2.6.3. The previous Order, Order No. R9-2015-0073 states "The Discharger shall implement the following actions in compliance with the Ocean Plan:
- a) As of October 1, 2011, any unit that is not directly engaged in power generating activities or critical system maintenance shall cease intake flows unless it has been demonstrated to the State Water Board that a reduced minimum flow is necessary for operations.
 - b) Commencing on the effective date of this Order, the Discharger shall implement interim measures to mitigate impingement and entrainment impacts until full compliance is achieved, by December 31, 2022. If the Discharger proposes to mitigate impacts by providing funding to the California State Coastal Conservancy (working with the California Ocean Protection Council), such as for mitigation projects directed toward increases in marine life associated with the State's Marine Protected Areas within the local area, the Discharger's mitigation funding shall be based on an amount that is determined by the State Water Board's Chief Deputy Director."

By letter dated April 1, 2011, the Discharger has demonstrated compliance with the OTC Policy's interim mitigation requirements through the ongoing SONGS Marine Mitigation Program required by and monitored through the California Coastal Commission.

6.2.7. Compliance Schedules – Not Applicable

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 authorize the San Diego Water Board to establish monitoring, inspection, entry, reporting, and recordkeeping requirements. The MRP (Attachment E) establishes monitoring, reporting, and recordkeeping requirements that implement federal and State requirements. The reports required by the MRP (Attachment E) are needed to ensure compliance with the Order, protect beneficial uses, and obtain other benefits as described in this Fact Sheet and the MRP (Attachment E). Thus, the burdens, including costs, of the MRP (Attachment E) required by this Order bear a reasonable relationship to the need for and benefits to be obtained from the MRP (Attachment E). The following provides the rationale for the monitoring and reporting requirements contained in the MRP (Attachment E) for the Facility. This monitoring location descriptions have been updated from the previous Order, Order No. R9-2015-0073 to reflect the Discharger's discontinued use of cooling water (see Table E-1 of the MRP (Attachment E)).

7.1. Core Monitoring Requirements

7.1.1. Influent Monitoring

Influent monitoring is required to assess the performance of the NIA Sewage Treatment Plant and to evaluate compliance with effluent limitations. The influent monitoring frequency and sample type for TSS has been retained from the previous Order, Order No. R9-2015-0073 for the NIA Sewage Treatment Plant.

Refer to section 3.1 of the MRP (Attachment E) of this Order.

7.1.2. Effluent Monitoring

Effluent monitoring is required to determine compliance with the conditions of this Order, to identify operational problems, to improve plant performance, and to conduct reasonable potential analyses for subsequent orders. Effluent monitoring also provides information on effluent characteristics for use in interpreting water quality and biological data. Effluent monitoring requirements have been carried over from the previous Order, Order No. R9-2015-0073 with the following exceptions:

- 7.1.2.1. This Order adds requirements to calculate and report the monthly average percent removal for TSS for the NIA Sewage Treatment Plant to determine compliance with the existing effluent limitation for TSS (carried over from Order No. R9-2015-0073).
- 7.1.2.2. For the combined low-volume waste stream discharges (Monitoring Location INT-002), this Order adds requirements to report the concentration results, as well as the calculated MERs, for all parameters in Table 3 of the Ocean Plan.
- 7.1.2.3. For Monitoring Location EFF-002, this Order adds requirements to calculate and report the MERs to determine compliance with the mass-based final effluent limitations.
- 7.1.2.4. For Monitoring Location EFF-002, this Order increases the monitoring frequency for parameters that have been assigned effluent limitations from semiannually to quarterly to ensure the effluent is meeting the effluent limitations.
- 7.1.2.5. For Monitoring Location EFF-002, this Order adds a trigger to increase the monitoring frequency from quarterly to monthly for any parameter that exceeds effluent limitations to ensure that compliance is being adequately assessed.
- 7.1.2.6. As stated in section 3.3.6. of this Fact Sheet, the San Diego Water Board has determined that the Thermal Plan no longer applies to this Order. Therefore, this Order removes the requirements to monitor the temperature at the discharge (Discharge Point No. 002/Monitoring Location EFF-002) and influent (Monitoring Locations INF-002 and INF-003).

Refer to section 3.2 of the MRP (Attachment E) of this Order.

