

**CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD  
CENTRAL COAST REGION**

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**ORDER NO. R3-2020-0031  
NPDES NO. CA0006254**

**WASTE DISCHARGE REQUIREMENTS  
FOR THE  
DYNEGY MOSS LANDING, LLC MOSS LANDING POWER PLANT  
DISCHARGE TO THE PACIFIC OCEAN**

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

**Table 1. Discharger Information**

<b>Discharger</b>	<b>Dynegy Moss Landing, LLC<sup>1</sup></b>
<b>Name of Facility</b>	<b>Moss Landing Power Plant</b>
<b>Facility Address</b>	<b>U.S Highway 1 and Dolan Road, P.O. Box 690</b>
	<b>Moss Landing, CA 95039-0690</b>
	<b>Monterey County</b>

**Table 2. Discharge Location**

<b>Discharge Point</b>	<b>Effluent Description</b>	<b>Discharge Point Latitude (North)</b>	<b>Discharge Point Longitude (West)</b>	<b>Receiving Water</b>
002	Cooling water, industrial wastewater	36.80389°	121.78970°	Pacific Ocean (Monterey Bay National Marine Sanctuary)
004	Intake system discharges	36.80472°	121.7836°	Moss Landing Harbor

**Table 3. Administrative Information**

This Order was adopted on:	<b>July 16, 2020</b>
This Order shall become effective on:	<b>September 4, 2020</b>
This Order shall expire on:	<b>September 3, 2025</b>
The Discharger shall file a Report of Waste Discharge as an application for reissuance of WDRs in accordance with title 23, California Code of Regulations, and an application for reissuance of a National Pollutant Discharge Elimination System permit no later than:	<b>March 7, 2025</b>
The U.S. Environmental Protection Agency and the California Regional Water Quality Control Board, Central Coast Region have classified this discharge as follows:	<b>Major discharge</b>

<sup>1</sup> Moss Landing Power Plant was formerly owned by Duke Energy North America, and the prior order issued for this facility used that name for the Discharger.

I, Matthew T. Keeling, Executive Officer, do hereby certify that this Order with all attachments is a full, true, and correct copy of an order adopted by the California Regional Water Quality Control Board, Central Coast Region on the date indicated above.

Matthew T. Keeling



Digitally signed by Matthew T. Keeling

Date: 2020.08.28 14:06:09 -07'00'

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Matthew T. Keeling, Executive Officer

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## I. FACILITY INFORMATION

Information describing the Moss Landing Power Plant (Facility or MLPP) is summarized in Table 1 and in sections I and II of the Fact Sheet (Attachment F). Section I of the Fact Sheet also includes information regarding the Facility's permit application.

## II. FINDINGS

The California Regional Water Quality Control Board, Central Coast Region (Central Coast Water Board) finds:

- A. Legal Authorities.** This Order serves as waste discharge requirements (WDRs) pursuant to article 4, chapter 4, division 7 of the California 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 (U.S. EPA) and chapter 5.5, division 7 of the California Water Code (commencing with section 13370). It shall serve as a National Pollutant Discharge Elimination System (NPDES) permit authorizing Dynegy Moss Landing, LLC (Discharger) to discharge into waters of the United States at the discharge location described in Table 2 subject to the WDRs in this Order.
- B. Background and Rationale for Requirements.** The Central Coast 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 are also incorporated into this Order.
- C. Provisions and Requirements Implementing State Law.** The provisions/requirements in subsections IV.B, IV.C, and V.B are included to implement 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.
- D. Notification of Interested Persons.** The Central Coast 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.
- E. Consideration of Public Comment.** The Central Coast Water Board, in a public meeting, heard and considered all comments pertaining to the discharge. Details of the public hearing are provided in the Fact Sheet.

THEREFORE, IT IS HEREBY ORDERED, that this Order supersedes Order No. R3-2000-0041 except for enforcement purposes, and, in order to meet the provisions contained in division 7 of the California Water Code (commencing with section 13000) and regulations adopted thereunder and the provisions of the CWA and regulations and guidelines adopted thereunder, the Discharger shall comply with the requirements in this Order. This action in no way prevents the Central Coast Water Board from taking enforcement action for violations of the previous Order.

## III. DISCHARGE PROHIBITIONS

- A.** Discharge of treated wastewater to the Pacific Ocean at a location other than described by this Order from MLPP is prohibited.
- B.** Discharge of any waste in any manner other than as described by this Order is prohibited.
- C.** The maximum daily discharge to Monterey Bay shall not exceed 362 million gallons per day (MGD) at Discharge Point No. 002.

- D. Wastes shall not be discharged to State Water Quality Protection Areas, described as Areas of Special Biological Significance by the 2019 California Ocean Plan (California Ocean Plan), except in accordance with Chapter III.E of the California Ocean Plan.
- E. The discharge of any radiological, chemical, or biological warfare agent or high-level radioactive waste into the ocean is prohibited.
- F. The overflow or bypass of wastewater from the Discharger’s collection, treatment, or disposal facilities and the subsequent discharge of untreated or partially treated wastewater, except as provided for in Attachment D, Standard Provision I.G (Bypass), is prohibited.
- G. 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 by the California Ocean Plan. 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.
- H. The discharge of polychlorinated biphenyl compounds is prohibited.
- I. The discharge of domestic wastewater or solid waste to surface waters is prohibited.
- J. Discharges of pollutants that are not otherwise authorized by this NPDES permit to a storm drain system or waters of the state are prohibited.
- K. The discharge of stormwater that causes pollution, contamination, or nuisance is prohibited.
- L. Discharges that cause adverse effects to beneficial uses of water or threatened or endangered species are prohibited.

**IV. EFFLUENT LIMITATIONS AND DISCHARGE SPECIFICATIONS**

**A. Effluent Limitations – Discharge Point No. 002**

**1. Final Effluent Limitations – Combined Effluent Through Discharge Point No. 002**

- a. The Discharger shall maintain compliance with the following effluent limitations at Discharge Point No. 002, with compliance measured at Monitoring Location EFF-002 as described in the Monitoring and Reporting Program (MRP), Attachment E:

**Table 4. Summary of Final Effluent Limitations for Discharge Point No. 002 for the Protection of Marine Aquatic Life (Monitoring Location EFF-002)**

Parameter	Units	Effluent Limitations					
		6-month median	Average Monthly	Average Weekly	Maximum Daily	Inst. Minimum	Inst. Maximum
pH	pH Units	--	--	--	--	6.0	9.0
Temperature	°F	[1]					
Free Available Chlorine	µg/L	--	--	--	200 <sup>[2]</sup>	--	500 <sup>[2]</sup>
Total Residual Chlorine	µg/L	--	--	--	--	--	200
Copper	µg/L	10	--	--	86	--	237.2
	lbs/day	30	--	--	258.2	--	--
Nickel	µg/L	42	--	--	168	--	420
	lbs/day	126.1	--	--	504.4	--	--

Parameter	Units	Effluent Limitations					
		6-month median	Average Monthly	Average Weekly	Maximum Daily	Inst. Minimum	Inst. Maximum
Cyanide	µg/L	8.4	--	--	33.6	--	84
	lbs/day	25.36	--	--	101.44	--	--
Chronic Toxicity <sup>[3]</sup>	TUc	--	--	--	8.4	--	--
Phenolic Compounds (Non-chlorinated Phenolics)	µg/L	252	--	--	1008	--	2520
	lbs/day <sup>[4]</sup>	760.81	--	--	3043.23	--	--
Chlorinated Phenolics	µg/L	8.4	--	--	33.6	--	84
	lbs/day <sup>[4]</sup>	25.36	--	--	101.44	--	--
Endosulfan	µg/L	0.0756	--	--	0.1512	--	0.2268
	lbs/day <sup>[4]</sup>	0.23	--	--	0.46	--	0.68
Endrin	µg/L	0.0168	--	--	0.0336	--	0.0504
	lbs/day <sup>[4]</sup>	0.05	--	--	0.10	--	0.15
Hexachloro-cyclohexane (HCH)	µg/L	0.0336	--	--	0.0672	--	0.1008
	lbs/day <sup>[4]</sup>	0.10	--	--	0.20	--	0.30
Radioactivity	Not to exceed limits specified in California Code of Regulations, Title 22, Division 4, Chapter 15, Article 5, Section 64443						

**Notes:**

- [1] Daily average temperature of the discharge shall not exceed the daily average natural temperature of the receiving water by more than 20°F (11.1°C) during the days in which either one or both Units 1 and 2 are operating. The instantaneous maximum temperature of the discharge shall not exceed the natural temperature of the receiving water by more than 26°F (14.4°C) during the days in which either one or both of Units 1 and 2 are operating.
- [2] Applied as an average daily concentration. 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 Discharger can demonstrate to the Central Coast Water Board that the units in a particular location cannot operate at or below this level of chlorination.
- [3] Chronic toxicity shall be reported as the chronic toxicity units (TUc) for the maximum daily effluent limitation (MDEL).
- [4] These mass-based effluent limitations are calculated using the following formula:  
 Mass-based effluent limitation = C \* Q \* 0.00834  
 Where:  
 C = Concentration-based effluent limitation (µg/L) calculated in the combined discharge (cooling water and in-plant wastes)  
 Q = Maximum discharge flow rate = 362 MGD, the maximum permitted combined cooling water and low volume wastes flow discharged through Discharge Point No. 002.

**Table 5. Summary of Final Effluent Limitations for Discharge Point No. 002 for the Protection of Human Health (Monitoring Location EFF-002)**

Parameter	Unit	Effluent Limitations <sup>[1][2][3]</sup>			
		6-Month Median	Maximum Daily	Instantaneous Maximum	30-Day Average
<b>OBJECTIVES FOR PROTECTION OF HUMAN HEALTH – NONCARCINOGENS</b>					
Acrolein	µg/L	--	--	--	1848.00

Parameter	Unit	Effluent Limitations <sup>[1][2][3]</sup>			
		6-Month Median	Maximum Daily	Instantaneous Maximum	30-Day Average
	lbs/day	--	--	--	5579.26
Antimony	µg/L	--	--	--	10080.00
	lbs/day	--	--	--	30432.33
Bis(2-chloroethoxy) Methane	µg/L	--	--	--	36.96
	lbs/day	--	--	--	111.59
Bis(2-chloroisopropyl) Ether	µg/L	--	--	--	10080.00
	lbs/day	--	--	--	30432.33
Chlorobenzene	µg/L	--	--	--	4788.00
	lbs/day	--	--	--	14455.36
Chromium (III)	µg/L	--	--	--	1596000
	lbs/day	--	--	--	4818451.68
Di-n-butyl Phthalate	µg/L	--	--	--	29400.00
	lbs/day	--	--	--	88760.95
Dichlorobenzenes	µg/L	--	--	--	42840.00
	lbs/day	--	--	--	129337.39
Diethyl Phthalate	µg/L	--	--	--	277200.00
	lbs/day	--	--	--	836888.98
Dimethyl Phthalate	µg/L	--	--	--	6888000.00
	lbs/day	--	--	--	20795423.04
4,6-dinitro-2-methylphenol	µg/L	--	--	--	1848.00
	lbs/day	--	--	--	5579.26
2,4-dinitrophenol	µg/L	--	--	--	33.60
	lbs/day	--	--	--	101.44
Ethylbenzene	µg/L	--	--	--	34440.00
	lbs/day	--	--	--	103977.12
Fluoranthene	µg/L	--	--	--	126.00
	lbs/day	--	--	--	380.40
Hexachlorocyclopentadiene	µg/L	--	--	--	487.20
	lbs/day	--	--	--	1470.90
Isophorone	µg/L	--	--	--	1260000.00
	lbs/day	--	--	--	3804040.80
Nitrobenzene	µg/L	--	--	--	41.16
	lbs/day	--	--	--	124.27
Thallium, Total Recoverable	µg/L	--	--	--	16.80
	lbs/day	--	--	--	50.72
Toluene	µg/L	--	--	--	714000.00
	lbs/day	--	--	--	2155623.12
Tributyltin	µg/L	--	--	--	0.01



Parameter	Unit	Effluent Limitations <sup>[1][2][3]</sup>			
		6-Month Median	Maximum Daily	Instantaneous Maximum	30-Day Average
	lbs/day	--	--	--	0.04
1,1,1-trichloroethane	µg/L	--	--	--	4536000.00
	lbs/day	--	--	--	13694546.88
1,1,2-trichloroethane	µg/L	--	--	--	361200.00
	lbs/day	--	--	--	1090491.70
<b>OBJECTIVES FOR PROTECTION OF HUMAN HEALTH – CARCINOGENS</b>					
Acrylonitrile	µg/L	--	--	--	0.840
	lbs/day	--	--	--	2.536
Aldrin	µg/L	--	--	--	0.0002
	lbs/day	--	--	--	0.001
Benzene	µg/L	--	--	--	49.560
	lbs/day	--	--	--	149.626
Benzidine	µg/L	--	--	--	0.001
	lbs/day	--	--	--	0.002
Beryllium	µg/L	--	--	--	0.277
	lbs/day	--	--	--	0.837
Bis(2-chloroethyl) Ether	µg/L	--	--	--	0.378
	lbs/day	--	--	--	1.141
Bis(2-chloroethyl) Phthalate	µg/L	--	--	--	29.400
	lbs/day	--	--	--	88.761
Carbon Tetrachloride	µg/L	--	--	--	7.560
	lbs/day	--	--	--	22.824
Chlordane	µg/L	--	--	--	0.0002
	lbs/day	--	--	--	0.001
Chloroform	µg/L	--	--	--	1092.000
	lbs/day	--	--	--	3296.835
DDT	µg/L	--	--	--	0.001
	lbs/day	--	--	--	0.004
1,4-dichlorobenzene	µg/L	--	--	--	151.200
	lbs/day	--	--	--	456.485
3,3'-dichlorobenzidine	µg/L	--	--	--	0.068
	lbs/day	--	--	--	0.205
1,2-dichloroethane	µg/L	--	--	--	235.200
	lbs/day	--	--	--	710.088
Dichloromethane	µg/L	--	--	--	3780.000
	lbs/day	--	--	--	11412.122
1,3-dichloropropene	µg/L	--	--	--	74.760

Parameter	Unit	Effluent Limitations <sup>[1][2][3]</sup>			
		6-Month Median	Maximum Daily	Instantaneous Maximum	30-Day Average
	lbs/day	--	--	--	225.706
Dieldrin	µg/L	--	--	--	0.0003
	lbs/day	--	--	--	0.001
2,4-dinitrotoluene	µg/L	--	--	--	21.840
	lbs/day	--	--	--	65.937
1,2-diphenylhydrazine	µg/L	--	--	--	1.344
	lbs/day	--	--	--	4.058
Halomethanes	µg/L	--	--	--	1092.000
	lbs/day	--	--	--	3296.835
Heptachlor	µg/L	--	--	--	0.0004
	lbs/day	--	--	--	0.001
Hexachlorobenzene	µg/L	--	--	--	0.002
	lbs/day	--	--	--	0.005
Hexachlorobutadiene	µg/L	--	--	--	117.600
	lbs/day	--	--	--	355.044
Hexachloroethane	µg/L	--	--	--	21.000
	lbs/day	--	--	--	63.401
N-nitrosodimethylamine	µg/L	--	--	--	61.320
	lbs/day	--	--	--	185.130
N-nitrosodiphenylamine	µg/L	--	--	--	21.000
	lbs/day	--	--	--	63.401
PAHs	µg/L	--	--	--	0.074
	lbs/day	--	--	--	0.223
PCBs <sup>[4]</sup>	µg/L	--	--	--	0
	lbs/day	--	--	--	0
TCDD Equivalentents	µg/L	--	--	--	3.28E-08
	lbs/day	--	--	--	9.89E-08
Tetrachloroethylene	µg/L	--	--	--	16.800
	lbs/day	--	--	--	50.721
Toxaphene	µg/L	--	--	--	0.002
	lbs/day	--	--	--	0.005
Trichloroethylene	µg/L	--	--	--	226.800
	lbs/day	--	--	--	684.727
2,4,6-trichlorophenol	µg/L	--	--	--	2.436
	lbs/day	--	--	--	7.354
Vinyl Chloride	µg/L	--	--	--	302.400
	lbs/day	--	--	--	912.970

Parameter	Unit	Effluent Limitations <sup>[1][2][3]</sup>			
		6-Month Median	Maximum Daily	Instantaneous Maximum	30-Day Average

**Notes:**

- <sup>[1]</sup> 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 x 10<sup>-2</sup> or 0.061, 6.1E+02 represents 6.1 x 10<sup>2</sup> or 610, and 6.1E+00 represents 6.1 x 10<sup>0</sup> or 6.1.
- <sup>[2]</sup> P = Existing Order, OP = California Ocean Plan (effective February 4, 2019), ELG = Effluent Limitation Guidelines and Standards (40 C.F.R. 423), TP = Thermal Plan.
- <sup>[3]</sup> These mass-based effluent limitations are calculated using the following formula:  
 Mass-based effluent limitation = C \* Q \* 0.00834  
 Where:  
 C = Concentration-based effluent limitation (µg/L) calculated in the combined discharge (cooling water and in-plant wastes)  
 Q = Maximum discharge flow rate (MGD) = 362 MGD of the combined cooling water and low volume wastes discharged through Discharge Point No. 002
- <sup>[4]</sup> The discharge of PCBs is prohibited. When analysis indicates noncompliance may be due to intake water quality, concurrent intake samples shall be collected to verify such is the case.

**2. Final Effluent Limitations – Low Volume Seawater Evaporator Blowdown Wastes at Monitoring Location INT-002B**

- a. The Discharger shall maintain compliance with the following effluent limitations for all low volume wastes produced as seawater evaporator blowdown, with compliance measured at Monitoring Location INT-002B as described in the MRP, Attachment E:

**Table 6. Final Effluent Limitations for Low Volume Seawater Evaporator Blowdown Wastes (Monitoring Location INT-002B)**

Parameter	Units	Effluent Limitations <sup>[1]</sup>					
		Average Monthly	Average Weekly	Maximum Daily	Instantaneous Minimum	Instantaneous Maximum	Six-Month Median
pH	pH Units	--	--	--	6.0	9.0	--
Total Suspended Solids	mg/L	30.0	--	--	100.0	--	--
	lbs/day <sup>[1]</sup>	138	--	--	459	--	--
Oil and Grease	mg/L	15	--	--	20	--	--
	lbs/day <sup>[1]</sup>	69	--	--	92	--	--

**Notes:**

- <sup>[1]</sup> Mass-based limitations are based on the flow of 0.55 MGD at internal monitoring location INT-002B reported by the Discharger as shown on the schematic water flow in Attachment B and are calculated as follows:

Mass Limit (lbs/day) = 8.34 x Ce x Q

Where,

Ce = The effluent concentration limitation specified in Table 6 for the specific pollutant considered (in units of mg/L).