7.1.3. Whole Effluent Toxicity Testing Requirements

This Order contains chronic toxicity effluent limitations as described in section 4.3.6. of this Fact Sheet.

Consistent with the requirements of the Ocean Plan, section 3.3.7 of the MRP (Attachment E) requires the Discharger to develop an Initial Investigation Toxicity Reduction Evaluation (TRE) Work Plan and submit the Initial Investigation TRE Work Plan within 90 days of the effective date of this Order. The Initial Investigation TRE Work Plan must describe steps the Discharger intends to follow if the effluent limitation for chronic toxicity is exceeded.

Section III.C.10 of the Ocean Plan requires a TRE if a discharge consistently exceeds an effluent limitation based on a toxicity objective in Table 3 of the Ocean Plan. To determine if the discharge consistently exceeds the toxicity effluent limitation, this Order requires the Discharger to notify the San Diego Water Board and to accelerate toxicity testing if the effluent limitation for chronic toxicity is exceeded in any one test. If any of the additional tests demonstrate toxicity, in accordance with section III.C.10 of the Ocean Plan, the Discharger is required to submit a Detailed TRE Work Plan in accordance with its submitted Initial Investigation TRE Work Plan and USEPA guidance² which shall include further steps taken by the Discharger to investigate, identify, and correct the causes of toxicity; actions the Discharger will take to mitigate the effects of the discharge and prevent the recurrence of toxicity; and a schedule for these actions. The Discharger may also implement a Toxicity Identification Evaluation (TIE), as necessary, based upon the magnitude and persistence of toxicity effluent limitation exceedances. Once the source of toxicity is identified, the Discharger must take all reasonable steps to reduce the toxicity to meet the chronic toxicity effluent limitation identified in section 4.1 of this Order.

The above accelerated monitoring (a minimum of six succeeding tests performed at 14-day intervals) is based on the probability of encountering at least one toxicity exceedance assuming a true, but unknown level of occurrence.

Within 30 days of completion of the TRE, the Discharger must submit the results of the TRE, including a summary of the findings, data generated, a list of corrective actions taken or planned to achieve consistent compliance with the toxicity effluent limitation of this Order and prevent recurrence of exceedances of the effluent limitation, and a time schedule for implementation of any planned corrective actions. The Discharger must implement any planned corrective actions in the TRE Final Report in accordance with the specified time schedule, unless otherwise directed in writing by the San Diego Water Board. The

² See (a) *Generalized Methodology for Conducting Industrial Toxicity Reduction Evaluations* (EPA/600/2-88/070); *Toxicity Identification Evaluation, Phase I* (EPA/600/6-91/005F); (b) *Methods for Aquatic Toxicity Identification Evaluations, Phase II* (EPA/600/R-92/080); (c) *Methods for Aquatic Toxicity Identification Evaluations, Phase III* (EPA/600/R-92/081); and (d) *Marine Toxicity Identification Evaluation (TIE): Phase I Guidance Document* (EPA/600/R-96-054, 1996).

corrective actions and time schedule must be modified at the direction of the San Diego Water Board.

Refer to section 3.3 of the MRP (Attachment E) of this Order.

7.2. Receiving Water Monitoring Requirements

The receiving water requirements have been carried over from the previous Order, Order No. R9-2015-0073. The language has been updated to be consistent with other permits in the San Diego Region. This Order adds the details of the receiving water monitoring locations from the previous Order, Order No. R9-2005-0005.

Based on the requirements in the Ocean Plan, Appendix III, section 4.0, this Order adds indicator bacteria monitoring to this Order.

Based on the requirements in the Ocean Plan, Appendix III, sections 6, 8, and 9, this Order adds:

- Annual sediment monitoring for acid volatile sulfides, organophosphorus insecticides, Ocean Plan Table 3 metals, ammonia-nitrogen, polynuclear aromatic hydrocarbons, and chlorinated hydrocarbons (Ocean Plan, Appendix III, section 6.1);
- Benthic community monitoring once per permit cycle (Ocean Plan, Appendix III, section 8.1); and
- Bioaccumulation monitoring once per permit cycle for pesticides, Table 3 metals, and polynuclear aromatic hydrocarbons (Ocean Plan, Appendix III, section 9.1).

Refer to section 4 of the MRP (Attachment E) of this Order.

7.2.1. California Environmental Data Exchange Network

The California Environmental Data Exchange Network (CEDEN) is a central database to find and share information about the State's water bodies, including streams, lakes, rivers, and the coastal ocean. Many groups in the State monitor water quality, aquatic habitat, and wildlife health to ensure good stewardship of our ecological resources. CEDEN aggregates this data and makes it accessible to environmental managers and the public. CEDEN requires a minimum level of quality assurance and quality control measures to ensure the data reported are of sufficient quality. When developing integrated reports for listing impaired water bodies pursuant to the federal CWA section 303(d), Regional Water Quality Control Boards must rely on data submitted to CEDEN to make determinations of water quality. Data not included in CEDEN are generally not permissible to be included in the integrated reports.

This Order requires the Discharger submit applicable receiving water monitoring data to CEDEN or an equivalent database that is linked to CEDEN to ensure the monitoring data is available to the San Diego Water Board for integrated reports and is easily accessible to the public and other environmental managers. Additionally, the requirement to submit receiving water monitoring data to CEDEN is consistent with the San Diego Water Board's *A Framework for*

Monitoring and Assessment in the San Diego Region, endorsed by the San Diego Water Board in December 2012 through Resolution No. R9-2012-0069. CEDEN currently does not accept all receiving water monitoring data collected pursuant to this Order; however, CEDEN is periodically updated to accept additional data. The Discharger is required to submit data that is in a format approved by CEDEN. The Discharger is required to submit an annual certification that all applicable receiving water monitoring data has been timely uploaded to CEDEN.

7.2.2. Receiving Water Monitoring Report

The requirement for an annual receiving water monitoring report has been carried over from the previous Order, Order No. R9-2015-0073.

7.4. Groundwater – Not Applicable

7.5. Regional Monitoring Requirements

Regional ocean water monitoring provides information about the sources, fates, and effects of anthropogenic contaminants in the coastal marine environment necessary to make assessments over large areas. The large-scale assessments provided by regional monitoring describe and evaluate cumulative effects of all anthropogenic inputs and enable better decision-making regarding protection of beneficial uses of ocean waters. Regional monitoring data assists in the interpretation of core monitoring studies by providing a more accurate and complete characterization of reference conditions and natural variability. Regional monitoring also leads to methods standardization and improved quality control through inter-calibration exercise. The coalitions implementing regional monitoring enable sharing of technical resources, trained personnel, and associated costs. Focusing these resources on regional issues and developing a broader understanding of pollutants effects in ocean waters enables the development of more rapid and effective response strategies. Based on all of these considerations the San Diego Water Board supports regional approaches to monitoring ocean waters.

Consistent with Appendix III section 1 of the Ocean Plan, the Discharger may be required by the San Diego Water Board, to participate with other regulated entities, other interested parties, and the San Diego Water Board in development and implementation of new and improved monitoring and assessment programs for ocean waters in the San Diego Region and discharges to those waters.

Refer to section 5 of the MRP (Attachment E) of this Order.

7.5.1. Kelp Bed Canopy Monitoring Requirements

Kelp consists of a number of species of brown algae. Along the central and southern California coast, giant kelp (*Macrocystis pyrifera*) is the largest species colonizing rocky, and in some cases sandy, subtidal habitats. Giant kelp is an important component of coastal and island communities in southern California, providing food and habitat for numerous animals. The Discharger is required to participate with other ocean dischargers under San Diego Water Board's

jurisdiction in an ongoing regional survey of coastal kelp beds in the Southern California Bight. The intent of these surveys is to provide an indication of the health of these kelp beds, recognizing that the extent of kelp bed canopies may change due to a variety of influences.

Giant kelp (*Macrocystis pyrifera*) beds along most of the southern California mainland coast have been mapped quarterly as part of NPDES permit requirements for most ocean dischargers in the San Diego Region by the Region Nine Kelp Survey Consortium (RNKSC) since 1983. The RNKSC participants agreed that the monitoring program would be methodologically based upon aerial kelp surveys that were conducted since 1967 by the late Dr. Wheeler J. North.