**3. Final Effluent Limitations – Low Volume Treated Wastewater Sump Wastes at Monitoring Location INT-002C**

- a. The Discharger shall maintain compliance with the following effluent limitations for all low volume wastes from wastewater sump, with compliance measured at Monitoring Location INT-002C as described in the MRP in Attachment E:

**Table 7. Final Technology-based Effluent Limitations at Monitoring Location INT - 002C**

Parameter	Units	Effluent Limitations <sup>[1]</sup>					
		Average Monthly	Average Weekly	Maximum Daily	Instantaneous Minimum	Instantaneous Maximum	Six-Month Median
pH	pH Units	--	--	--	6.0	9.0	--
Total Suspended Solids	mg/L	30	--	100	--	--	--
	lbs/day <sup>[1]</sup>	59	--	196.9	--	--	--
Oil and Grease	mg/L	15	--	20	--	--	--
	lbs/day <sup>[1]</sup>	29.54	--	39.38	--	--	--

Notes:

<sup>[1]</sup> Mass-based limitations are based on the flow of 0.48 MGD at internal monitoring location INT-002C reported by the Discharger as shown on the schematic water flow in Attachment B and are calculated as follows:  
 Mass Limit (lbs/day) = 8.34 x Ce x Q  
 Where,  
 Ce = The effluent concentration limitation specified in Table 7 for the specific pollutant considered (in units of mg/L).

**4. Final Effluent Limitations for Metal Cleaning Wastes at Monitoring Location INT-002C3**

- a. The Discharger shall maintain compliance with the following effluent limitations for all metal cleaning wastes, with compliance measured at Monitoring Location INT-002C3 as described in the MRP, Attachment E:

**Table 8. Final Effluent Limitations at Monitoring Location INT – 002C3**

Parameter	Units	Effluent Limitations <sup>[1]</sup>					
		Average Monthly	Average Weekly	Maximum Daily	Instantaneous Minimum	Instantaneous Maximum	Six-Month Median
Total Suspended Solids	mg/L	30	--	100	--	--	--
	lbs/day <sup>[2]</sup>	0.55	--	1.84	--	--	--
Oil and Grease	mg/L	15	--	20	--	--	--
	lbs/day <sup>[2]</sup>	0.28	--	0.37	--	--	--
Copper, Total Recoverable	mg/L	1.0	--	1.0	--	--	--
	lbs/day <sup>[2]</sup>	0.018	--	0.018	--	--	--
Iron, Total Recoverable	mg/L	1.0	--	1.0	--	--	--
	lbs/day <sup>[2]</sup>	0.018	--	0.018	--	--	--

Notes:

<sup>[1]</sup> Consistent with 40 C.F.R. part 423.

<sup>[2]</sup> Mass-based limitations are based on a flow of 2.2 x 10<sup>-3</sup> MGD at internal monitoring location INT-002C3 reported by the Discharger as shown on the schematic water flow (Attachment B) and are calculated as follows:

Mass Limit (lbs/day) = 8.34 x Ce x Q

Where,

Ce = The effluent concentration limitation specified in Table 8 for the specific pollutant considered (in units of mg/L).

Q = Flow rate discharged at Monitoring Location INT-002C3 (in units of MGD).

**5. Final Effluent Limitations for In-Plant Wastes (Monitoring Location INT-002E)**

The Discharger shall maintain compliance with the following effluent limitations for all in-plant waste streams taken together, with compliance determined by the sum of mass discharges measured at Monitoring Location INT-002B and INT-002C, as described in the MRP, Attachment E:

**Table 9. Effluent Limitations for In-Plant Wastes (Total) <sup>[1][2]</sup>**

Effluent Limitations for the Protection of Marine Aquatic Life						
Pollutant	Units	Effluent Limitations <sup>[1][2]</sup>				
		6-month median	Average Monthly	Maximum Daily	Instantaneous Minimum	Instantaneous Maximum
Copper	lbs/day	0.068	--	0.5645	--	1.557
Nickel	lbs/day	0.276	--	1.1027	--	2.757
Cyanide	lbs/day	0.055	--	0.22	--	0.55
Total Chlorine Residual	lbs/day	0.110	--	--	--	3.308
Phenolic Compounds (Non-chlorinated Phenolics)	lbs/day	1.654	--	6.616	--	16.540
Chlorinated Phenolics	lbs/day	0.055	--	0.221	--	0.551
Endosulfan	lbs/day	0.0005	--	0.001	--	0.002
Endrin	lbs/day	0.0001	--	0.0002	--	0.0003
HCH	lbs/day	0.0002	--	0.0004	--	0.0007
Effluent Limitations for the Protection of Human Health (Non-Carcinogenic)						
Pollutant	Units	30-day average				
Acrolein	lbs/day	12.13				
Antimony	lbs/day	66.16				
Bis(2-chloroethoxy) methane	lbs/day	0.24				
Bis(2-chloroisopropyl) ether	lbs/day	66.16				
Chlorobenzene	lbs/day	31.43				
Chromium (III)	lbs/day	10475.47				
Di-n-butyl phthalate	lbs/day	192.97				
Dichlorobenzene	lbs/day	281.18				
Diethyl phthalate	lbs/day	1819.42				
Dimethyl phthalate	lbs/day	45209.94				
4,6-dinitro-2-methylphenol	lbs/day	12.13				
2,4-dinitrophenol	lbs/day	0.22				
Ethylbenzene	lbs/day	225.79				
Fluoranthene	lbs/day	0.83				
Hexachlorocyclopentadiene	lbs/day	3.20				
Nitrobenzene	lbs/day	0.27				
Thallium	lbs/day	0.11				
Toluene	lbs/day	4686.40				
Tributyltin	lbs/day	0.0001				

1,1,1-trichloroethane	lbs/day	29772.40
Effluent Limitations for the Protection of Human Health (Carcinogenic)		
Pollutant	Units	30-day Average
Acrylonitrile	lbs/day	0.01
Aldrin	lbs/day	0.000001
Benzene	lbs/day	0.33
Benzidine	lbs/day	0.000004
Beryllium	lbs/day	0.002
Bis(2-chloroethyl) ether	lbs/day	0.002
Bis(2-ethylhexyl) phthalate	lbs/day	0.19
Carbon tetrachloride	lbs/day	0.05
Chlordane	lbs/day	0.000001
Chloroform	lbs/day	7.15
DDT	lbs/day	0.00001
1,4-dichlorobenzene	lbs/day	0.99
3,3'-dichlorobenzidine	lbs/day	0.0004
1,2-dichloroethane	lbs/day	7.15
1,1-dichloroethylene	lbs/day	3914.52
Dichloromethane	lbs/day	24.81
1,3-dichloropropene	lbs/day	0.49
Dieldrin	lbs/day	0.000002
2,4-dinitrotoluene	lbs/day	0.14
1,2-diphenylhydrazine	lbs/day	0.01
Halomethanes	lbs/day	7.15
Heptachlor	lbs/day	0.00004
Hexachlorobenzene	lbs/day	0.00001
Hexachlorobutadiene	lbs/day	0.77
Hexachloroethane	lbs/day	0.14
Isophorone	lbs/day	8270.11
N-nitrosodimethylamine	lbs/day	0.40
N-nitrosodiphenylamine	lbs/day	0.14
PAHs	lbs/day	0.0005
PCBs	lbs/day	0.000001
TCDD equivalents	lbs/day	0.0000000002
1,1,2,2-tetrachloroethane	lbs/day	66.29
Tetrachloroethylene	lbs/day	0.11
Toxaphene	lbs/day	0.00001
1,1,2-trichloroethane	lbs/day	2370.77
Trichloroethylene	lbs/day	1.49
2,4,6-trichlorophenol	lbs/day	0.02
Vinyl chloride	lbs/day	1.98

**Notes:**

<sup>[1]</sup> Compliance shall be determined from the sum of mass discharges of each parameter in the individual in-plant waste streams. Total mass emission per day (lbs/day) = mass emission at INT-002B (calculated using flow measured at INT-002B) (lbs/day) + mass emission at INT-002C (calculated using flow measured at INT-002C) (lbs/day).

The total mass emission per day (lbs/day) value from a single day will be compared with the maximum daily effluent limitations as set forth in this table for compliance determination; compliance with the 6-month median effluent limitations shall be determined by the median of Total Mass Emission per day values over any 180-day period.

<sup>[2]</sup> The mass-based effluent limitations are based on a maximum combined flow of 1.03 MGD for all in-plant waste streams, and are calculated using the following formula:

Mass-based effluent limitation (lbs/day) =  $C * Q * 0.00834$

Where:

C = Concentration-based effluent limitation ( $\mu\text{g/L}$ ) calculated in the combined discharge (cooling water and in-plant wastes).

Q = 1.03 MGD, the maximum total flow of all in-plant waste streams;

Where: Q = Total combined in-plant waste streams flow =  $0.55 + 0.48 = 1.03$  MG

## **6. Interim Effluent Limitations – Not Applicable**

### **B. Land Discharge Specifications – Not Applicable**

### **C. Recycling Specifications – Not Applicable**

## **V. RECEIVING WATER LIMITATIONS**

### **A. Surface Water Limitation**

The discharge shall not cause a violation of the following receiving water limitations, which are based on water quality objectives contained in the California Ocean Plan, revised in 2019, and are a required part of this Order. Compliance shall be determined from samples collected at stations representative of the area within the waste field where initial dilution is completed, except where other stations are defined.

#### **1. Bacterial Characteristics**

- a. Within a zone bounded by the shoreline and a distance of 1,000 feet from the shoreline or the 30-foot depth contour, whichever is further from the shoreline, and in areas outside this zone used for water contact sports, as determined by the Central Coast Water Board (i.e., waters designated with the water contact recreation beneficial use (REC-1)), but including all kelp beds, the following bacterial objectives shall be maintained throughout the water column.
  1. Fecal Coliform
    - (a) Thirty-day geometric mean of fecal coliform density not to exceed 200 per 100 milliliters (mL) calculated based on the five most recent samples from each site.
    - (b) Single sample maximum not to exceed 400 per 100 mL.
  2. Enterococci
    - (a) Six-week rolling geometric mean not to exceed 30 colony-forming units (CFU) per 100 mL, calculated weekly.
    - (b) Statistical threshold value 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.
- b. The zone of initial dilution of wastewater outfalls shall be excluded from designation as kelp beds for the 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.
- c. At all areas where shellfish may be harvested for human consumption, as determined by the Central Coast Water Board, the following bacterial objectives shall be maintained throughout the water column.

- i. The median total coliform density shall not exceed 70 per 100 mL and not more than 10 percent of the samples shall exceed 230 per 100 mL.

## **2. Physical Characteristics**

- a. Floating particulates and grease and oil shall not be visible on the ocean surface.
- b. The discharge of waste shall not cause aesthetically undesirable discoloration of the ocean surface.
- c. Natural light shall not be significantly reduced at any point outside the zone of initial dilution as the result of the discharge of waste.
- d. The rate of deposition of inert solids and the characteristics of inert solids in ocean sediments shall not be changed such that benthic communities are degraded.
- e. Temperature of the receiving water shall not be altered to adversely affect beneficial uses, as set forth in *Water Quality Control Plan for Control of Temperature in the Coastal and Interstate Waters and Enclosed Bays and Estuaries of California*

## **3. Chemical Characteristics**

- a. The dissolved oxygen concentration shall not, at any time, be depressed more than 10 percent from that which occurs naturally or fall below 5.0 mg/L.
- b. The pH shall not be changed at any time more than 0.2 units from that which occurs naturally and shall be within the range of 6.0 to 9.0 at all times.
- c. The dissolved sulfide concentrations of waters in and near sediments shall not be significantly increased above that present under natural conditions.
- d. The concentrations of substances set forth in Table 3 of the California Ocean Plan shall not be increased in marine sediments to that which would degrade indigenous biota.
- e. The concentration of organic materials in marine sediments shall not be increased to that which would degrade marine life.
- f. Nutrient materials shall not cause objectionable aquatic growth or degrade indigenous biota.
- g. Numerical water quality objectives established in Table 3 of the California Ocean Plan apply to all discharges within the jurisdiction of the California Ocean Plan. Unless otherwise specified, all metal concentrations are expressed as total recoverable concentrations.

## **4. Biological Characteristics**

- a. Marine communities, including vertebrate and plant species, shall not be degraded.
- b. The natural taste, odor, and color of fish, shellfish, or other marine resources used for human consumption shall not be altered.
- c. 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. Radioactivity**

- a. Discharge of radioactive waste shall not degrade marine life.



- b. Radionuclides shall not be present in concentrations that are deleterious to human, plant, animal, or aquatic life or result in the accumulation of radionuclides in the food web to an extent that presents a hazard to human, plant, animal, or aquatic life.

#### **6. General Standards**

- a. The discharge shall not cause a violation of any applicable water quality objective or standard for receiving waters adopted by the Central Coast Water Board or State Water Resources Control Board (State Water Board), as required by the CWA and regulations adopted thereunder.
- b. Waste management systems that discharge to the ocean must be designed and operated in a manner that will maintain the indigenous marine life and a healthy and diverse marine community.
- c. Waste effluents shall be discharged in a manner that provides sufficient initial dilution to minimize the concentrations of substances not removed in the treatment.

#### **B. Groundwater Limitations – Not Applicable**

### **VI. PROVISIONS**

#### **A. Standard Provisions**

- 1. **Federal Standard Provisions.** The Discharger shall comply with all Standard Provisions included in Attachment D.
- 2. **Central Coast Water Board Standard Provisions.** The Discharger shall comply with all Central Coast Water Board Standard Provisions included in Attachment D of this Order.

#### **B. MRP Requirements**

Pursuant to California Water Code sections 13267 and 13383, the Discharger shall comply with the MRP, and future revisions thereto, in Attachment E of this Order, and all notification and general reporting requirements throughout this Order and Attachment D. Where notification or general reporting requirements conflict with those stated in the MRP (e.g., annual report due date), the Discharger shall comply with the MRP requirements. All monitoring shall be conducted according to 40 C.F.R. part 136, *Guidelines Establishing Test Procedures for Analysis of Pollutants*.

The Discharger is required to provide technical or monitoring reports because it is the owner and operator responsible for the waste discharge and compliance with this Order. The Central Coast Water Board needs the information to determine the Discharger's compliance with this Order, assess the need for further investigation or enforcement action, and to protect public health and safety and the environment.

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

#### **C. Special Provisions**

##### **1. Reopener Provisions**

- a. This Order may be reopened and modified in accordance with NPDES regulations at 40 C.F.R. parts 122 and 124, as necessary, to include additional conditions or limitations based on newly available information or to implement any U.S. EPA-approved, new state water quality objective.
- b. 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 a California Ocean Plan Table 3 water quality objective.

## 2. Special Studies, Technical Reports and Additional Monitoring Requirements

### a. Toxicity Reduction Requirements

The Discharger shall notify the Central Coast Water Board and U.S. EPA in writing within 14 days of exceedance of a chronic toxicity effluent limitation of 8.4 chronic toxicity units (TUc). This notification shall describe actions the Discharger has taken or will take to investigate, identify, and correct the causes of toxicity; the status of actions required by this permit; and schedule for actions not yet completed; or reason(s) that no action has been taken.

If the discharge consistently exceeds the chronic toxicity effluent limitation of 8.4 TUc, the Discharger shall conduct a Toxicity Reduction Evaluation (TRE) in accordance with the Discharger's TRE Workplan.

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

The Discharger shall maintain a TRE Workplan, which describes steps that the Discharger intends to follow if a toxicity effluent limitation in this Order is exceeded. The workplan shall be prepared in accordance with current technical guidance and reference material, including:

- i. *Toxicity Reduction Evaluation Guidance for Municipal Wastewater Treatment Plants* (EPA/833/B-99-022).
- ii. *Toxicity Identification Evaluation, Phase I* (EPA/600/6-91/005F).
- iii. *Methods for Aquatic Toxicity Identification Evaluations, Phase II* (EPA/600/R-92/080).
- iv. *Methods for Aquatic Toxicity Identification Evaluations, Phase III* (EPA/600/R-92/081).

At a minimum, the TRE Workplan shall include:

- i. Actions proposed to investigate and identify the causes and sources of toxicity,

- ii. Actions proposed to mitigate the discharge’s adverse effects, to correct the noncompliance, or to prevent the recurrence of acute or chronic toxicity (this list of action steps may be expanded if a TRE is undertaken), and
- iii. A schedule to implement these actions.
- iv. When monitoring detects effluent toxicity greater than a limitation in this Order, the Discharger shall resample immediately, if the discharge is continuing, and retest for whole effluent toxicity. Results of an initial failed test and results of subsequent monitoring shall be reported to the Central Coast Water Board Executive Officer as soon as possible after receiving monitoring results. The Executive Officer will determine if it is appropriate to initiate enforcement action, require the Discharger to implement a TRE, or implement other measures. The Discharger shall conduct a TRE considering guidance provided by the U.S. EPA’s Toxicity Reduction Evaluation Procedures, Phases 1, 2, and 3 (U.S. EPA document nos. EPA 600/3-88/034, 600/3-88/035, and 600/3-88/036, respectively). A TRE, if necessary, shall be conducted in accordance with the following schedule.

**Table 10. TRE Schedule**

<b>Action</b>	<b>When Required</b>
Take all reasonable measures necessary to immediately reduce toxicity, where the source is known.	Within 24 hours of identification of noncompliance.
Initiate the TRE in accordance with the workplan.	Within 7 days of notification by the Executive Officer.
Conduct the TRE following the procedures in the workplan.	Within the period specified in the workplan (not to exceed one year, without an approved workplan).
Submit the results of the TRE, including summary of findings, required corrective action, and all results and data.	Within 60 days of completion of the TRE.
Implement corrective actions to meet Order limitations and conditions.	To be determined by the Executive Officer.

**b. Initial Investigation TRE Workplan for Whole Effluent Toxicity**

Within 180 days of the permit effective date, the Discharger shall prepare and submit a copy of its Initial Investigation TRE Workplan to the Central Coast Water Board for review. This plan shall include steps the Discharger intends to implement if toxicity is measured above a toxicity trigger and should include, at minimum:

- i. A description of the investigation and evaluation techniques that would be used to identify potential causes and sources of toxicity, effluent variability, and treatment system efficiency.
- ii. A description of methods for maximizing in-house treatment system efficiency, good housekeeping practices, and a list of all chemicals used in operations at the facility.

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

This workplan is subject to approval and modification by the Central Coast Water Board.

c. **Accelerated Toxicity Testing and TRE/TIE Process for Whole Effluent Toxicity**

- i. If the toxicity trigger is exceeded and the source of toxicity is known (e.g., a temporary plant upset), then the Discharger shall conduct one additional toxicity test using the same species and test method. This test shall begin within 14 days of receipt of test results exceeding the toxicity trigger. If the additional toxicity test does not exceed the toxicity effluent trigger, then the Discharger may return to their regular testing frequency.
- ii. If the toxicity trigger is exceeded and the source of toxicity is not known, then the Discharger shall conduct six additional toxicity tests using the same species and test method, approximately every two weeks, over a 12-week period. This testing shall begin within 14 days of receipt of test results exceeding the toxicity trigger. If none of the additional toxicity tests exceed the toxicity trigger, then the Discharger may return to their regular testing frequency.
- iii. If one of the additional toxicity tests exceeds the toxicity trigger, then the Discharger shall notify the Executive Officer and Director. If the Executive Officer and Director determine that the discharge consistently exceeds the toxicity trigger, then the Discharger shall initiate a TRE using as guidance the U.S. EPA manuals: *Toxicity Reduction Evaluation Guidance for Municipal Wastewater Treatment Plants* (EPA 833/B-99/002, 1999) or *Generalized Methodology for Conducting Industrial Toxicity Reduction Evaluations* (EPN600/2-88/070, 1989). In conjunction, the Discharger shall develop and implement a detailed TRE Workplan which shall include: further actions undertaken by the Discharger to investigate, identify, and correct the causes of toxicity; actions the Discharger will take to mitigate the impact of the discharge and prevent the recurrence of toxicity, and a schedule for these actions. This detailed TRE Workplan and schedule are subject to approval and modification by the Central Coast Water Board and U.S. EPA.
- iv. As part of a TRE, the Discharger may initiate a TIE using the same species and test method, and U.S. EPA TIE guidance manuals, to identify the causes of toxicity. The U.S. EPA TIE guidance manuals are: *Toxicity Identification Evaluation: Characterization of Chronically Toxic Effluents, Phase I* (EPN600/6-91/005F, 1992; only chronic toxicity); *Methods for Aquatic Toxicity Identification Evaluations: Phase I Toxicity Characterization Procedures* (EPN600/6-91/003, 1991; only acute toxicity); *Methods for Aquatic Toxicity Identification Evaluations, Phase II Toxicity Identification Procedures for Samples Exhibiting Acute and Chronic Toxicity* (EPN600/R-92/080, 1993); *Methods for Aquatic Toxicity Identification Evaluations, Phase III Toxicity Confirmation Procedures for Samples Exhibiting Acute and Chronic Toxicity* (EPN600/R-92/081, 1993); and *Marine Toxicity Identification Evaluation (TIE): Phase I Guidance Document* (EPN600/R-96-054, 1996).

### 3. Best Management Practices and Pollution Prevention

#### a. Pollutant Minimization Program (PMP)

The California Ocean Plan establishes guidelines for the PMP. At the time of the adoption of this Order, no known evidence was available that would require the Discharger to immediately develop and conduct a PMP. The Central Coast Water Board will notify the Discharger in writing if a PMP becomes necessary. The California Ocean Plan PMP language is included herein to provide guidance in the event that a PMP must be developed and implemented by the Discharger.

PMP Goal: The PMP goal is to reduce all potential pollutant sources through pollutant minimization (control) strategies, including pollution prevention measures, to maintain pollutant effluent concentrations at or below the effluent limitation. Pollution prevention measures may be particularly appropriate for persistent bioaccumulative priority pollutants where there is evidence of impairment of beneficial uses. The completion and implementation of a Pollution Prevention Plan, required in accordance with California Water Code Section 13263.3(d), will fulfill the PMP requirements.

#### Determining the Need for a PMP:

- i. The Discharger must develop and conduct a PMP if all of the following conditions are true:
  - (a) The calculated effluent limitation is less than the reported minimum level;
  - (b) The concentration of the pollutant is reported as “Detected, but Not Quantified” or DNQ; and
  - (c) There is evidence showing that the pollutant is present in the effluent above the calculated effluent limitation.
- ii. Alternatively, the Discharger must develop and conduct a PMP if all of the following conditions are true:
  - (a) The calculated effluent limitation is less than the Method Detection Limit (MDL);
  - (b) The concentration of the pollutant is reported as “Not Detected” or ND; and
  - (c) There is evidence showing that the pollutant is present in the effluent above the calculated effluent limitation.

#### Special Provision for Evidence of Pollutant Presence:

The Central Coast Water Board may include special provisions in the discharge requirements to require the gathering of evidence to determine whether the pollutant is present in the effluent at levels above the calculated effluent limitation. Examples of evidence may include:

- i. Health advisories for fish consumption;

- ii. Presence of whole effluent toxicity;
- iii. Results of benthic or aquatic organism tissue sampling;
- iv. Sample results from analytical methods more sensitive than methods included in the permit (in accordance with the California Ocean Plan, Chapter III, Section C.4.b, Deviations from Minimum Levels in Appendix II; or
- v. The concentration of the pollutant is reported as DNQ and the effluent limitation is less than the MDL.

Elements of a PMP:

The Central Coast Water Board may consider cost-effectiveness when establishing the requirements of a PMP. The program shall include actions and submittals acceptable to the Central Coast Water Board including, but not limited to, the following:

- i. An annual review and semi-annual monitoring of potential sources of the reportable pollutant, which may include fish tissue monitoring and other bio-uptake sampling;
- ii. Quarterly monitoring for the reportable pollutant in the influent to the wastewater treatment system;
- iii. Submittal of a control strategy designed to proceed toward the goal of maintaining concentrations of the reportable pollutant in the effluent at or below the calculated effluent limitation;
- iv. Implementation of appropriate cost-effective control measures for the pollutant, consistent with the control strategy; and
- v. An annual status report that shall be sent to the Central Coast Water Board including:
  - (a) All PMP monitoring results for the previous year;
  - (b) A list of potential sources of the reportable pollutant;
  - (c) A summary of all action taken in accordance with the control strategy; and,
  - (d) A description of actions to be taken in the following year.

**4. Construction, Operation and Maintenance Specifications – Not Applicable**

**5. Special Provisions for Publicly Owned Treatment Works (POTWs)– Not Applicable**

**6. Other Special Provisions**

- a. **Discharges of Stormwater.** For the control of stormwater discharged from the Facility, the Discharger will discharge under the State Water Board Water Quality Order 2014-0057-DWQ, NPDES General Permit No. CAS000001, *General Permit for Storm Water Discharges Associated with Industrial Activities*.

**b. Once-Through Cooling (OTC) Water Compliance Schedule**

- i. **Compliance Date and Alternatives.** The Discharger submitted a revised implementation plan for compliance with the *Water Quality Control Policy on the Use of Coastal and Estuarine Waters for Power Plant Cooling* (OTC Policy) on March 1, 2017. According to its implementation plan, the facility consists of two units: Units 1 and 2 are each 510 megawatts (MW) steam electric generating units that use once-through cooling. The Discharger intends to achieve OTC Policy Track 2 compliance by implementing operational control measures at MLPP to reduce flow and installing variable speed drive controls on four water circulating pumps for Units 1 and 2. As shown in Table 11, MLPP has met all the compliance requirements of the OTC Policy through March 2020. As specified in the Settlement Agreement at paragraphs 2.1.7.c.i-iii, the Discharger must evaluate and report on resulting levels of entrainment and impingement following the implementation of the operational and technology controls using the Compliance Tool described in the Settlement Agreement.

The Discharger is on track to comply by the December 31, 2020 compliance deadline included in the OTC Policy. This Order and the Settlement Agreement require the Discharger to submit annual reports to the Central Coast Water Board on the Facility’s progress towards achieving final compliance with the OTC Policy, through either the date of attainment of final compliance with the OTC Policy or December 31, 2020. The Discharger completed submittal of the reports to the State Water Board and Central Coast Water Board every year beginning on March 1, 2015, through March 1, 2020.

**Table 11. Schedule of Compliance with OTC Policy<sup>[1]</sup>**

Task	Compliance Date	Completed (Yes/No)
1. Submit an update to the MLPP Implementation Plan	November 8, 2014 (Within 30 days after the execution of the Settlement Agreement)	Yes
2. Submit an update on the implementation of operational control measures to reduce flow	November 8, 2014 (Within 30 days after the execution of the Settlement Agreement)	Yes
3. Submit an annual update to the State Water Board on the status of measures to reduce impingement mortality and entrainment (IM&E) and report the status of any studies undertaken in the previous calendar year to determine compliance options to meet Track 2	Beginning in 2015, by March 1 of each year	Yes
4. Submit second progress report on the status of measures discussed in Task 3 above	March 1, 2016	Yes
5. Install controls on the circulating water pumps for Units 1 and 2	December 31, 2016	Yes

6. Achieve 83.7% or greater reduction at MLPP in impingement mortality and entrainment from design flow using flow control and operational measures. Compliance will be determined as an annual average over the period December 31, 2016 to December 31, 2020.	Beginning December 31,2016 through the final compliance date of December 31,2020	Ongoing
7. Submit third progress report on the status of measures discussed in Task 3 above	March 1, 2017	Yes
8. Submit fourth progress report on the status of measures discussed in Task 3 above	March 1, 2018	Yes
9. Submit fifth progress report on the status of measures discussed in Task 3 above	March 1, 2019	Yes
10. Submit sixth and final progress report	March 1, 2020	Yes
11. Install supplemental control technology at Units 1 and 2 to complement the operational control measures and achieve compliance pursuant to Policy sections 2.A.(2)(a)(ii) and 2.A.(2)(b)(ii);	December 31, 2020	Yes
12. Achieve compliance with Policy sections 2.A.(2)(a)(ii) and 2.A.(2)(b)(ii) at Units 6 and 7 or cease operations of such unit(s) until such time as compliance is achieved subject to Policy section 2.B.(2).	December 31, 2020	Yes
13. Achieve full compliance with Units 1, 2, 6, and 7	December 31, 2020	Yes

<sup>[1]</sup> Discharger’s Track 2 Compliance obligations under the OTC Policy are defined by the terms of the Settlement Agreement.

Based on the need for continued operation to maintain the reliability of the electric system, the Central Coast Water Board or State Water Board may reopen this Order to suspend the compliance date of December 31, 2020, for the Facility, under the circumstances set forth in OTC Policy section 2.B(2).

**ii. Immediate and Interim Requirements**

The Discharger shall implement the following:

- (a) Any unit that is not directly engaged in power generating activities or critical system maintenance (as defined in Attachment A of this Order) shall cease intake flows unless it has been demonstrated to the State Water Board that a reduced minimum flow is necessary for operations. However, for MLPP, the State Water Board recognizes that it may be necessary to continue intake flows at MLPP even when not directly engaging in power generating activities or critical system maintenance while performing baseline, pilot, and/or verification studies to ensure safe operation of critical plant systems.
- (b) The Discharger shall implement measures to mitigate interim impingement and entrainment impacts until full compliance is achieved by December 31, 2020. The Discharger may comply with this requirement by:
  - (1) Demonstrating to the State Water Board’s satisfaction that the Discharger is compensating for the interim impingement and entrainment impacts through existing mitigation efforts, including any



projects that were required by state or federal permits as of October 1, 2010, or

- (2) Demonstrating to the State Water Board's satisfaction that the interim impacts are compensated for by the Discharger by providing funding to the California Coastal Conservancy which will work with the California Ocean Protection Council to fund an appropriate mitigation project, or
- (3) Developing and implementing a mitigation project for the facility, approved by the State Water Board, which will compensate for the interim impingement and entrainment impacts. Such a project must be overseen by an advisory panel of experts convened by the State Water Board.

Since the Discharger has already contributed seven million dollars (\$7,000,000) to the Elkhorn Slough Foundation, it satisfies the requirements under Policy section 2.C.(3)(a) from October 1, 2015, through the December 31, 2020 final compliance date for all MLPP units as determined by the State Water Board in the Settlement Agreement (paragraph 2.1.1).

## 7. Climate Change Adaptation

- a. **Climate Change Hazards, Vulnerabilities, and Response Plan.** With the Report of Waste Discharge submitted for reissuance of the next Order, the Discharger shall submit a Climate Change Hazards, Vulnerabilities, and Response Plan describing the Discharger's long-term approach for responding to climate change. The Climate Change Hazards, Vulnerabilities, and Response Plan shall, at minimum:
  1. Identify current approaches being implemented at the facility to reduce greenhouse gas emissions.
  2. Identify and assess potential approaches to be implemented at the facility to reduce greenhouse gas emissions in the future. Identify preferred approaches based on effectiveness in reducing greenhouse gas emissions and feasibility of implementation.
  3. Identify climate change hazards that could cause reduction, loss, and/or failure of processes and/or critical infrastructure at the facility (e.g., intake structure, conveyances to discharge points, discharge facilities) and assess facility vulnerability to those climate change hazards. For the anticipated life of the facility, accounting for forecasted climatic changes,<sup>1</sup> at a minimum include assessment of facility process and infrastructure vulnerability to the following:
    - (a) The range of potential sea-level rise and flooding scenarios at the facility, including potential resulting impacts such as:

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<sup>1</sup> Including an analysis of a range of sea level rise scenarios applicable to the anticipated life of the facility, utilizing the latest State of California Sea-Level Rise Guidance and the California Coastal Commission's Sea Level Rise Policy Guidance. Sea-level scenarios to be analyzed shall include "High Emissions" with both "Low Risk Aversion" and "Medium-High Risk Aversion" projections for the expected lifespan and location of the facility.

- (1) inundation,
  - (2) corrosion,
  - (3) erosion,
  - (4) disruption of power or electrical components,
  - (5) saltwater intrusion and backflows,
  - (6) deposition of solids,
  - (7) infiltration,
  - (8) overflows, and
  - (9) impairment of treatment processes.
- (b) The range of potential temperature scenarios, including ocean temperature changes and resulting potential marine life changes and facility impacts (e.g., clogging of the intake screens by large blooms of marine organisms such as jellyfish and siphonophores); and
- (c) The range of potential extreme low and extreme high influent scenarios.
4. Prioritize climate change hazards and vulnerabilities at the facility.
  5. Identify climate change hazard triggers that will initiate responses at the facility.
  6. Identify and prioritize potential responses to climate change hazard triggers, accounting for a full suite of potential adaptation responses.
  7. Prioritize potential responses to climate change hazard triggers that achieve long-term facility safety and operation and minimize resource impacts.
  8. Identify next steps the Discharger will implement to reduce greenhouse gas emissions and ensure that the facility is safe from and resilient to climate change hazards.
  9. deposition of solids, infiltration, overflows, impairment of treatment processes,

#### **8. Intake Structure Maintenance**

- a. Based on the results of intake structure monitoring, the Discharger shall dredge as necessary to eliminate sand and silt buildup at intake structures and shall routinely clean bar racks as necessary to maintain bar rack approach velocities as close as practicable to design velocities.

#### **9. Compliance Schedules – Not Applicable**

### **VII. COMPLIANCE DETERMINATION**

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

#### **A. General**

Compliance with effluent limitations for reportable pollutants shall be determined using sample reporting protocols defined in the MRP and Attachment A of this Order. For purposes of reporting and administrative enforcement by the Central Coast and State Water Boards, 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 minimum level (ML).

## **B. 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:

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.
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.

## **C. 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 non-compliance 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.

## **D. Average Weekly Effluent Limitation (AWEL)**

If the average of daily discharges over a calendar week exceeds the AWEL for a given parameter, an alleged violation will be flagged and the Discharger will be considered out of compliance for each day of that week for that parameter, resulting in 7 days of non-compliance. 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.

## **E. Maximum Daily Effluent Limitation (MDEL)**

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 1 day only within the reporting period. For any 1 day during which no sample is taken, no compliance determination can be made for that day.

## **F. Acute and Chronic Toxicity**

If the discharge is subject to determination of "Pass" or "Fail" from an acute or chronic toxicity test using the Test of Significant Toxicity (TST) statistical t-test approach described in *National Pollutant Discharge Elimination System Test of Significant Toxicity Implementation Document* (EPA 833-R-10-004, 2010), Appendix A, Figure A-1 and Table A-1, and Appendix B, Table B-1. The null hypothesis ( $H_0$ ) for the TST statistical approach is: Mean discharge instream waste concentration (IWC) response  $\leq 0.75 \times$  Mean control response. A test result that rejects this null hypothesis is reported as "Pass." A test result that does not reject this null

hypothesis is reported as "Fail." Acute and chronic whole effluent toxicity testing is to be performed with only two test concentrations, the laboratory control and a single effluent treatment (the IWC). As discussed in Fact Sheet section IV.C.6, evaluation of concentration-response does not apply to single-concentration (IWC) tests where the TST is applied. Concentration-response is required during accelerated monitoring tests.

The MDEL for acute or chronic toxicity is exceeded and a violation will be flagged when an acute or chronic toxicity test, analyzed using the TST statistical approach, results in "Fail."

**G. 6-Month Median**

For compliance with effluent limitations expressed as a 6-month median, the Discharger shall calculate a moving 6-month median concentration from the results reported for Monitoring Location EFF-002 and compare them to the effluent limitations at Discharge Point 002. The Total Mass Emission per day (lb/day) value from a single day will be compared with the maximum daily effluent limitations as set forth for compliance determination; compliance with the 6-month median effluent limitations shall be determined by the median of Total Mass Emission per day values over any 180-day period. Other requirements for compliance determination are provided in the MRP section X.B.

## ATTACHMENT A – DEFINITIONS

### Acute Toxicity (not applicable to Test of Significant Toxicity hypothesis testing)

- a. Acute Toxicity (TUa)  
Expressed in Toxic Units Acute (TUa)

$$TUa = \frac{100}{96\text{-hr LC } 50\%}$$

- b. Lethal Concentration 50% (LC 50)  
LC 50 (percent waste giving 50% survival of test organisms) shall be determined by static or continuous flow bioassay techniques using standard marine test species as specified in California Ocean Plan Appendix III. If specific identifiable substances in wastewater can be demonstrated by the discharger as being rapidly rendered harmless upon discharge to the marine environment, but not as a result of dilution, the LC 50 may be determined after the test samples are adjusted to remove the influence of those substances.

When it is not possible to measure the 96-hour LC 50 due to greater than 50 percent survival of the test species in 100 percent waste, the toxicity concentration shall be calculated by the expression:

$$TUa = \frac{\log(100 - S)}{1.7}$$

where:

S = percentage survival in 100% waste. If S > 99, TUa shall be reported as zero.

### Areas of Special Biological Significance (ASBS)

Those areas designated by the State Water Resources Control Board (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 STATE WATER QUALITY PROTECTION AREAS.

### 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.

### Central Coast Long-Term Environmental Assessment Network (CCLEAN)

The long-term integrated Regional Monitoring Program implemented by a consortium of dischargers to fulfill receiving water compliance monitoring requirements and designed to help municipal agencies and resource managers protect the quality of nearshore marine waters in the Monterey Bay area.

### **Chemical Metal Cleaning Wastes**

The term chemical metal cleaning waste means any wastewater resulting from the cleaning of any metal process equipment with chemical compounds, including, but not limited to, boiler tube cleaning.