The RNKSC program area extends from Abalone Point in northern Laguna Beach in Orange County southward to the U.S./Mexico Border in San Diego County and recognizes 24 existing or historic kelp beds. Kelp beds associated with harbors, marinas, or hard substrate also are surveyed. Region Nine supports what are usually the two largest kelp beds in southern California, the La Jolla and Point Loma kelp beds. There are eight ocean outfalls, including the SONGS ocean outfalls, located within the geographical area surveyed on behalf of the RNKSC.

The results of these kelp surveys are published in a single separate report for each region prior to 2012. These reports have since been combined into a single "Status of the Kelp Beds" report published each year that is required to be submitted as part of the MRP in Attachment E of this Order.

Refer to section 5.1 of the MRP (Attachment E) of this Order.

7.5.2. Southern California Bight Regional Monitoring Program Participation Requirements

The Southern California Bight (Bight), defined as the concave bend of the shoreline extending from Point Conception to Punta Colonet in Mexico, is host to unique, biologically diverse marine ecosystems that have long been vulnerable to the impacts of human activity. The coastal zone of the Bight hosts nearly 22 million United States residents that engage in a wide variety of industrial, military, and recreational activities. Approximately 5,600 miles of watersheds, half of which is highly developed, drain into the Bight. The Southern California Bight Regional Monitoring Program brings together researchers and water-quality managers to pool their resources and work together to investigate the condition of marine ecosystems both spatially and temporally and extend greater protections to the Bight's diverse habitats and natural resources.

Consistent with Appendix III section 1 of the Ocean Plan, the Discharger may be required to participate in the Southern California Bight Regional Monitoring Program coordinated by SCCWRP, or any other coordinator named by the San Diego Water Board, pursuant to Water Code section 13383, and 40 CFR section 122.48. The intent of the Southern California Bight Regional Monitoring Program is to maximize the efforts of all monitoring partners using a more cost-effective monitoring design and to best utilize the pooled scientific resources of the Bight.

During these coordinated sampling efforts, the Discharger's receiving water sampling and analytical effort, as defined in section 4 of the MRP (Attachment E), may be reallocated to provide a regional assessment of the impact of the discharge of wastewater to the Bight. In that event, the San Diego Water Board will notify the Discharger in writing that a portion of the requirement to perform the receiving water sampling and analytical effort defined in section 4 of the MRP (Attachment E) is suspended for the duration of the reallocation. Anticipated modifications to the monitoring program will be coordinated so as to provide a more comprehensive picture of the ecological and statistical significance of monitoring results and to determine cumulative impacts of various pollution sources. The level of resources in terms of sampling and analytical effort redirected from the receiving water monitoring program required under section 4 of the MRP (Attachment E) shall equal the level of resources provided to implement the regional monitoring and assessment program unless the San Diego Water Board and the Discharger agrees otherwise. The specific scope and duration of the receiving water monitoring program reallocation and redirection will be determined and set by the San Diego Water Board, in consultation with the Discharger.

Refer to section 5.2 of the MRP (Attachment E) of this Order.

7.6. Special Studies Requirements

7.6.1. Fish Impingement/Entrainment Monitoring

The fish impingement/entrainment monitoring requirements have been carried over from the previous Order, Order No. R9-2015-0073.

Refer to section 6.1 of the MRP (Attachment E) of this Order.

7.6.2. Monitoring Location INF-002 – Cooling Water/Ocean Water Intake Monitoring

The cooling water/ocean water intake monitoring requirements have been carried over from the previous Order, Order No. R9-2015-0073. The requirements have been updated to reflect the Discharger's discontinued use of cooling water.

Refer to section 6.2 of the MRP (Attachment E) of this Order.

7.6.3. Climate Change Action Plan (CCAP)

Climate change research indicates the overarching driver of change is increased atmospheric carbon dioxide (CO₂) from human activity. The increased CO₂ emissions trigger changes to climatic patterns, which increase sea level and the intensity of coastal storm surges (Δ Sea Level) lead to more erratic local weather patterns (Δ Weather Patterns), increased incidents of flooding and wildfires, trigger a gradual warming of freshwater and ocean temperatures (Δ Water Temperature), and trigger changes to ocean water chemistry (Δ Water pH). The changes to the sea level and weather patterns may affect the Facility (e.g., flooding, increased influent flows during wet weather, wildfires, and heat waves). The changes to the water temperature and pH may affect how the receiving waters reacts to the discharges.

The California Public Resources Code (Public Resources Code) recognizes that anthropogenic greenhouse gas emissions responsible for climate change are also driving major shifts in the chemical properties of the world's oceans (Public Resources Code section 35630(c)). Furthermore, Governor Newsom's Executive Order N-10-1920 directs state agencies to prepare a water resiliency portfolio that meets the needs of California's communities, economy, and environment. The State Water Board's Resolution No. 2017-0012, *Comprehensive Response to Climate Change*, and the San Diego Water Board's Resolution No. R9-2018-0051, *Addressing Threats to Beneficial Uses from Climate Change*, also require a proactive approach to climate change in all state and regional actions.

Based on all of these considerations, this Order requires the Discharger to prepare and submit a CCAP within three years of the effective date of this Order.

Refer to section 6.3 of the MRP (Attachment E) of this Order.

7.7. Other Monitoring Requirements

Discharge Monitoring Report-Quality Assurance (DMR-QA) Study Program. Under the authority of section 308 of the CWA (33 U.S.C. section 1318), USEPA requires major and selected minor permittees under the NPDES Program 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, it 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.

Refer to section 1.7 of the MRP (Attachment E) of this Order.

8. Public Participation

The San Diego Water Board has considered the issuance of WDRs that will serve as an NPDES permit for the Facility. As a step in the WDR adoption process, the San Diego Water Board staff developed tentative WDRs and encouraged public participation in the WDR adoption process by providing a period of a minimum of 30 days for public review and comment on the Tentative Order.

8.1. Notification of Interested Parties

The San Diego Water Board notified the Discharger and interested agencies and persons of its intent to prescribe WDRs for the discharge and provided an opportunity to submit written comments and recommendations. Notification was provided by posting a Notice of Public Hearing and Opportunity to Comment and the tentative WDRs on the San Diego Water Board's website for the duration of the public comment period. The Tentative Order was posted on the San Diego Water Board website and emailed to the Discharger, and all known interested parties on February 2, 2023.

The public also had access to the meeting agenda including all supporting documents and any changes in meeting dates and locations through the San Diego Water Board's website at: <https://www.waterboards.ca.gov/sandiego/>.

8.2. Written Comments

Interested persons were invited to submit written comments concerning tentative WDRs as provided through the notification process. Comments were due either in person or by mail to the San Diego Water Board at 2375 Northside Drive, Suite 100, San Diego, CA 92108.

To be fully responded to by staff and considered by the San Diego Water Board, the written comments were due at the San Diego Water Board office by 5:00 p.m. on March 6, 2023.

8.3. Public Hearing

The San Diego 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: April 12, 2023
Time: 9:00 AM
Location: City of Laguna Beach,
City Council Chambers,
505 Forest Avenue,
Laguna Beach, CA 92651

Interested persons were invited to attend. At the public hearing, the San Diego Water Board heard testimony, pertinent to the discharge, WDRs, and permit. For accuracy of the record, important testimony was requested in writing.

8.4. Reconsideration of Waste Discharge Requirements

Any person aggrieved by this action of the San Diego Water Board may petition the State Water Board to review the action in accordance with Water Code section 13320 and CCR, title 23, section 2050. 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. Petitions may be sent in as follows:

By mail:
State Water Resources Control Board
Office of Chief Counsel
P.O. Box 100, 1001 I Street
Sacramento, CA 95812-0100

In Person:
State Water Resources Control Board
Office of Chief Counsel
1001 I Street
Sacramento, California 95814

By email:
waterqualitypetitions@waterboards.ca.gov

By fax:
(916) 341-5199

For instructions on how to file a petition for review, see:
https://www.waterboards.ca.gov/public_notices/petitions/water_quality/wqpetition_instr.shtml

8.5. Information and Copying

The ROWD, other supporting documents, and comments received are on file and may be inspected at the address above at any time between 8:30 a.m. and 4:45 p.m., Monday through Friday. Copying of documents may be arranged through the San Diego Water Board by calling (619) 516-1990.

8.6. Register of Interested Persons

Any person interested in being placed on the mailing list for information regarding the WDRs and NPDES permit should contact the San Diego Water Board, reference this Facility, and provide a name, address, and phone number.

8.7. Additional Information

Requests for additional information or questions regarding this Order should be directed to Joann Lim by email at Joann.Lim@waterboards.ca.gov or by phone at (619) 521-3362.