### **Chlordane**

Shall mean the sum of chlordane-alpha, chlordane-gamma, chlordene-alpha, chlordene-gamma, nonachlor-alpha, nonachlor-gamma, and oxychlordane.

### **Chronic Toxicity (not applicable to Test of Significant Toxicity hypothesis testing):**

This parameter shall be used to measure the acceptability of waters for supporting a healthy marine biota until improved methods are developed to evaluate biological response.

- a. Chronic Toxicity (TU<sub>c</sub>)  
Expressed as Toxic Units Chronic (TU<sub>c</sub>)

$$TU_c = \frac{100}{NOEL}$$

- b. No Observed Effect Level (NOEL)

The NOEL is expressed as the maximum percent effluent or receiving water that causes no observable effect on a test organism, as determined by the result of a critical life stage toxicity test listed in California Ocean Plan Appendix III.

### **Daily Discharge**

Daily Discharge is defined as either: (1) the total mass of the constituent discharged over the calendar day (12:00 am through 11:59 pm) or any 24-hour period that reasonably represents a calendar day for purposes of sampling (as specified in the 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.

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

### **DDT**

Shall mean the sum of 4,4'DDT, 2,4'DDT, 4,4'DDE, 2,4'DDE, 4,4'DDD, and 2,4'DDD.

### **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 Minimum Level, but greater than or equal to the laboratory's method detection limit (MDL). Sample results reported as DNQ are estimated concentrations.

**Dichlorobenzenes**

Shall mean the sum of 1,2- and 1,3-dichlorobenzene.

**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** 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 California Water Code, Suisun Bay, Carquinez Strait downstream to Carquinez Bridge, and appropriate areas of the Smith, Klamath, Mad, Eel, Noyo, and Russian Rivers.

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

**HCH** shall mean 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 Central Coast 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).

**Kelp Beds**

For purposes of the bacteriological standards of the California Ocean Plan, 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 California 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.

**Metal Cleaning Waste**

The term metal cleaning waste means any wastewater resulting from cleaning—with or without chemical cleaning compounds—any metal process equipment including, but not limited to, boiler tube cleaning, boiler fireside cleaning, and air preheater cleaning.

**Method Detection Limit (MDL)**

The minimum concentration of a substance that can be measured and reported with 99 percent confidence that the analyte concentration is greater than zero, as defined in 40 C.F.R. 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 Central Coast Water Board by measurement of light transmissivity or total irradiance, or both, according to the monitoring needs of the Central Coast Water Board.

### **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 California Ocean Plan will occur in ocean waters.

### **OTC Policy**

On May 4, 2010, the State Water Board adopted a *Statewide Water Quality Control Policy on the Use of Coastal and Estuarine Waters for Power Plant Cooling* (OTC Policy). 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.

### **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)**

In the California Ocean Plan PCBs are the sum of chlorinated biphenyls whose analytical characteristics resemble those of Aroclor-1016, Aroclor-1221, Aroclor-1232, Aroclor-1242, Aroclor-1248, Aroclor-1254 and Aroclor-1260. PCBs analyzed for the sum of 209 congeners using U.S. EPA proposed method 1668c meet the CCLEAN monitoring obligations.

### **Pollutant Minimization Program (PMP)**

PMP means waste minimization and pollution prevention actions that include, but are not limited to, product substitution, waste stream recycling, alternative waste management methods, and education of the public and businesses. The goal of the PMP shall be to reduce all potential sources of California Ocean Plan Table 3 pollutants through pollutant minimization (control) strategies, including pollution prevention measures as appropriate, to maintain the effluent concentration at or below the water quality-based effluent limitation. Pollution prevention measures may be particularly appropriate for persistent bioaccumulative priority pollutants where there is evidence that beneficial uses are being impacted. The Central Coast Water Board may consider cost effectiveness when establishing the requirements of a PMP. The completion and implementation of a Pollution Prevention Plan, if required pursuant to Water Code section 13263.3(d), shall be considered to fulfill the PMP requirements.

### **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 Central Coast Water Board either from Appendix II of the California Ocean Plan in accordance with

section III.C.5.a. of the California Ocean Plan or established in accordance with section III.C.5.b. of the California 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.

**Settlement Agreement**

The Settlement Agreement and Release Regarding Water Quality Control Policy on the Use of Coastal and Estuarine Waters for Power Plant Cooling between State Water Board and the Discharger, dated October 9, 2014.

**Shellfish**

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

**Significant Difference**

Defined as a statistically significant difference in the means of two distributions of sampling results at the 95 percent confidence level.

**Six-Month Median Effluent Limitation**

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

**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 AREAS OF SPECIAL BIOLOGICAL SIGNIFICANCE (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 SWQPAs and require special protections afforded by the California Ocean Plan.

**TCDD Equivalent**

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, as shown in the table below.

Isomer Group	Toxicity Equivalence Factor
	1.0
2,3,7,8-tetra CDD	
2,3,7,8-penta CDD	0.5
2,3,7,8-hexa CDDs	0.1
2,3,7,8-hepta CDD	0.01
octa CDD	0.001
2,3,7,8 tetra CDF	0.1
1,2,3,7,8 penta CDF	0.05
2,3,4,7,8 penta CDF	0.5
2,3,7,8 hexa CDFs	0.1
2,3,7,8 hepta CDFs	0.01
octa CDF	0.001

### **Test of Significant Toxicity (TST)**

The statistical approach described in the NPDES Test of Significant Toxicity Implementation Document (EPA 833-R10-003, 2010). TST was developed by the US EPA for analyzing whole effluent toxicity and ambient toxicity data. Using the TST approach, the sample is declared toxic if there is greater than or equal to a 25% effect in chronic tests, or if there is greater than or equal to a 20% effect in acute tests at the permitted instream waste concentration (IWC) [referred to as the toxic regulatory management decision (RMD)]. The sample is declared non-toxic if there is less than or equal to a 10% effect at the IWC in acute or chronic tests (referred to as the non-toxic RMD).

### **Toxicity Reduction Evaluation (TRE)**

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

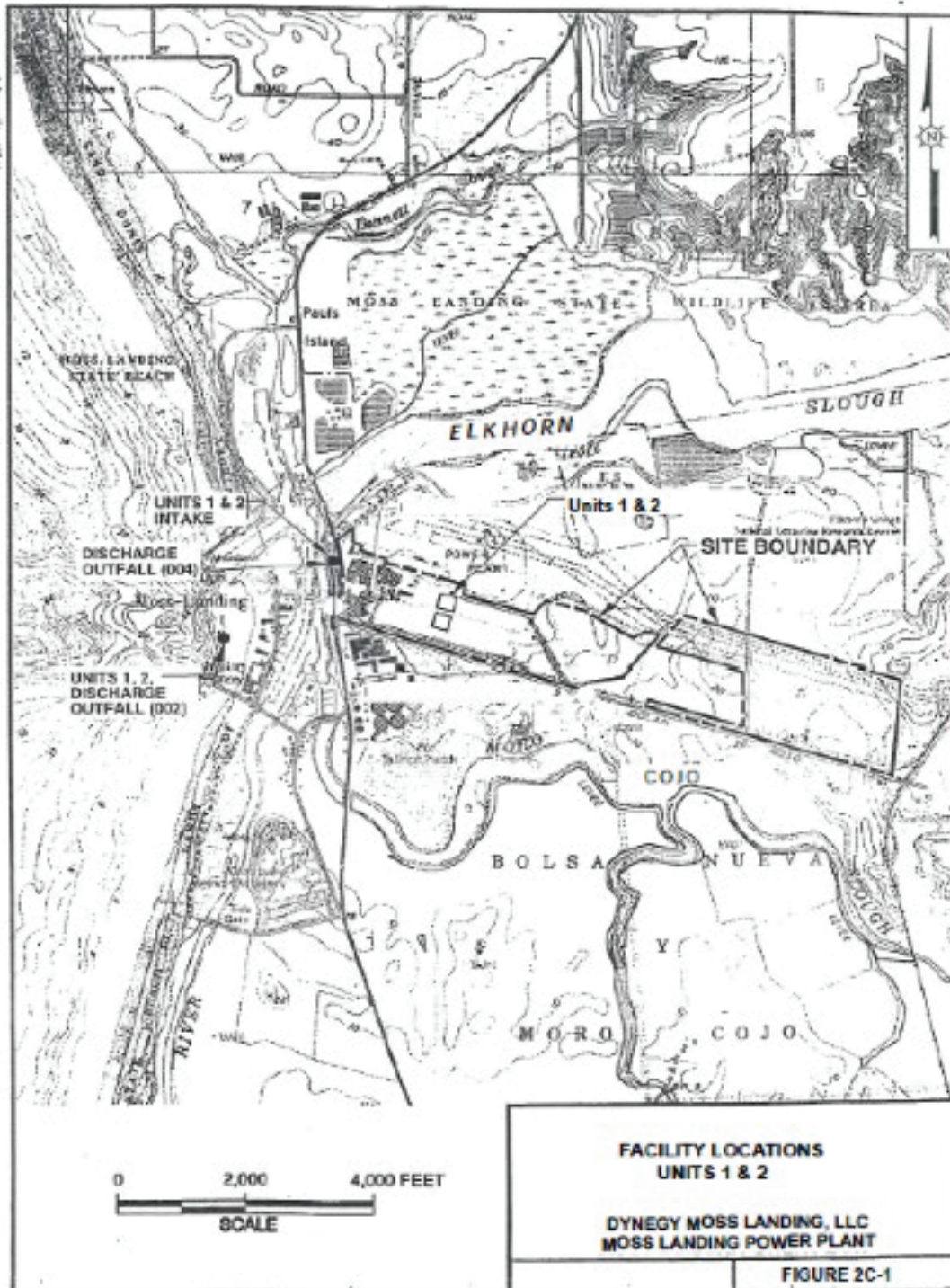
### **Waste**

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

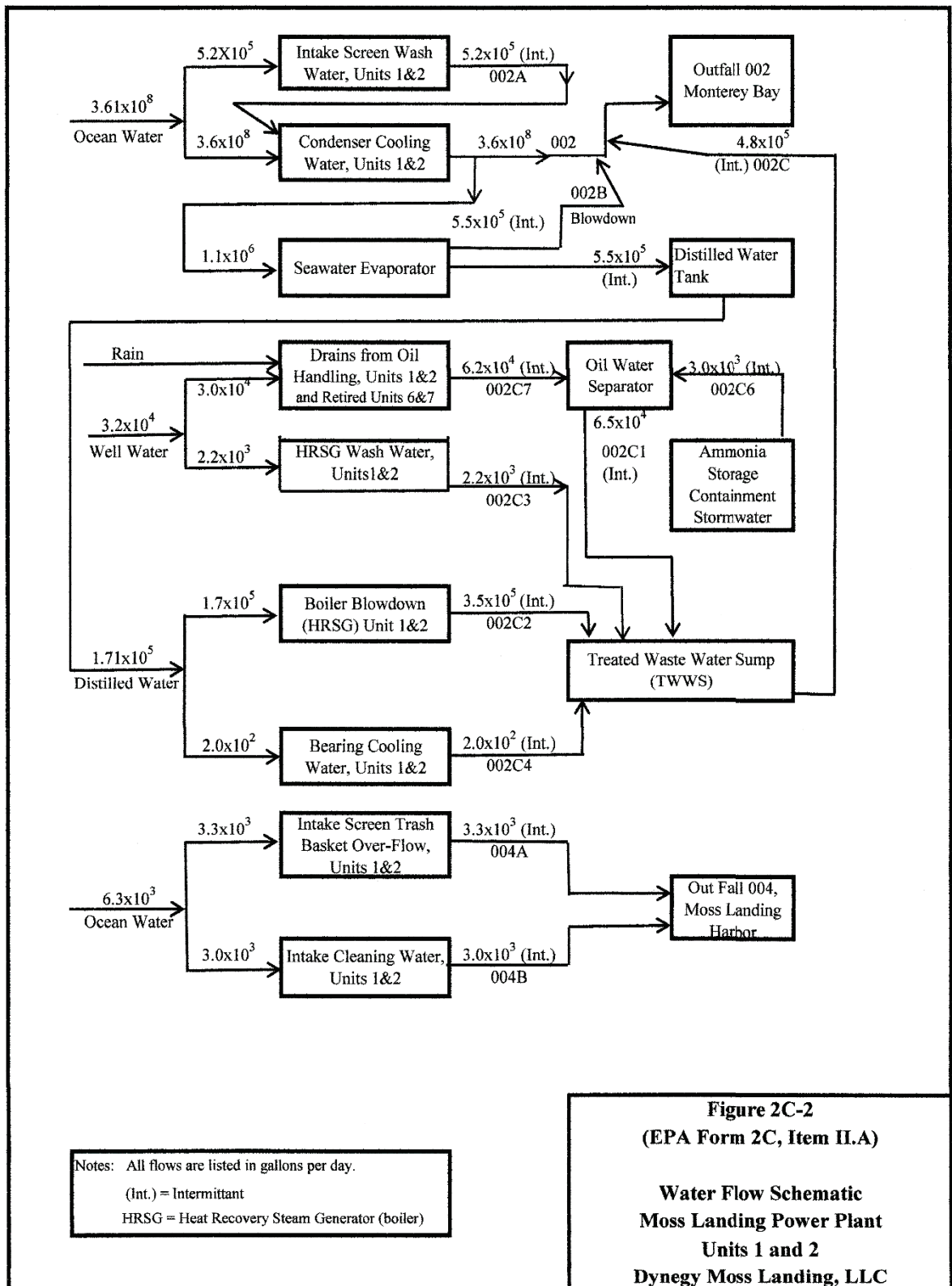
### **Water Recycling**

The treatment of wastewater to render it suitable for reuse, the transportation of treated wastewater to the place of use, and the actual use of treated wastewater for a direct beneficial use or controlled use that would not otherwise occur.

**ATTACHMENT B – MAP**



**ATTACHMENT C – FLOW SCHEMATIC**



## ATTACHMENT D –STANDARD PROVISIONS

### I. STANDARD PROVISIONS – PERMIT COMPLIANCE

#### A. Duty to Comply

1. Dynegy Moss Landing, LLC (Discharger) must comply with all of the terms, requirements, and conditions of this Order. Any noncompliance constitutes a violation of the Clean Water Act (CWA) and the California Water Code and is grounds for enforcement action; permit termination, revocation and reissuance, or modification; denial of a permit renewal application; or a combination thereof. (40 C.F.R. § 122.41(a); California Water Code, §§ 13261, 13263, 13265, 13268, 13000, 13001, 13304, 13350, 13385.)
2. The Discharger shall comply with effluent standards or prohibitions established under Section 307(a) of the CWA for toxic pollutants within the time provided in the regulations that establish these standards or prohibitions, even if this Order has not yet been modified to incorporate the requirement. (40 C.F.R. § 122.41(a)(1).)

#### B. Need to Halt or Reduce Activity Not a Defense

It shall not be a defense for a Discharger in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this Order. (40 C.F.R. § 122.41(c).)

#### C. 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 C.F.R. § 122.41(d).)

#### D. 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 a Discharger only when necessary to achieve compliance with the conditions of this Order. (40 C.F.R. § 122.41(e).)

#### E. Property Rights

1. This Order does not convey any property rights of any sort or any exclusive privileges. (40 C.F.R. § 122.41(g).)
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 C.F.R. § 122.5(c).)

#### F. Inspection and Entry

The Discharger shall allow the California Regional Water Quality Control Board, Central Coast Region (Central Coast Water Board), State Water Resources Control Board (State Water Board), United States Environmental Protection Agency (U.S. EPA,) and/or their authorized representatives (including an authorized contractor acting as their representative),

upon the presentation of credentials and other documents, as may be required by law, to (33 U.S.C. § 1318(a)(4)(b); 40 C.F.R. § 122.41(i); California Water Code, §§13267, 13383):

1. Enter upon the Discharger's premises where a regulated facility or activity is located or conducted, or where records are kept under the conditions of this Order (33 U.S.C. § 1318(a)(4)(b)(i); 40 C.F.R. § 122.41(i)(1); California Water Code, §§ 13267, 13383);
2. Have access to and copy, at reasonable times, any records that must be kept under the conditions of this Order (33 U.S.C. § 1318(a)(4)(b)(ii); 40 C.F.R. § 122.41(i)(2); California Water Code, §§ 13267, 13383);
3. Inspect and photograph, at reasonable times, any facilities, equipment (including monitoring and control equipment), practices, or operations regulated or required under this Order (33 U.S.C. § 1318(a)(4)(b)(ii); 40 C.F.R. § 122.41(i)(3); California Water Code, §§ 13267, 13383); and
4. Sample or monitor, at reasonable times, for the purposes of assuring Order compliance or as otherwise authorized by the CWA or the Water Code, any substances or parameters at any location. (33 U.S.C. § 1318(a)(4)(b); 40 C.F.R. § 122.41(i)(4); California Water Code, §§ 13267, 13383.)

## **G. Bypass**

1. Definitions
  - a. "Bypass" means the intentional diversion of waste streams from any portion of a treatment facility. (40 C.F.R. § 122.41(m)(1)(i).)
  - b. "Severe property damage" means substantial physical damage to property, damage to the treatment facilities, which causes them to become inoperable, or substantial and permanent loss of natural resources that can reasonably be expected to occur in the absence of a bypass. Severe property damage does not mean economic loss caused by delays in production. (40 C.F.R. § 122.41(m)(1)(ii).)
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 I.G.3, I.G.4, and I.G.5 below. (40 C.F.R. § 122.41(m)(2).)
3. Prohibition of bypass. Bypass is prohibited, and the Central Coast Water Board may take enforcement action against a Discharger for bypass, unless (40 C.F.R. § 122.41(m)(4)(i)):
  - a. Bypass was unavoidable to prevent loss of life, personal injury, or severe property damage (40 C.F.R. § 122.41(m)(4)(i)(A));
  - b. There were no feasible alternatives to the bypass, such as the use of auxiliary treatment facilities, retention of untreated wastes, or maintenance during normal periods of equipment downtime. This condition is not satisfied if adequate back-up equipment should have been installed in the exercise of reasonable engineering judgment to prevent a bypass that occurred during normal periods of equipment downtime or preventive maintenance (40 C.F.R. § 122.41(m)(4)(i)(B)); and
  - c. The Discharger submitted notice to the Central Coast Water Board as required under Standard Provisions – Permit Compliance I.G.5 below. (40 C.F.R. § 122.41(m)(4)(i)(C).)

4. The Central Coast Water Board may approve an anticipated bypass, after considering its adverse effects, if the Central Coast Water Board determines that it will meet the three conditions listed in Standard Provisions – Permit Compliance I.G.3 above. (40 C.F.R. § 122.41(m)(4)(ii).)
5. Notice
  - a. Anticipated bypass. If the Discharger knows in advance of the need for a bypass, it shall submit prior notice, if possible at least 10 days before the date of the bypass. The notice shall be sent to the Central Coast Water Board. As of December 21, 2020, all notices must be submitted electronically to the initial recipient defined in Standard Provisions – Reporting V.J below. Notices shall comply with 40 C.F.R. part 3, 40 C.F.R. section 122.22, and 40 C.F.R. part 127. (40 C.F.R. § 122.41(m)(3)(i).)
  - b. 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 Central Coast Water Board. As of December 21, 2020. All notices must be submitted electronically to the initial recipient defined in Standard Provisions – Reporting V.J below. Notices shall comply with 40 C.F.R. part 3, 40 C.F.R. section 122.22, and 40 C.F.R. part 127.(40 C.F.R. § 122.41(m)(3)(ii).)

#### H. 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 C.F.R. § 122.41(n)(1).)

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 I.H.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 C.F.R. § 122.41(n)(2).)
2. Conditions necessary for a demonstration of upset. A Discharger who wishes to establish the affirmative defense of upset shall demonstrate, through properly signed, contemporaneous operating logs or other relevant evidence that (40 C.F.R. § 122.41(n)(3)):
  - a. An upset occurred and that the Discharger can identify the cause(s) of the upset (40 C.F.R. § 122.41(n)(3)(i));
  - b. The permitted facility was, at the time, being properly operated (40 C.F.R. § 122.41(n)(3)(ii));
  - c. The Discharger submitted notice of the upset as required in Standard Provisions – Reporting V.E.2.b below (24-hour notice) (40 C.F.R. § 122.41(n)(3)(iii)); and
  - d. The Discharger complied with any remedial measures required under Standard Provisions – Permit Compliance I.C above. (40 C.F.R. § 122.41(n)(3)(iv).)
3. Burden of proof. In any enforcement proceeding, the Discharger seeking to establish the occurrence of an upset has the burden of proof. (40 C.F.R. § 122.41(n)(4).)



## II. STANDARD PROVISIONS – PERMIT ACTION

### A. 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 C.F.R. § 122.41(f).)

### B. 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 C.F.R. § 122.41(b).)

### C. Transfers

This Order is not transferable to any person except after notice to the Central Coast Water Board. The Central Coast 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 Clean Water Act (CWA) and the California Water Code. (40 C.F.R. §§ 122.41(l)(3), 122.61.)

## III. STANDARD PROVISIONS – MONITORING

A. Samples and measurements taken for the purpose of monitoring shall be representative of the monitored activity. (40 C.F.R. § 122.41(j)(1).) Monitoring must be conducted according to test procedures approved under 40 C.F.R. part 136 for the analyses of pollutants unless another method is required under 40 C.F.R. chapter 1, subchapter N. Monitoring must be conducted according to sufficiently sensitive test methods approved under 40 C.F.R. part 136 for the analysis of pollutants or pollutant parameters or as required under 40 C.F.R. chapter 1, subchapter N. For the purposes of this paragraph, a method is sufficiently sensitive when:

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
2. The method has the lowest ML of the analytical methods approved under 40 C.F.R. part 136 or required under 40 C.F.R. 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 C.F.R. part 136 or otherwise required under 40 C.F.R. chapter 1, subchapter N, monitoring must be conducted according to a test procedure specified in this Order for such pollutants or pollutant parameters. (40 C.F.R. §§122.21(e)(3), 122.41(j)(4), 122.44(i)(1)(iv).)

## IV. STANDARD PROVISIONS – RECORDS

A. 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 Central Coast Water Board Executive Officer at any time. (40 C.F.R. § 122.41(j)(2).)

Records of monitoring information shall include:

1. The date, exact place, and time of sampling or measurements (40 C.F.R. § 122.41(j)(3)(i));
2. The individual(s) who performed the sampling or measurements (40 C.F.R. § 122.41(j)(3)(ii));
3. The date(s) analyses were performed (40 C.F.R. § 122.41(j)(3)(iii));
4. The individual(s) who performed the analyses (40 C.F.R. § 122.41(j)(3)(iv));
5. The analytical techniques or methods used (40 C.F.R. § 122.41(j)(3)(v)); and
6. The results of such analyses. (40 C.F.R. § 122.41(j)(3)(vi).)

Claims of confidentiality for the following information will be denied (40 C.F.R. § 122.7(b)):

1. The name and address of any permit applicant or Discharger (40 C.F.R. § 122.7(b)(1)); and
2. Permit applications and attachments, permits and effluent data. (40 C.F.R. § 122.7(b)(2).)

## **V. STANDARD PROVISIONS – REPORTING**

### **A. Duty to Provide Information**

The Discharger shall furnish to the Central Coast Water Board, State Water Board, or U.S. EPA within a reasonable time, any information which the Central Coast Water Board, State Water Board, or U.S. EPA 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 Central Coast Water Board, State Water Board, or U.S. EPA copies of records required to be kept by this Order. (40 C.F.R. § 122.41(h); California Water Code, §§ 13267, 13383.)

### **B. Signatory and Certification Requirements**

1. All applications, reports, or information submitted to the Central Coast Water Board, State Water Board, and/or U.S. EPA shall be signed and certified in accordance with Standard Provisions – Reporting V.B.2, V.B.3, V.B.4, V.B.5, and V.B.6 below. (40 C.F.R. § 122.41(k).)
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 C.F.R. § 122.22(a)(1).)

3. All reports required by this Order and other information requested by the Central Coast Water Board, State Water Board, or U.S. EPA shall be signed by a person described in Standard Provisions – Reporting V.B.2 above, or by a duly authorized representative of that person. A person is a duly authorized representative only if:
  - a. The authorization is made in writing by a person described in Standard Provisions – Reporting V.B.2 above (40 C.F.R. § 122.22(b)(1));
  - b. The authorization specifies either an individual or a position having responsibility for the overall operation of the regulated facility or activity such as the position of plant manager, operator of a well or a well field, superintendent, position of equivalent responsibility, or an individual or position having overall responsibility for environmental matters for the company. (A duly authorized representative may thus be either a named individual or any individual occupying a named position.) (40 C.F.R. § 122.22(b)(2)); and
  - c. The written authorization is submitted to the Central Coast Water Board and State Water Board. (40 C.F.R. § 122.22(b)(3).)
4. If an authorization under Standard Provisions – Reporting V.B.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 V.B.3 above must be submitted to the Central Coast Water Board and State Water Board prior to or together with any reports, information, or applications, to be signed by an authorized representative. (40 C.F.R. § 122.22(c).)
5. Any person signing a document under Standard Provisions – Reporting V.B.2 or V.B.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 C.F.R. § 122.22(d).)
6. Any person providing the electronic signature for documents described in Standard Provisions – V.B.1, V.B.2, or V.B.3 that are submitted electronically shall meet all relevant requirements of Standard Provisions – Reporting V.B, and shall ensure that all relevant requirements of 40 C.F.R. part 3 (Cross-Media Electronic Reporting) and 40 C.F.R. part 127 (National Pollutant Discharge Elimination System (NPDES) Electronic Reporting Requirements) are met for that submission. (40 C.F.R § 122.22(e).)

### **C. Monitoring Reports**

1. Monitoring results shall be reported at the intervals specified in the Monitoring and Reporting Program (Attachment E) in this Order. (40 C.F.R. § 122.41(l)(4).)
2. Monitoring results must be reported on a Discharge Monitoring Report (DMR) form or forms provided or specified by the Central Coast 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 V.J and comply with 40 C.F.R. part 3, 40 C.F.R. section 122.22, and 40 C.F.R. part 127. (40 C.F.R. § 122.41(l)(4)(i).)

3. If the Discharger monitors any pollutant more frequently than required by this Order using test procedures approved under 40 C.F.R. part 136, or another method required for an industry-specific waste stream under 40 C.F.R. 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 Central Coast Water Board or State Water Board. (40 C.F.R. § 122.41(l)(4)(ii).)
4. Calculations for all limitations, which require averaging of measurements, shall utilize an arithmetic mean unless otherwise specified in this Order. (40 C.F.R. § 122.41(l)(4)(iii).)

**D. 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 C.F.R. § 122.41(l)(5).)

**E. Twenty-Four Hour Reporting**

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. The Discharger shall also report spills that are likely to enter ocean waters, directly to the Monterey Bay National Marine Sanctuary (MBNMS) 24-hour emergency number at 831-236-6797 at the earliest possible time

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

As of December 21, 2020, all reports related to combined sewer overflows, sanitary sewer overflows, or bypass events must be submitted to the Central Coast Water Board and must be submitted electronically to the initial recipient defined in Standard Provisions – Reporting V.J. The reports shall comply with 40 C.F.R. part 3, 40 C.F.R. section 122.22, and 40 C.F.R. part 127. The Central Coast 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 C.F.R. § 122.41(l)(6)(i).)

2. The following shall be included as information that must be reported within 24 hours:
  - a. Any unanticipated bypass that exceeds any effluent limitation in this Order. (40 C.F.R. § 122.41(l)(6)(ii)(A).)
  - b. Any upset that exceeds any effluent limitation in this Order. (40 C.F.R. § 122.41(l)(6)(ii)(B).)

3. The Central Coast 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 C.F.R. § 122.41(l)(6)(ii)(B).)

**F. Planned Changes**

The Discharger shall give notice to the Central Coast 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 C.F.R. § 122.41(l)(1)):

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

**G. Anticipated Noncompliance**

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

**H. Other Noncompliance**

The Discharger shall report all instances of noncompliance not reported under Standard Provisions – Reporting V.C, V.D, and V.E above at the time monitoring reports are submitted. The reports shall contain the information listed in Standard Provision – Reporting V.E 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 V.E and the applicable required data in appendix A to 40 C.F.R. part 127. The Central Coast 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 C.F.R. § 122.41(l)(7).)

**I. 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 Central Coast Water Board, State Water Board, or U.S. EPA, the Discharger shall promptly submit such facts or information. (40 C.F.R. § 122.41(l)(8).)

**J. 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 C.F.R. part 127 to the initial recipient defined in 40 C.F.R. section 127.2(b). U.S. EPA 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 C.F.R. section 127.2(c)]. U.S. EPA will update and maintain this listing. (40 C.F.R. § 122.41(l)(9).)

## **VI. STANDARD PROVISIONS – ENFORCEMENT**

- A.** The Central Coast Water Board is authorized to enforce the terms of this permit under several provisions of the California Water Code, including, but not limited to, sections 13268, 13385, 13386, and 13387.

## **VII. ADDITIONAL PROVISIONS – NOTIFICATION LEVELS**

### **A. Non-Municipal Facilities**

Existing manufacturing, commercial, mining, and silvicultural Dischargers shall notify the Central Coast Water Board as soon as they know or have reason to believe (40 C.F.R. § 122.42(a)):

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 C.F.R. § 122.42(a)(1)):
  - a. 100 micrograms per liter ( $\mu\text{g/L}$ ) (40 C.F.R. § 122.42(a)(1)(i));
  - b. 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 ( $\text{mg/L}$ ) for antimony (40 C.F.R. § 122.42(a)(1)(ii));
  - c. Five (5) times the maximum concentration value reported for that pollutant in the Report of Waste Discharge (40 C.F.R. § 122.42(a)(1)(iii)); or
  - d. The level established by the Central Coast Water Board in accordance with section 122.44(f). (40 C.F.R. § 122.42(a)(1)(iv)).
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 C.F.R. § 122.42(a)(2)):
  - a. 500 micrograms per liter ( $\mu\text{g/L}$ ) (40 C.F.R. § 122.42(a)(2)(i));
  - b. 1 milligram per liter ( $\text{mg/L}$ ) for antimony (40 C.F.R. § 122.42(a)(2)(ii));
  - c. Ten (10) times the maximum concentration value reported for that pollutant in the Report of Waste Discharge (40 C.F.R. § 122.42(a)(2)(iii)); or
  - d. The level established by the Central Coast Water Board in accordance with section 122.44(f). (40 C.F.R. § 122.42(a)(2)(iv)).

## **VIII. CENTRAL COAST WATER BOARD STANDARD PROVISIONS**

### **A. Central Coast Standard Provision – Prohibitions**

1. Introduction of "incompatible wastes" to the treatment system is prohibited.
2. Discharge of high-level radiological waste and of radiological, chemical, and biological warfare agents is prohibited.
3. Discharge of "toxic pollutants" in violation of effluent standards and prohibitions established under section 307(a) of the CWA is prohibited.
4. Discharge of sludge, sludge digester or thickener supernatant, and sludge drying bed leachate to drainage ways, surface waters, or the ocean is prohibited.

5. Introduction of pollutants into the collection, treatment, or disposal system by and “indirect discharger” that:
  - a. Inhibit or disrupt the treatment process, system operation, or the eventual use or disposal of sludge; or,
  - b. Flow through the system to the receiving water untreated; and,
  - c. Cause or “significantly contribute” to a violation of any requirement of this Order, is prohibited.
6. Introduction of “pollutant free” wastewater to the collection, treatment, and disposal system in amounts that threaten compliance with this Order is prohibited.

**B. Central Coast Standard Provisions**

1. Collection, treatment, and discharge of waste shall not create a nuisance or pollution, as defined by California Water Code section 13050.
2. All facilities used for transport or treatment of wastes shall be adequately protected from inundation and washout as the result of a 100-year frequency flood.
3. Operation of collection, treatment, and disposal systems shall be in a manner that precludes public contact with wastewater.
4. Collected screenings, sludges, and other solids removed from liquid wastes shall be disposed in a manner approved by the Executive Officer.
5. Wastewater treatment plants shall be supervised and operated by persons possessing certificates of appropriate grade pursuant to title 23 of the California Code of Regulations.
6. After notice and opportunity for a hearing, this order may be terminated for cause, including, but not limited to:
  - a. Violation of any term or condition contained in this order;
  - b. Obtaining this order by misrepresentation, or by failure to disclose fully all relevant facts;
  - c. A change in any condition or endangerment to human health or environment that requires a temporary or permanent reduction or elimination of the authorized discharge; and,
  - d. A substantial change in character, location, or volume of the discharge.
7. Provisions of this permit are severable. If any provision of the permit is found invalid, the remainder of the permit shall not be affected.
8. After notice and opportunity for hearing, this Order may be modified or revoked and reissued for cause, including:
  - a. Promulgation of a new or revised effluent standard or limitation.
  - b. A material change in character, location, or volume of the discharge.
  - c. Access to new information that affects the terms of the Order, including applicable schedules.
  - d. Correction of technical mistakes or mistaken interpretations of law.
  - e. Other causes set forth under subpart D of 40 C.F.R. part 122.

9. Safeguards shall be provided to ensure maximal compliance with all terms and conditions of this permit. Safeguards shall include preventative and contingency plans and may also include alternative power sources, stand-by generators, retention capacity, operative procedures, or other precautions. Preventative and contingency plans for controlling and minimizing the effect of accidental discharges shall:
  - a. Identify possible situations that could cause “upset,” “overflow,” or “bypass,” or other noncompliance. (Loading and storage areas, power outage, waste treatment unit outage, and failure of process equipment, tanks and pipes should be considered).
  - b. Evaluate the effectiveness of present facilities and procedures and describe procedures and steps to minimize or correct any adverse environmental impact resulting from noncompliance with the permit.
10. Physical facilities shall be designed and constructed according to accepted engineering practice and shall be capable of full compliance with this order when properly operated and maintained. Proper operation and maintenance shall be described in an Operation and Maintenance Manual. Facilities shall be accessible during the wet-weather season.
11. The discharger shall at all times properly operate and maintain all facilities and systems of treatment and control (and related appurtenances) that are installed or used by the discharger to achieve compliance with the conditions of this order. Electrical and mechanical equipment shall be maintained in accordance with appropriate practices and standards, such as NFPA 70B, *Recommended Practice for Electrical Equipment Maintenance*; NFPA 70E, *Standard for Electrical Safety in the Workplace*; ANSI/NETA MTS *Standard for Maintenance: Testing Specifications for Electrical Power Equipment and Systems*, or procedures established by insurance companies or industry resources.
12. If the discharger’s facilities are equipped with supervisory control and data acquisition (SCADA) or other systems that implement wireless, remote operation, the discharger should implement appropriate safeguards against unauthorized access to the wireless systems. Standards such as NIST SP 800-53, *Recommended Security Controls for Federal Information Systems*, can provide guidance.
13. Production and use of recycled water is subject to the approval of the Central Coast Board. Production and use of reclaimed water shall be in conformance with reclamation criteria established in chapter 3, title 22, of the California Code of Regulations and chapter 7, division 7, of the California Water Code. An engineering report pursuant to section 60323, title 22, of the California Code of Regulations is required and a waiver or water reclamation requirements from the Central Coast Water Board is required before reclaimed water is supplied for any use, or to any user, not specifically identified and approved either in this Order or another order issued by the Central Coats Water Board.

**C. Central Coast Standard Provisions – General Monitoring Requirements**

1. If results of monitoring a pollutant appear to violate effluent limitations based on a weekly, monthly, 30-day, or six-month period, but compliance or non-compliance cannot be validated because sampling is too infrequent, the frequency of sampling shall be increased to validate the test within the next monitoring period. The increased frequency shall be maintained until the Executive Officer agrees the original monitoring frequency may be resumed.

For example, if copper is monitored annually and results exceed the six-month median numerical effluent limitation in the permit, monitoring of copper must be increased to a frequency of at least once every two months (Central Coast Standard Provisions – Definitions I.G.13.). If suspended solids are monitored weekly and results exceed the



weekly average numerical limit in the permit, monitoring of suspended solids must be increased to at least four (4) samples every week (Central Coast Standard Provisions – Definitions I.G.14.).

2. Water quality analyses performed in order to monitor compliance with this permit shall be by a laboratory certified by the State Water Board Environmental Laboratory Accreditation Program (ELAP) for the constituent(s) being analyzed. Bioassay(s) performed in order to monitor compliance with this permit shall be in accord with guidelines approved by the State Water Board and the State Department of Fish and Wildlife.
3. Samples and measurements taken for the purpose of monitoring shall be representative of the monitored activity. Samples shall be taken during periods of peak loading conditions. Influent samples shall be samples collected from the combined flows of all incoming wastes, excluding recycled wastes. Effluent samples shall be samples collected downstream of the last treatment unit and tributary flow and upstream of any mixing with receiving waters.
4. All monitoring instruments and devices used by the discharger to fulfill the prescribed monitoring program shall be properly maintained and calibrated as necessary to ensure their continued accuracy.