ATTACHMENT G – DISCHARGE PROHIBITIONS CONTAINED IN THE OCEAN PLAN AND BASIN PLAN

1. Ocean Plan Discharge Prohibitions

- 1.1. The Discharge of any radiological chemical, or biological warfare agent or high-level radioactive waste into the ocean is prohibited.
- 1.2. Waste shall not be discharged to designated Areas of Special Biological Significance except as provided in chapter III.E. of the Ocean Plan.
- 1.3. Pipeline discharge of sludge to the ocean is prohibited by federal law; the discharge of municipal and industrial waste sludge directly to the ocean, or into a waste stream that discharges to the ocean, is prohibited. The discharge of sludge digester supernatant directly to the ocean, or to a waste stream that discharges to the ocean without further treatment, is prohibited.
- 1.4. The by-passing of untreated wastes containing concentrations of pollutants in excess of those of Table 3 or Table 4 [of the Ocean Plan] to the ocean is prohibited, except as allowed by Federal Standard Provisions I.G and I.H (Attachment D).
- 1.5. 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.

2. Basin Plan Discharge Prohibitions

- 2.1. The discharge of waste to waters of the State in a manner causing, or threatening to cause a condition of pollution, contamination or nuisance as defined in Water Code section 13050, is prohibited.
- 2.2. The discharge of waste to land, except as authorized by WDRs of the terms described in Water Code section 13264 is prohibited.
- 2.3. The discharge of pollutants or dredged or fill material to waters of the United States except as authorized by an NPDES permit or a dredged or fill material permit (subject to the exemption described in Water Code section 13376) is prohibited.
- 2.4. Discharges of recycled water to lakes or reservoirs used for municipal water supply or to inland surface water tributaries thereto are prohibited, unless the San Diego Water Board issues an NPDES permit authorizing such a discharge; the proposed discharge has been approved by the State of California Department of Public Health and the operating agency of the impacted reservoir; and the discharger has an approved fail-safe long-term disposal alternative.

- 2.5. The discharge of waste to inland surface waters, except in cases where the quality of the discharge complies with applicable receiving water quality objectives, is prohibited. Allowances for dilution may be made at the discretion of the San Diego Water Board. Consideration would include streamflow data, the degree of treatment provided and safety measures to ensure reliability of facility performance. As an example, discharge of secondary effluent would probably be permitted if streamflow provided 100:1 dilution capability.
- 2.6. The discharge of waste in a manner causing flow, ponding, or surfacing on lands not owned or under the control of the discharger is prohibited, unless the discharge is authorized by the San Diego Water Board.
- 2.7. The dumping, deposition, or discharge of waste directly into waters of the State, or adjacent to such waters in any manner which may permit it's being transported into the waters, is prohibited unless authorized by the San Diego Water Board.
- 2.8. Any discharge to a storm water conveyance system that is not composed entirely of storm water is prohibited unless authorized by the San Diego Water Board. [The federal regulations, 40 CFR section 122.26(b)(13), define storm water as storm water runoff, snow melt runoff, and surface runoff and drainage. 40 CFR section 122.26(b)(2) defines an illicit discharge as any discharge to a storm water conveyance system that is not composed entirely of storm water except discharges pursuant to an NPDES permit and discharges resulting from firefighting activities.] [section 122.26 amended at 56 FR 56553, November 5, 1991; 57 FR 11412, April 2, 1992].
- 2.9. The unauthorized discharge of treated or untreated sewage to waters of the State or to a storm water conveyance system is prohibited.
- 2.10. The discharge of industrial wastes to conventional septic tank/subsurface disposal systems, except as authorized by the terms described in Water Code section 13264, is prohibited.
- 2.11. The discharge of radioactive wastes amenable to alternative methods of disposal into the waters of the State is prohibited.
- 2.12. The discharge of any radiological, chemical, or biological warfare agent into waters of the State is prohibited.
- 2.13. The discharge of waste into a natural or excavated site below historic water levels is prohibited unless the discharge is authorized by the San Diego Water Board.
- 2.14. The discharge of sand, silt, clay, or other earthen materials from any activity, including land grading and construction, in quantities which cause deleterious bottom deposits, turbidity or discoloration in waters of the State or which unreasonably affect, or threaten to affect, beneficial uses of such waters is prohibited.