**D. Central Coast Standard Provisions – General Reporting Requirements**

1. Reports of marine monitoring surveys conducted to meet receiving water monitoring requirements of the Monitoring and Reporting Program shall include at least the following information:
  - a. A description of climatic and receiving water characteristics at the time of sampling (weather observations, floating debris, discoloration, wind speed and direction, swell or wave action, time of sampling, tide height, etc.).
  - b. A description of sampling stations, including differences unique to each station (e.g., station location, grain size, rocks, shell litter, calcareous worm tubes, evident life, etc.).
  - c. A description of the sampling procedures and preservation sequence used in the survey.
  - d. A description of the exact method used for laboratory analysis. In general, analysis shall be conducted according to Central Coast Standard Provisions – C.1 above, and Federal Standard Provision – Monitoring III.B. However, variations in procedure are acceptable to accommodate the special requirements of sediment analysis. All such variations must be reported with the test results.
  - e. A brief discussion of the results of the survey. The discussion shall compare data from the control station with data from the outfall stations. All tabulations and computations shall be explained.
2. Reports of compliance or noncompliance with, or any progress reports on, interim and final requirements contained in any compliance schedule shall be submitted within 14 days following each scheduled date unless otherwise specified within the permit. If reporting noncompliance, the report shall include a description of the reason, a description and schedule of tasks necessary to achieve compliance, and an estimated date for achieving full compliance. A second report shall be submitted within 14 days of full compliance.

3. The Discharger shall file a report of waste discharge or secure a waiver from the Executive Officer at least 180 days before making any material change or proposed change in the character, location, or plume of the discharge.
4. Within 120 days after the discharger discovers, or is notified by the Central Coast Water Board, that monthly average daily flow will or may reach design capacity of waste treatment and/or disposal facilities within four (4) years, the discharger shall file a written report with the Central Coast Water Board. The report shall include:
  - a. the best estimate of when the monthly average daily dry weather flow rate will equal or exceed design capacity; and,
  - b. a schedule for studies, design, and other steps needed to provide additional capacity for waste treatment and/or disposal facilities before the waste flow rate equals the capacity of present units

In addition to complying with Federal Standard Provision – Reporting V.B., the required technical report shall be prepared with public participation and reviewed, approved and jointly submitted by all planning and building departments having jurisdiction in the area served by the waste collection, treatment, or disposal facilities.

5. All Dischargers shall submit electronic self-monitoring reports (eSMRs) electronically to the:

State Water Board’s California Integrated Water Quality System (CIWQS) database:

<http://ciwqs.waterboards.ca.gov/>

In addition, Dischargers with designated major discharges shall submit discharge monitoring reports to U.S. EPA, Region IX’s NetDMR database at

<https://netdmr.epa.gov/netdmr/public/login.htm>

Other correspondence should be sent electronically to the Central Coast Water Board at:

[centralcoast@waterboards.ca.gov](mailto:centralcoast@waterboards.ca.gov)

6. Transfer of control or ownership of a waste discharge facility must be preceded by a notice to the Central Coast Water Board at least 30 days in advance of the proposed transfer date. The notice must include a written agreement between the existing Discharger and proposed Discharger containing specific date for transfer of responsibility, coverage, and liability between them. Whether a permit may be transferred without modification or revocation and reissuance is at the discretion of the Board. If permit modification or revocation and reissuance is necessary, transfer may be delayed 180 days after the Central Coast Water Board’s receipt of a complete permit application. Please also see Federal Standard Provision – Permit Action II.C.
7. Except for data determined to be confidential under CWA §308 (excludes effluent data and permit applications), all reports prepared in accordance with this permit shall be available for public inspection at the office of the Central Coast Water Board or Regional Administrator of U.S. EPA. Please also see Federal Standard Provision – Records IV.C.
8. By January 30 of each year, the discharger shall submit an annual report to the Central Coast Water Board and to [sophie.debeukelaer@noaa.gov](mailto:sophie.debeukelaer@noaa.gov) and [karen.grimmer@noaa.gov](mailto:karen.grimmer@noaa.gov) at the Monterey Bay National Marine Sanctuary (MBNMS). The report shall contain the following:
  - a. Both tabular and graphical summaries of the monitoring data obtained during the previous year.

- b. A discussion of the previous year's compliance record and corrective actions taken, or which may be needed, to bring the discharger into full compliance.
- c. An evaluation of wastewater flows with projected flow rate increases over time and the estimated date when flows will reach facility capacity.
- d. A discussion of operator certification and a list of current operating personnel and their grades of certification.
- e. The date of the facility's Operation and Maintenance Manual (including contingency plans as described in Provision B.9), the date the manual was last reviewed, and whether the manual is complete and valid for the current facility.
- f. A discussion of the laboratories used by the discharger to monitor compliance with effluent limits and a summary of performance relative to Section C, General Monitoring Requirements.

**E. Central Coast Standard Provisions – General Pretreatment Provisions**

1. Discharge of pollutants by indirect dischargers in specific industrial sub-categories (appendix C, 40 C.F.R. Part 403), where categorical pretreatment standards have been established, or are to be established, (according to 40 C.F.R. Chapter 1, Subchapter N), shall comply with the appropriate pretreatment standards:
  - a. By the date specified therein;
  - b. If a new indirect discharger, upon commencement of discharge.

**F. Central Coast Standard Provision – Enforcement**

1. Any person failing to file a report of waste discharge or other report as required by this permit shall be subject to a civil penalty not to exceed \$5,000 per day.
2. Upon reduction, loss, or failure of the treatment facility, the Discharger shall, to the extent necessary to maintain compliance with this permit, control production or all discharges, or both, until the facility is restored or an alternative method of treatment is provided.

**G. Central Coast Standard Provisions – Definitions (Not otherwise included in Attachment A to this Order)**

1. A "composite sample" is a combination of no fewer than eight (8) individual samples obtained at equal time intervals (usually hourly) over the specified sampling (composite) period. The volume of each individual sample is proportional to the flow rate at the time of sampling. The period shall be specified in the Monitoring and Reporting Program ordered by the Executive Officer. Alternatively, a flow proportioned composite sample may be collected by collecting equal aliquot volumes at variable time intervals.
2. "Daily Maximum" limit means the maximum acceptable concentration or mass emission rate of a pollutant measured during a calendar day or during any 24-hour period reasonably representative of the calendar day for purposes of sampling. It is normally compared with results based on "composite samples" except for ammonia, total chlorine, phenolic compounds, and toxicity concentration. For all exceptions, comparisons will be made with results from a "grab sample".
3. "Discharger", as used herein, means, as appropriate: (1) the Discharger, (2) the local sewerage entity (when the collection system is not owned and operated by the Discharger), or (3) "indirect discharger" (where "Discharger" appears in the same paragraph as "indirect discharger", it refers to the discharger).

4. "Duly Authorized Representative" is one where:
  - a. the authorization is made in writing by a person described in the signatory paragraph of Federal Standard Provision V.B.;
  - b. the authorization specifies either an individual or the occupant of a position having either responsibility for the overall operation of the regulated facility, such as the plant manager, or overall responsibility for environmental matters of the company; and,
  - c. the written authorization was submitted to the Central Coast Water Board.
5. A "grab sample" is defined as any individual sample collected in less than 15 minutes. "Grab samples" shall be collected during peak loading conditions, which may or may not be during hydraulic peaks. It is used primarily in determining compliance with the daily maximum limits identified in Central Coast Standard Provision – Provision G.2. and instantaneous maximum limits.
6. "Hazardous substance" means any substance designated under 40 C.F.R. Part 116 pursuant to Section 311 of the CWA.
7. "Incompatible wastes" are:
  - a. Wastes which create a fire or explosion hazard in the treatment works;
  - b. Wastes which will cause corrosive structural damage to treatment works, but in no case wastes with a pH lower than 5.0 unless the works is specifically designed to accommodate such wastes;
  - c. Solid or viscous wastes in amounts which cause obstruction to flow in sewers, or which cause other interference with proper operation of treatment works;
  - d. Any waste, including oxygen demanding pollutants (BOD<sub>5</sub>, etc.), released in such volume or strength as to cause inhibition or disruption in the treatment works and subsequent treatment process upset and loss of treatment efficiency; and,
  - e. Heat in amounts that inhibit or disrupt biological activity in the treatment works or that raise influent temperatures above 40°C (104°F) unless the treatment works is designed to accommodate such heat.
8. "Indirect Discharger" means a non-domestic discharger introducing pollutants into a publicly owned treatment and disposal system.
9. "Log Mean" is the geometric mean. Used for determining compliance of fecal or total coliform populations, it is calculated with the following equation:

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

in which "n" is the number of days samples were analyzed during the period and any "C" is the concentration of bacteria (MPN/100 mL) found on each day of sampling. "n" should be five or more.

10. "Mass emission rate" is a daily rate defined by the following equations:

$$\text{mass emission rate (lbs/day)} = 8.34 \times Q \times C; \text{ and,}$$

$$\text{mass emission rate (kg/day)} = 3.79 \times Q \times C$$

where "C" (in mg/L) is the measured daily constituent concentration or the average of measured daily constituent concentrations and "Q" (in MGD) is the measured daily flowrate or the average of measured daily flow rates over the period of interest.

11. The "Maximum Allowable Mass Emission Rate," whether for a month, week, day, or six month period, is a daily rate determined with the formulas in paragraph G.10, above, using the effluent concentration limit specified in the permit for the period and the average of measured daily flows (up to the allowable flow) over the period.
12. "Maximum Allowable Six-Month Median Mass Emission Rate" is a daily rate determined with the formulas in Central Coast Standard Provision – Provision G.10, above, using the "six-month Median" effluent limit specified in the permit, and the average of measured daily flows (up to the allowable flow) over a 180-day period.
13. "Median" is the value below which half the samples (ranked progressively by increasing value) fall. It may be considered the middle value, or the average of the two middle values.
14. "Monthly Average" (or "Weekly Average", as the case may be) is the arithmetic mean of daily concentrations or of daily mass emission rates over the specified 30-day (or 7-day) period.

$$\text{Average} = (X1 + X2 + \dots + Xn) / n$$

in which "n" is the number of days samples were analyzed during the period and "X" is either the constituent concentration (mg/L) or mass emission rate (kg/day or lbs/day) for each sampled day. "n" should be four or greater.

15. "Municipality" means a city, town, borough, county, district, association, or other public body created by or under State law and having jurisdiction over disposal of sewage, industrial waste, or other waste.
16. "Overflow" means the intentional or unintentional diversion of flow from the collection and transport systems, including pumping facilities.
17. "Pollutant-free wastewater" means inflow and infiltration, stormwaters, and cooling waters and condensates which are essentially free of pollutants.
18. "Primary Industry Category" means any industry category listed in 40 C.F.R. Part 122, Appendix A.
19. "Removal Efficiency" is the ratio of pollutants removed by the treatment unit to pollutants entering the treatment unit. Removal efficiencies of a treatment plant shall be determined using "Monthly averages" of pollutant concentrations (C, in mg/L) of influent and effluent samples collected about the same time and the following equation (or its equivalent):

$$C_{\text{Effluent}} \text{ Removal Efficiency (\%)} = 100 \times (1 - C_{\text{effluent}} / C_{\text{influent}})$$

20. "Severe property damage" means substantial physical damage to property, damage to treatment facilities which causes them to become inoperable, or substantial and permanent loss to natural resources which can reasonably be expected to occur in the absence of a "bypass". It does not mean economic loss caused by delays in production.
21. "Sludge" means the solids, residues, and precipitates separated from, or created in, wastewater by the unit processes of a treatment system.
22. To "significantly contribute" to a permit violation means an "indirect discharger" m
  - a. Discharge a daily pollutant loading in excess of that allowed by contract with the "Discharger" or by Federal, State, or Local law;

- b. Discharge wastewater which substantially differs in nature or constituents from its average discharge;
  - c. Discharge pollutants, either alone or in conjunction with discharges from other sources, which results in a permit violation or prevents sewage sludge use or disposal; or
  - d. Discharge pollutants, either alone or in conjunction with pollutants from other sources that increase the magnitude or duration of permit violations.
- 23.** "Toxic Pollutant" means any pollutant listed as toxic under Section 307(a)(1) of the CWA or under 40 C.F.R. Part 122, Appendix D. Violation of maximum daily discharge limitations are subject to 24-hour reporting (Federal Standard Provisions V.E.).
- 24.** "Zone of Initial Dilution" means the region surrounding or adjacent to the end of an outfall pipe or diffuser ports whose boundaries are defined through calculation of a plume model verified by the State Water Board.

## 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 C.F.R.) require that all National Pollutant Discharge Elimination System (NPDES) permits specify monitoring and reporting requirements. California Water Code sections 13267 and 13383 also authorize the California Regional Water Quality Control Board, Central Coast Region (Central Coast Water Board) to establish monitoring, inspection, entry, reporting, and recordkeeping requirements. This MRP establishes monitoring, reporting, and recordkeeping requirements that implement the federal and California laws and/or regulations.

### I. GENERAL MONITORING PROVISIONS

- A. Laboratory Certification. Laboratories analyzing monitoring samples shall be certified by the State Water Resources Control Board (State Water Board), in accordance with the provision of California Water Code section 13176, and must include quality assurance/quality control data with their reports.
- B. Samples and measurements taken as required herein shall be representative of the volume and nature of the monitored discharge. All samples shall be taken at the monitoring locations specified below and, unless otherwise specified, before the monitored flow joins or is diluted by any other waste stream, body of water, or substance. Monitoring locations shall not be changed without notification to and approval of the Central Coast Water Board.
- C. Appropriate flow measurement devices and 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 measurements 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  $\pm 10$  percent from true discharge rates throughout the range of expected discharge volumes. Guidance in selection, installation, calibration, and operation of acceptable flow measurement devices can be obtained from the following references.
  - 1. *A Guide to Methods and Standards for the Measurement of Water Flow*, U.S. Department of Commerce, National Bureau of Standards, NBS Special Publication 421, May 1975, 96 pp. (Available from the U.S. Government Printing Office, Washington, D.C. 20402. Stock No. C13.10:421)
  - 2. *Water Measurement Manual*, U.S. Department of Interior, Bureau of Reclamation, Third Edition, Revised Reprint, 2001, 317 pp. (Available from the U.S. Government Printing Office, Washington D.C. 20402. Stock No. 024-00215-1)
  - 3. *Flow Measurement in Open Channels and Closed Conduits*, U.S. Department of Commerce, National Bureau of Standards, NBS Special Publication 484, October 1977, 982 pp. (Available in paper copy or microfiche from National Technical Information Services (NTIS) Springfield, VA 22151. Order by NTIS No. PB-273 535/5ST.)
  - 4. *NPDES Compliance Sampling Manual*, U.S. Environmental Protection Agency (U.S.EPA), Office of Water Enforcement, Publication MCD-51, 1977, 140 pp. (Available from the General Services Administration (8FFS), Centralized Mailing Lists Services, Building 41, Denver Federal Center, CO 80225.)
- D. All monitoring instruments and devices used by Dynegy Moss Landing, LLC (Discharger) to fulfill the prescribed monitoring program shall be properly maintained and calibrated as necessary to ensure their continued accuracy. All flow measurement devices shall be calibrated at least once per year to ensure continued accuracy of the devices.



- E. Monitoring results, including noncompliance, shall be reported at intervals and in a manner specified in this MRP.
- F. Unless otherwise specified by this MRP, all monitoring shall be conducted according to test procedures established at 40 C.F.R. part 136, Guidelines Establishing Test Procedures for Analysis of Pollutants. All analyses shall be conducted using the lowest practical quantitation limit achievable using the specified methodology. Where effluent limitations are set below the lowest achievable quantitation limits, pollutants not detected at the lowest practical quantitation limits will be considered in compliance with effluent limitations. Analyses for toxics listed in Table 3 of the 2019 California Ocean Plan (California Ocean Plan) shall adhere to guidance and requirements contained in that document
- G. The Discharger shall ensure that the results of the Discharge Monitoring Report-Quality Assurance (DMR-QA) Study or the most recent Water Pollution Performance Evaluation Study are submitted annually to the State Water Board at the following address:

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

**II. MONITORING LOCATIONS**

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

**Table E-1. Monitoring Station Locations**

Discharge Point Name	Monitoring Location Name	Monitoring Location Description
--	INF-002	Influent wastewater prior to treatment, upstream of any in-plant return flows, in intakes, where representative samples of wastewater influent can be obtained.
002	EFF-002	This monitoring location receives once-through cooling water from Units 1 and 2. This is the location where representative samples of discharges through the ocean outfall can be collected, after treatment and chlorination/dechlorinating, prior to the contact with receiving water.
--	INT-002B	Internal monitoring location that receives seawater evaporator blow down of brine discharged to the flow of once-through cooling water (EFF- 002).
--	INT-002C	Treated wastewater sump that receives low volume waste and metal cleaning waste from previous monitoring locations 002C1 to 002C6. This monitoring location receives wastewater from oil water separator, boiler (Heat Recovery Steam Generator (HRSG)) blowdown, fireside wash water from Units 1 and 2, bearing cooling water, stormwater from ammonia storage system for selective catalytic reduction, and drains from oil handling areas of retired Units 6 and 7, and Units 1 and 2.
--	INT-002C3	This monitoring location receives fireside wash water from a total of four HRSGs for Units 1 and 2 (2 HRSGs per unit). The HRSGs are also referred as boilers. The firesides of Units 1 and 2 HRSGs are periodically water washed during maintenance outages to increase efficiency. These washes are non-hazardous and are performed using an above ground temporary tankage system that recycles the water.

--	INT-002E	At a location where a representative sample of all in-plant waste streams can be collected prior to combining with once-through cooling water. In lieu of a monitoring station, the Discharger may report calculated sum of mass emissions measured at Monitoring Location INT-002B and INT-002C.
004	EFF-004	This monitoring location receives combined flow from intake screen trash basket over-flow and intake cleaning water from Units 1 and 2.

**III. INFLUENT MONITORING REQUIREMENTS**

**A. Monitoring Location INF-002**

- The Discharger shall monitor influent to the facility at Monitoring Location INF-002 as follows:

**Table E-2. Influent Monitoring**

Parameter <sup>1</sup>	Units	Sample Type	Minimum Sampling Frequency
Temperature	°F	Estimate	Daily
pH	pH units	Grab	Weekly during chlorination
Settleable Solids	ml/L	Grab	Quarterly

<sup>[1]</sup> When suspended solids analysis or certain metal analysis such as copper indicate noncompliance may be due to intake water quality, concurrent intake samples should be collected to verify such is the case.

**IV. EFFLUENT MONITORING REQUIREMENTS**

**A. Monitoring Location EFF-002**

- The Discharger shall monitor once through cooling water, commingled with low volume wastes, metal cleaning wastes (when discharged), and stormwater runoff from the ammonia tank area at Monitoring Location EFF-002 as follows. If more than one analytical test method is listed for a given parameter, the Discharger must select from the listed methods and corresponding Minimum Level:

**Table E-3. Effluent Monitoring at Monitoring Location EFF-002**

Parameter	Units	Sample Type	Minimum Sampling Frequency <sup>[8]</sup>	Required Analytical Test Method and (Minimum Level, Units), respectively
Average Daily Flow	MGD	Record from Pump Operating Data	Daily <sup>[1]</sup>	[2]
Temperature	°F	--	Daily/Instantaneous	[2]
pH	pH units	Grab	Weekly during chlorination	[2]
Settleable Solids	ml/L	Grab	Quarterly <sup>[6]</sup>	[2]
Dissolved Oxygen	mg/L	Grab	Quarterly <sup>[6]</sup>	[2]
Arsenic	µg/L	Grab	Quarterly <sup>[6]</sup>	[2]

Parameter	Units	Sample Type	Minimum Sampling Frequency <sup>[8]</sup>	Required Analytical Test Method and (Minimum Level, Units), respectively
Cadmium	µg/L	Grab	Quarterly <sup>[6]</sup>	[2]
Total Chromium <sup>[3]</sup>	µg/L	Grab	Quarterly <sup>[6]</sup>	[2]
Lead	µg/L	Grab	Quarterly <sup>[6]</sup>	[2]
Mercury	µg/L	Grab	Quarterly <sup>[6]</sup>	[2]
Selenium	µg/L	Grab	Quarterly <sup>[6]</sup>	[2]
Silver	µg/L	Grab	Quarterly <sup>[6]</sup>	[2]
Zinc	µg/L	Grab	Quarterly <sup>[6]</sup>	[2]
Total Residual Chlorine	µg/L	Grab	Weekly during chlorination	[2]
Free Available Chlorine	µg/L	Grab	Weekly during chlorination	[2]
Copper <sup>[4]</sup>	µg/L	Grab	Quarterly <sup>[6]</sup>	[2]
Nickel	µg/L	Grab	Quarterly <sup>[6]</sup>	[2]
Cyanide	µg/L	Grab	Quarterly <sup>[6]</sup>	[2]
Chronic Toxicity <sup>[5]</sup>	TUc	Grab	Quarterly	[2]
Ammonia	µg/L	Grab	Quarterly <sup>[6]</sup>	[2]
Non-Chlorinated Phenolic Compounds	µg/L	Grab	Annually (May)	[2]
Chlorinated Phenolics	µg/L	Grab	Annually (May)	[2]
Endosulfan	µg/L	Grab	Annually (May)	[2]
Endrin	µg/L	Grab	Annually (May)	[2]
HCH	µg/L	Grab	Annually (May)	[2]
Acrolein	µg/L	Grab	Annually (May)	[2]
Antimony	µg/L	Grab	Annually (May)	[2]
Bis(2-chloroethoxy) Methane	µg/L	Grab	Annually (May)	[2]

Parameter	Units	Sample Type	Minimum Sampling Frequency <sup>[8]</sup>	Required Analytical Test Method and (Minimum Level, Units), respectively
Bis(2-chloroisopropyl) Ether	µg/L	Grab	Annually (May)	[2]
Chlorobenzene	µg/L	Grab	Annually (May)	[2]
Chromium (III)	µg/L	Grab	Annually (May)	[2]
Di-n-butyl Phthalate	µg/L	Grab	Annually (May)	[2]
Dichlorobenzenes	µg/L	Grab	Annually (May)	[2]
Diethyl Phthalate	µg/L	Grab	Annually (May)	[2]
Dimethyl Phthalate	µg/L	Grab	Annually (May)	[2]
4,6-dinitro-2-methylphenol	µg/L	Grab	Annually (May)	[2]
2,4-dinitrophenol	µg/L	Grab	Annually (May)	[2]
Ethylbenzene	µg/L	Grab	Annually (May)	[2]
Fluoranthene	µg/L	Grab	Annually (May)	[2]
Hexachloro-cyclopentadiene	µg/L	Grab	Annually (May)	[2]
Nitrobenzene	µg/L	Grab	Annually (May)	[2]
Thallium, Total Recoverable	µg/L	Grab	Annually (May)	[2]
Toluene	µg/L	Grab	Annually (May)	[2]
Tributyltin	µg/L	Grab	Annually (May)	[2]
1,1,1-trichloroethane	µg/L	Grab	Annually (May)	[2]
Acrylonitrile	µg/L	Grab	Annually (May)	[2]
Aldrin	µg/L	Grab	Annually (May)	[2]
Benzene	µg/L	Grab	Annually (May)	[2]
Benzidine	µg/L	Grab	Annually (May)	[2]
Beryllium	µg/L	Grab	Annually (May)	[2]
Bis(2-chloroethyl) Ether	µg/L	Grab	Annually (May)	[2]

Parameter	Units	Sample Type	Minimum Sampling Frequency <sup>[8]</sup>	Required Analytical Test Method and (Minimum Level, Units), respectively
bis(2-ethylhexyl) phthalate	µg/L	Grab	Annually (May)	[2]
Carbon Tetrachloride	µg/L	Grab	Annually (May)	[2]
Chlordane	µg/L	Grab	Annually (May)	[2]
Chlorodibromomethane	µg/L	Grab	Annually (May)	[2]
Chloroform	µg/L	Grab	Annually (May)	[2]
DDT	µg/L	Grab	Annually (May)	[2]
1,4-dichlorobenzene	µg/L	Grab	Annually (May)	[2]
3,3'-dichlorobenzidine	µg/L	Grab	Annually (May)	[2]
1,2-dichloroethane	µg/L	Grab	Annually (May)	[2]
1,1-dichloroethylene	µg/L	Grab	Annually (May)	[2]
Dichlorobromomethane	µg/L	Grab	Annually (May)	[2]
Dichloromethane	µg/L	Grab	Annually (May)	[2]
1,3-dichloropropene	µg/L	Grab	Annually (May)	[2]
Dieldrin	µg/L	Grab	Annually (May)	[2]
2,4-dinitrotoluene	µg/L	Grab	Annually (May)	[2]
1,2-diphenylhydrazine	µg/L	Grab	Annually (May)	[2]
Halomethanes	µg/L	Grab	Annually (May)	[2]
Heptachlor	µg/L	Grab	Annually (May)	[2]
Heptachlor Epoxide	µg/L	Grab	Annually (May)	[2]
Hexachlorobenzene	µg/L	Grab	Annually (May)	[2]
Hexachlorobutadiene	µg/L	Grab	Annually (May)	[2]
Hexachloroethane	µg/L	Grab	Annually (May)	[2]
Isophorone	µg/L	Grab	Annually (May)	[2]

Parameter	Units	Sample Type	Minimum Sampling Frequency <sup>[8]</sup>	Required Analytical Test Method and (Minimum Level, Units), respectively
N-nitrosodimethylamine	µg/L	Grab	Annually (May)	[2]
N-nitrosodi-N-propylamine	µg/L	Grab	Annually (May)	[2]
N-nitrosodiphenylamine	µg/L	Grab	Annually (May)	[2]
PAHs	µg/L	Grab	Annually (May)	[2]
PCBs	ng/L	Grab	Two times per year (wet and dry season)	[2], [7]
TCDD equivalents	µg/L	Grab	Annually (May)	[2]
1,1,2,2-tetrachloroethane	µg/L	Grab	Annually (May)	[2]
Tetrachloroethylene	µg/L	Grab	Annually (May)	[2]
Toxaphene	µg/L	Grab	Annually (May)	[2]
Trichloroethylene	µg/L	Grab	Annually (May)	[2]
1,1,2-trichloroethane	µg/L	Grab	Annually (May)	[2]
2,4,6-trichlorophenol	µg/L	Grab	Annually (May)	[2]
Vinyl Chloride	µg/L	Grab	Annually (May)	[2]
Radioactivity	pCi/L	Grab	Annually (May)	[2]

Notes:

- [1] When continuous monitoring is required, the total daily flow (24-hour basis) shall be reported. If no discharge occurs during the month, the report shall so state.
- [2] Pollutants shall be analyzed using the analytical methods described in 40 C.F.R. part 136. For priority pollutants, the methods must meet the lowest minimum levels (MLs) specified in Appendix II of the California Ocean Plan (2019) that is required to demonstrate compliance. Where no methods are specified for a given pollutant, the methods must be approved by the Central Coast Water Board or the State Water Board.
- [3] The Discharger may at its option meet this requirement as total chromium.
- [4] When suspended solids analysis or certain metal analysis such as copper indicate noncompliance may be due to intake water quality, concurrent intake samples should be collected to verify such is the case.
- [5] Refer to section V, Whole Effluent Toxicity Testing Requirements.
- [6] Quarterly monitoring during the first year requires with stipulation that at least one sample per year must be collected when discharging from the treated water sump; one sample per year must be collected when discharging metal cleaning wastes, and one sample per year must be collected when discharging boiler blowdown. The Discharger shall calculate and report the results quarterly. After the first year, the Central Coast Water Board will evaluate results and may notify the Discharger, in writing, of changes in sampling and reporting frequency. Until the Discharger receives such written notice from the Central Coast Water Board, the required frequency will remain at quarterly, with representative monitoring of low volume wastes and metal cleaning wastes.
- [7] PCBs for comparison to the California Ocean Plan mean the sum of Aroclor-1016, 1221, 1232, 2342, 1248, 1254, and 1260 when monitoring using U.S. EPA method 608. PCBs shall also be analyzed for the sum of 209 congeners using U.S. EPA proposed method 1668c as consistent with Central Coast Long-Term Environmental Assessment Network (CCLEAN) methodology utilizing grab samples to meet the CCLEAN monitoring obligations. The 209 congeners shall be individually quantified and results also reported to CCLEAN. The discharge of PCBs is prohibited (See Order Prohibitions section III.H. When analysis indicates noncompliance may be due to intake water quality, concurrent intake samples shall be collected to verify such is the case.

<sup>[8]</sup> If a discharge of low volume wastes and chemical metal cleaning wastes (to be monitored at Monitoring Location INT-002C and INT-002C3) occurs during a discharge event, then the Discharger must sample for the final combined effluent at Monitoring Location EFF-002 during the duration of such discharge, and state so under penalty of perjury in the corresponding monitoring report.

**B. Monitoring Location INT-002B (Seawater Evaporator Blowdown)**

1. The Discharger shall monitor seawater evaporator blowdown waste at Monitoring Location INT-002B as follows:

**Table E-4. Effluent Monitoring at Monitoring Location INT-002B**

Parameter	Units	Sample Type	Minimum Sampling Frequency <sup>[3]</sup>
Average Daily Flow <sup>[1]</sup>	GPD	Estimate	Daily
Total Suspended Solids <sup>[2]</sup>	mg/L	Grab	Monthly
Oil and Grease	mg/L	Grab	Monthly
pH	pH units	Grab	Weekly during chlorination

**Notes:**

- <sup>[1]</sup> The Discharger shall report the dates of discharge of evaporator blowdown and the total volume discharged per event.
- <sup>[2]</sup> When suspended solids analysis or certain metal analysis such as copper indicate noncompliance may be due to intake water quality, concurrent intake samples shall be collected to verify such is the case.
- <sup>[3]</sup> Sampling must occur when no stormwater from the ammonia storage containment structure is contributing to the treated wastewater sump.

**C. Monitoring Location INT-002C (Low Volume Waste from Wastewater Sump)**

1. The Discharger shall monitor low volume wastes at Monitoring Location INT-002C as follows:

**Table E-5. Effluent Monitoring at Monitoring Location INT-002C**

Parameter	Units	Sample Type	Minimum Sampling Frequency <sup>[2]</sup>
Average Daily Flow	GPD	Estimate	Daily
Total Suspended Solids <sup>[1]</sup>	mg/L	Grab	Monthly
Oil and Grease	mg/L	Grab	Monthly
pH	pH units	Grab	Weekly during chlorination

**Notes:**

- <sup>[1]</sup> When suspended solids analysis or certain metal analysis such as copper indicate noncompliance may be due to intake water quality, concurrent intake samples shall be collected to verify such is the case.
- <sup>[2]</sup> Sampling must occur when no stormwater from the ammonia storage containment structure is contributing to the treated wastewater sump.

**D. Monitoring Location INT-002C3 (Metal Cleaning Waste)**

1. The Discharger shall monitor metal cleaning wastes at Monitoring Location INT-002C3 as follows:

**Table E-6. Effluent Monitoring at Monitoring Location INT-002C3**

Parameter	Units	Sample Type	Minimum Sampling Frequency <sup>[3]</sup>
Average Daily Flow <sup>[1]</sup>	GPD	Estimate	Daily
Total Suspended Solids <sup>[2]</sup>	mg/L	Grab	During each discharge
Oil and Grease	mg/L	Grab	During each discharge
Copper, Total Recoverable	mg/L	Grab	During each discharge
Iron, Total Recoverable	mg/L	Grab	During each discharge

Notes:

- <sup>[1]</sup> The Discharger shall report the dates of discharge of metal cleaning waste and the total volume discharged per event.
- <sup>[2]</sup> When suspended solids analysis or certain metal analysis such as copper indicate noncompliance may be due to intake water quality, concurrent intake samples shall be collected to verify such is the case.
- <sup>[3]</sup> Sampling must occur when no stormwater from the ammonia storage containment structure is contributing to the treated wastewater sump.

**E. Monitoring Location INT-002E (In-Plant Waste Streams - Total)**

1. The Discharger shall report the mass emission of all in-plant low volume wastes taken together prior to commingling with once-through cooling water using the calculated sum of mass emissions measured at Monitoring Location INT-002B and INT-002C as follows:

**Table E-7. Effluent Monitoring at Monitoring Location INT-002E**

Parameter	Units	Sample Type	Minimum Sampling Frequency <sup>[1][2]</sup>
Copper, Total Recoverable	lbs/day	Grab	During each discharge from 002C3
Iron, Total Recoverable	lbs/day	Grab	During each discharge from 002C3
All Remaining California Ocean Plan Table 3 Priority Pollutants	lbs/day	Grab	Annually

Notes:

- <sup>[1]</sup> Sampling must occur when no stormwater from the ammonia storage containment structure is contributing to the treated wastewater sump.
- <sup>[2]</sup> In lieu of a monitoring station, the Discharger may report the sum of mass at INT-002B and 002C if those stations have been sampled and analyzed sufficiently to provide the data required by Table E-7.

**F. Monitoring Location EFF-004**

1. The Discharger shall monitor intake screen wash water at Monitoring Location EFF-004 as follows. If more than one analytical test method is listed for a given parameter, the Discharger must select from the listed methods and corresponding Minimum Level:



**Table E-8. Effluent Monitoring at Monitoring Location EFF-004**

Parameter <sup>[1]</sup>	Units	Sample Type	Minimum Sampling Frequency
Average Daily Flow	GPD	Estimate	Daily
Total Suspended Solids	mg/L	Grab	Monthly

**Notes:**

<sup>[1]</sup> When suspended solids analysis or certain metal analysis such as copper indicate noncompliance may be due to intake water quality, concurrent intake samples shall be collected to verify such is the case.

**V. WHOLE EFFLUENT TOXICITY TESTING REQUIREMENTS**

**A. Chronic Toxicity**

The presence of chronic toxicity shall be estimated as specified in *Short Term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to West Coast Marine and Estuarine Organisms*, EPA-821/600/R-95/136; *Short Term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to Marine and Estuarine Organisms*, EPA600-4-01-003; *Procedures Manual for Conducting Toxicity Tests developed by the Marine Bioassay Project*, SWRCB 1996, 96-1WQ; and/or *Short Term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to Marine and Estuarine Organisms*, EPA/600/4-87-028 or subsequent editions.

Chronic toxicity measures a sublethal effect (e.g., reduced growth or reproduction) to experimental test organisms exposed to an effluent compared to that of the control organisms.

Chronic Toxicity (TU<sub>c</sub>) = 100/no observed effect level (NOEL)

The NOEL is the maximum tested concentration in a medium which does not cause known adverse effects upon chronic exposure in the species in question (i.e., the highest effluent concentration to which organisms are exposed in a chronic test that causes no observable adverse effects on the test organisms; e.g., the highest concentration of a toxicant to which the values for the observed responses are not statistically significantly different from the controls). Examples of chronic toxicity include but are not limited to measurements of toxicant effects on reproduction, growth, and sublethal effects that can include behavioral, physiological, and biochemical effects.

In accordance with the 2019 California Ocean Plan, Appendix III, *Standard Monitoring Procedures*, the Discharger shall use the critical life stage toxicity tests specified in the table below to measure TU<sub>c</sub>. Other species or protocols will be added to the list after State Water Board review and approval.

**Table E-9. Approved Tests – Chronic Toxicity**

Species	Test	Tier <sup>[1]</sup>	Reference <sup>[2]</sup>
Giant kelp, <i>Macrocystis pyrifera</i>	percent germination; germ tube length	1	a, c
Red abalone, <i>Haliotis rufescens</i>	abnormal shell development	1	a, c
Oyster, <i>Crassostrea gigas</i> ; mussels, <i>Mytilus spp.</i>	abnormal shell development; percent survival	1	a, c
Urchin, <i>Strongylocentrotus purpuratus</i> ; sand dollar, <i>Dendraster excentricus</i>	percent normal development	1	a, c
Urchin, <i>Strongylocentrotus purpuratus</i> ; sand dollar, <i>Dendraster excentricus</i>	percent fertilization	1	a, c

Species	Test	Tier <sup>[1]</sup>	Reference <sup>[2]</sup>
Shrimp, <i>Homesimysis costata</i>	percent survival; growth	1	a, c
Shrimp, <i>Mysidopsis bahia</i>	percent survival; fecundity	1	a, c
Topsmelt, <i>Atherionops affinis</i>	larval growth rate; percent survival	1	a, c
Silverside, <i>Menidia beryllina</i>	larval growth rate; percent survival	1	a, c

<sup>[1]</sup> First tier methods are preferred for compliance monitoring. If first tier organisms are not available, the Discharger may use a second tier test method following approval by Central Coast Water Board staff.

<sup>[2]</sup> Protocol Reference

- a. Chapman, G.A., D.L. Denton, and J.M. Lazorchak. 1995. Short-term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to West Coast Marine and Estuarine Organisms. U.S. EPA Report No. EPA/600/R-95/136.
- b. Klemm, D.J., G.E. Morrison, T.J. Norberg-King, E.J. Peltier, and M.A. Heber. 1994. Short-term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Water to Marine and Estuarine Organisms. U.S. EPA Report No. EPA-600-4-91-003.
- c. SWRCB 1996. Procedures Manual for Conducting Toxicity Tests Developed by the Marine Bioassay Project. 96-1WQ.
- d. Weber, C.I., W.B. Horning, I.I., D.J. Klemm, T.W. Nieheisel, P.A. Lewis, E.L. Robinson, J. Menkedick and F. Kessler (eds). 1998. Short-term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to ences

If the effluent to be discharged to a marine or estuarine system (e.g., salinity values in excess of 1,000 mg/L) originates from a freshwater supply, salinity of the effluent must be increased with dry ocean salts (e.g., FORTY FATHOMS®) to match salinity of the receiving water. This modified effluent shall then be tested using marine species.

Reference toxicant test results shall be submitted with the effluent sample test results. Both tests must satisfy the test acceptability criteria specified in EPA-821-R-02-012. If the test acceptability criteria are not achieved or if toxicity is detected, the sample shall be retaken and retested within 5 days of the failed sampling event. The retest results shall be reported in accordance with EPA-821-R-02-012 (chapter on report preparation) and the results shall be attached to the next monitoring report.

Dilution and control waters shall be obtained from an area of the receiving waters, typically upstream, which is unaffected by the discharge. Standard dilution water can be used, if the receiving water itself exhibits toxicity or if approved by the Central Coast Water Board. If the dilution water used in testing is different from the water in which the test organisms were cultured, a second control sample using culture water shall be tested.

**B. Conducting Toxicity Identification Evaluations (TIE) and Toxicity Reduction Evaluations (TRE)**

1. A TRE shall be implemented by the Discharger as specified by the Executive Officer. A TIE may be required as part of the TRE.
2. The TIE shall be conducted to identify and evaluate toxicity in accordance with procedures recommended by the U.S. EPA which include the following:
  - a. Toxicity Identification Evaluation: Characterization of Chronically Toxic Effluents, Phase I, (U.S. EPA, 1992a);

- b. Methods for Aquatic Toxicity Identification Evaluations: Phase 1 Toxicity Characterization Procedures, Second Edition (U.S. EPA, 1991a);
  - c. Methods for Aquatic Toxicity Identification Evaluations: Phase II Toxicity Identification Procedures for Sampling Exhibiting Acute and Chronic Toxicity (U.S. EPA, 1993a); and
  - d. Methods for Aquatic Toxicity Identification Evaluations: Phase III Toxicity Confirmation Procedures for Samples Exhibiting Acute and Chronic Toxicity (U.S. EPA, 1993b).
3. As part of the TIE investigation, the Discharger shall be required to implement its TRE work plan. The Discharger shall take all reasonable steps to control toxicity once the source of the toxicity is identified. A failure to conduct required toxicity tests or a TRE within a designated period may result in the establishment of numerical effluent limitations for chronic toxicity in a permit or appropriate enforcement action. Recommended guidance in conducting a TRE includes the following:
- a. Toxicity Reduction Evaluation Guidance for Municipal Wastewater Treatment Plants, August 1999, EPA/833B-99/002; and
  - b. Clarifications Regarding Toxicity Reduction and Identification Evaluations in the National Pollutant Discharge Elimination System Program dated May 27, 2001, U.S. EPA Office of Wastewater Management, Office of Regulatory Enforcement.

### C. Toxicity Reporting

1. The Discharger shall include a full report of toxicity test results with the regular monthly monitoring report and include the following information:
  - a. Toxicity test results;
  - b. Dates of sample collection and initiation of each toxicity test; and
  - c. Acute and/or chronic toxicity discharge limitations (or value).
2. Toxicity test results shall be reported according to the appropriate guidance: *Methods for Measuring the Acute Toxicity of Effluents and Receiving Waters to Freshwater and Marine Organisms*, Fifth Edition, U.S. EPA Office of Water, EPA-821-R-02-012 (2002) or the latest edition, or *Short Term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to Freshwater and Marine Organisms*, EPA-821-R-02-012 (2002) or latest edition.
3. If the results from the initial investigation based on the TRE workplan show that additional (accelerated) toxicity testing is unnecessary, these results shall be submitted with the monitoring report for the month in which investigations conducted under the TRE workplan occurred.
4. Within 14 days of receipt of test results exceeding an acute or chronic toxicity discharge limitation, the Discharger shall provide written notification to the Executive Officer of:
  - a. Findings of the TRE or other investigation to identify the causes of toxicity; and
  - b. Actions the Discharger has taken or will take to mitigate the impact of the discharge and to prevent the recurrence of toxicity.

If the Discharger has not completed the corrective actions, including a TRE, then the Discharger shall submit a schedule under which corrective actions will be implemented or provide the reason for not taking corrective actions if no action is needed.

**VI. LAND DISCHARGE MONITORING REQUIREMENT – NOT APPLICABLE**

**VII. RECYCLING MONITORING REQUIREMENTS – NOT APPLICABLE**

**VIII. RECEIVING WATER MONITORING REQUIREMENTS**

**A. Central Coast Long-Term Environmental Assessment Network (CCLEAN)**

1. The Discharger shall participate in the implementation of the CCLEAN Regional Monitoring Program to fulfill receiving water compliance monitoring requirements and support the following CCLEAN Program objectives.
  - a. Obtain high-quality data describing the status and long-term trends in the quality of nearshore waters, sediments, and associated beneficial uses.
  - b. Determine whether nearshore waters and sediments are in compliance with the California Ocean Plan.
  - c. Determine sources of contaminants to nearshore waters.
  - d. Provide legally defensible data on the effects of wastewater discharges in nearshore waters.
  - e. Develop a long-term database on trends in the quality of nearshore waters, sediments, and associated beneficial uses.
  - f. Ensure that the nearshore component database is compatible with other regional monitoring efforts and regulatory requirements.
  - g. Ensure that nearshore component data are presented in ways that are understandable and relevant to the needs of stakeholders.
2. Monitoring requirements of the CCLEAN Program in effect as of the date of this order are outlined in the following table. The CCLEAN Quality Assurance Project Plan (QAPP) for each year shall be submitted for staff approval prior to initiation of CCLEAN sampling. A detailed technical study design description, including specific location of sampling sites and a description of the specific contents of the CCLEAN Annual Report, shall be provided as a component of the CCLEAN QAPP. Any year-to-year modifications to the program (including implementation of subsequent program phases) shall be identified in the QAPP and/or Annual Report.

**Table E-10. CCLEAN Monitoring Requirements**

Sample Matrix	Sampling Frequency	Sampling Technique	Parameter Sampled	Applicable Water Quality Stressors and Program Objectives
Effluent – Santa Cruz, Watsonville, Monterey One Water, Carmel Area Wastewater District) in effluent	Two times per year (wet and dry season)	30-day flow proportioned samples using automated pumping and solid-phase-extraction (particle filter + XAD resin)	PAHs	Sources, loads, trends, effects and permit compliance for:  POPs
			DDTs	
			Dieldrin	
			Chlordanes	
			PCBs	
			Dioxins/Furans	
	Two-day, four-liter composites	Pyrethroids	Trends of: Emerging contaminants of concern	
		Fipronils		
		Neonicotinoids		
Monthly	Grab	Ammonia		
		Nitrate		
		Silica		

Sample Matrix	Sampling Frequency	Sampling Technique	Parameter Sampled	Applicable Water Quality Stressors and Program Objectives
			Ortho-Phosphate	Sources, loads, trends and permit compliance for: Nutrients
			Urea	
<b>Influent –</b> Watsonville	Once per year (dry season)	Same as effluent	Same as effluent	Efficiency of: POP removal
<b>Rivers –</b> San Lorenzo	Two times per year (wet and dry season)	30-day flow proportioned samples using automated pumping and solid-phase-extraction (particle filter + XAD resin)	PAHs	Sources, loads, trends, effects and permit compliance for: POPs
			DDTs	
			Dieldrin	
			Chlordanes	
			PCBs	
<b>Rivers –</b> San Lorenzo Pajaro Salinas Carmel	Two times per year (wet and dry season)	Two-day, four-liter composites	Pyrethroids	Trends of: Emerging contaminants of concern
			Fipronils	
			Neonicotinoids	
		Grab	Ammonia	Effects of: Nutrients
			Nitrate	
Silicate				
<b>Monterey Bay –</b> (Receiving water) Santa Cruz Watsonville Monterey One Water	Monthly or weekly, as required by each NPDES permit	Grab	Total coliform	Sources, trends, effects and permit compliance for: Fecal Indicator Bacteria (FIB) pathogen indicators
			Fecal coliform	
			<i>Enterococcus</i>	
<b>Monterey Bay –</b> (Open water) North South	Two times per year (wet and dry season)	30-day flow proportioned samples using automated pumping and solid-phase-extraction (particle filter + XAD resin)	PAHs	Sources, loads, trends, effects and permit compliance for: POPs
			DDTs	
			Dieldrin	
			Chlordanes	
			PCBs	
	Grab	PBDEs	Effects of: Nutrients and FIBs	
		TSS		
		FIBs		
		Ammonia		
		Nitrate		
Every 5 years	Database satellite ocean color imagery	Silica		
		Ortho-Phosphate		
			Urea	
<b>Sediments –</b> Six sites along the 80m contour in Monterey Bay, Santa Cruz Inner Harbor, Moss Landing Harbor	Annually in the fall	Sediment Grab	DDTs	Status, effects and alert level comparisons for POPs
			Dieldrin	
			Chlordanes	
			PCBs	
			PBDEs	
			Grain size	
Six sites along the 80m contour in Monterey Bay	Every five years in the fall		TOC	Status and trends of benthic communities
			Benthic infauna	

Sample Matrix	Sampling Frequency	Sampling Technique	Parameter Sampled	Applicable Water Quality Stressors and Program Objectives
Mussels – Five rocky intertidal sites in Monterey Bay	Annually in the wet season	1 composite of 30-40 mussels	Lipid content	Status, trends, effects and alert level comparisons for:  POPs and pathogen indicators
			DDTs	
			Dieldrin	
			Chlordanes	
			PCBs	
		1 composite of 30-40 mussels	PBDEs	
			Fecal indicator bacteria	

**B. MBNMS Spill Reporting**

In accordance with Standard Provision V.E. (Attachment D), within 24 hours, the Discharger shall report spills under its control that are likely to enter ocean waters, directly to the Monterey Bay National Marine Sanctuary (MBNMS) office at 831-236-6797. A report shall also be provided to the Central Coast Water Board within five days of the time the Discharger becomes aware of the circumstances.

**IX. OTHER MONITORING REQUIREMENTS**

**A. Impingement Mortality and Entrainment (IM&E) Monitoring Requirement Under the Once-Through Cooling Policy (OTC Policy)**

1. Section 4 of the OTC Policy requires the Discharger to perform a baseline IM&E monitoring study. The baseline IM&E study was submitted to the State Water Board on September 21, 2017, and approved by the State Water Board on December 1, 2017. In accordance with Moss Landing Settlement Agreement section 2.1.7 d, after the Track 2 controls are implemented and after the December 31, 2020 final compliance date, OTC Policy sections 4.A.(2) and 4.B.(2) specify the need for another study to confirm Track 2 compliance. The Discharger shall assess OTC Policy Track 2 compliance as follows, which will satisfy the requirements of OTC Policy sections 4.A.(2) and 4.B.(2).
  - a. Compliance shall be monitored utilizing a Compliance Tracking Tool that relies on: (1) data on the densities of representative site-specific species as approved in the Baseline Study Report that will allow the calculation of the percent reduction in impingement mortality and entrainment; (2) actual records of cooling water flow; and (3) technology performance as verified in paragraph 2.1.7.c.iii of the Moss Landing Settlement Agreement.
  - b. Compliance shall be determined based on the average annual reduction calculated across each NPDES permit term.

**B. Technology Verification Studies**

As specified in the Settlement Agreement at paragraphs 2.1.7.c.i-iii, the Discharger shall evaluate and report on resulting levels of entrainment and impingement following the implementation of the operational and technology controls using the Compliance Tool described in the Settlement Agreement.

**C. Status of Control Measures to Reduce IM&E Monitoring Requirement**

As provided in paragraph 2.1.6.c. of the Settlement Agreement, the Discharger shall provide the State Water Board with an annual update on the status of measures to reduce IM&E and

report the status of any studies undertaken in the previous calendar year to determine compliance options to meet Track 2. As shown in Table 11 of this Order (Section VI.A.C.6.b), the Discharger has met all necessary compliance requirements of the OTC Policy to date.

**D. OTC Policy Compliance Approach Report**

As provided in paragraph 2.1.6.e. of the Settlement Agreement, the Discharger shall submit, from time to time, study designs, results, and other information regarding compliance approaches and progress related to the OTC Policy, including but not limited to the Baseline Study Design, Baseline Study Report, pilot study designs, and technology verification reports. Whenever the Discharger submits information to the State Water Board and requests the State Water Board's confirmation or approval, the State Water Board will respond promptly with an approval or an explanation for disapproval, including any additional information needs, but in any event no later than 60 days after receipt of the update. In the event the State Water Board requests additional information or other amendments, the State Water Board will provide a decision not later than 30 days after receipt of the information or amendment. These deadlines may be extended by mutual agreement. The provisions of paragraph 2.1.6.e of the Settlement Agreement pertain only to the Discharger's compliance with the Policy, and do not impose obligations on the State Water Board unrelated to the Discharger's compliance with the Policy.

**E. Stormwater Monitoring**

Stormwater monitoring and reporting shall be conducted in accordance with the current Industrial Activities Stormwater General Permit for on-going industrial activities, and the current Construction Activities Stormwater General Permit for any construction activities at the plant.

**F. Intake Structure Monitoring**

Annually, the Discharger shall measure bar rack approach velocity and sediment deposition at intake structures.

**X. REPORTING REQUIREMENTS**

**A. General Monitoring and Reporting Requirements**

The Discharger shall comply with all federal Standard Provisions and Central Coast Water Board Standard Provisions (Attachment D) related to monitoring, reporting, and recordkeeping.

**B. Self-Monitoring Reports (SMRs)**

1. The Discharger shall electronically submit SMRs using the State Water Board's California Integrated Water Quality System (CIWQS) Program website at:

[http://www.waterboards.ca.gov/water\\_issues/programs/ciwqs/](http://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 service interruption for electronic submittal. The Discharger shall use the current version of the Permittee Entry Template (PET) tool to configure data into the applicable CIWQS Data Format and shall update that template according to this Order (e.g., add/delete parameters, revise limits, update monitoring locations, etc.). Blank versions of the latest PET tool are available at:

[http://www.waterboards.ca.gov/water\\_issues/programs/ciwqs/chc\\_npdes.shtml](http://www.waterboards.ca.gov/water_issues/programs/ciwqs/chc_npdes.shtml).

2. The Discharger shall report in the SMR the results for all monitoring specified in this MRP under sections III through IX. The Discharger shall submit SMRs including the results of all required monitoring using U.S. EPA-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.
3. Sampling and monitoring as required by this MRP shall begin on the effective date of this Order. The Discharger shall complete all required monitoring and reporting according to the schedule shown in Table E-11 unless otherwise directed by the Executive Officer.

**Table E-11. Monitoring Reports and Reporting Schedule**

SMR Name	Permit Section for Monitoring & Sampling Data Included in this Report	SMR Submittal Frequencies	SMR Due Date
NPDES Monitoring Report – Quarterly	MRP Sections III (Influent) and IV (Effluent) – CA Ocean Plan Table 3 constituents, ammonia, chronic toxicity, priority pollutants	Quarterly	First day of second calendar month following period of sampling
NPDES Monitoring Report – Annual	MRP Section IV (Effluent) and VIII (Receiving Water) – CA Ocean Plan Table 3 constituents, ammonia, chronic toxicity, priority pollutants	Annually	February 1 <sup>st</sup> , following calendar year of sampling
NPDES Summary Report	Attachment D, Standard Provision VIII.D.8	Annually	February 1 <sup>st</sup> , following calendar year of sampling
Report of Waste Discharge (ROWD) Application	Table 3	Once per permit term	March 7, 2025
Intake Structure Monitoring	MRP section IX.F	Annually during years of operation	Submit with the annual report of same year.
Climate Change Hazards, Vulnerabilities, and Response Plan Progress Report	MRP section X.D.3	Annually	Submit with the annual report of same year.
Climate Change Hazards, Vulnerabilities, and Response Plan	Order Section VI.C.7.a	Once	March 7, 2025, submit with ROWD

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 C.F.R. 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:

- a. 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).
- b. 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.

- c. Sample results less than the laboratory's MDL shall be reported as "Not Detected," or ND.
  - d. Dischargers are to instruct laboratories to establish calibration standards so that the ML value (or its equivalent if there is differential treatment of samples relative to calibration standards) is the lowest calibration standard. At no time is the Discharger to use analytical data derived from extrapolation beyond the lowest point of the calibration curve.
5. Compliance Determination. Compliance with effluent limitations for reportable pollutants shall be determined using sample reporting protocols defined above and in Attachment A. For purposes of reporting and administrative enforcement by the Central Coast 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 Minimum Level (ML).
  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:
    - a. The data set shall be ranked from low to high, ranking the reported ND determinations lowest, DNQ determinations next, followed by quantified values (if any). The order of the individual ND or DNQ determinations is unimportant.
    - b. The median value of the data set shall be determined. If the data set has an odd number of data points, then the median is the middle value. If the data set has an even number of data points, then the median is the average of the two values around the middle unless one or both of the points are ND or DNQ, in which case the median value shall be the lower of the two data points where DNQ is lower than a value and ND is lower than DNQ.

7. The Discharger shall submit SMRs in accordance with the following requirements:

- a. 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.
- b. 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.

**C. Discharge Monitoring Reports (DMRs)**

1. DMRs are U.S. EPA reporting requirements. The Discharger shall electronically certify and submit DMRs together with SMRs using Electronic Self-Monitoring Reports module eSMR 2.5 or any upgraded version. Electronic DMR submittal shall be in addition to electronic SMR submittal. Information about electronic DMR submittals is available at the DMR website at:  
[http://www.waterboards.ca.gov/water\\_issues/programs/discharge\\_monitoring](http://www.waterboards.ca.gov/water_issues/programs/discharge_monitoring).

**D. Other Reports**

1. The Discharger shall report the results of any special studies, acute and chronic toxicity testing, TRE/TIE, best management practices (BMPs), Pollutant Minimization Program (PMP), and Pollution Prevention Plan required by Special Provisions – VI.C. The Discharger shall report the progress in satisfaction of compliance schedule dates specified in Special Provisions – VI.C.6.b. The Discharger shall submit reports with the first monthly SMR scheduled to be submitted on or immediately following the report due date in compliance with SMR reporting requirements described in subsection X.B of the MRP.
2. The Discharger shall report BMPs that are maintained or implemented at the facility including documentation of conditions prior to implementation, a description of the BMPs, and period of implementation. The Discharger shall maintain and make available to the Central Coast Water Board upon request a daily log of visual inspection for the pollutants of concern. The Discharger shall certify within the report that the log has been maintained.
3. The Discharger shall report annually on progress made towards completing the Climate Change Hazards, Vulnerabilities, and Response Plan. The annual progress report shall describe all steps the Discharger has undertaken to generate the plan and outline planned next steps for the following year.

## ATTACHMENT F – FACT SHEET

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**ATTACHMENT F – FACT SHEET**

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

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

**I. PERMIT INFORMATION**

The following table summarizes administrative information related to the facility.

**Table F-1. Facility Information**

WDID	3272011001
Discharger	Dynegy Moss Landing, LLC
Name of Facility	Moss Landing Power Plant (MLPP)
Facility Address	U.S Highway 1 and Dolan Road
	Moss Landing, CA 95039-0690
	Monterey County
Facility Contact, Title and Phone	Mike Batte, Managing Director, 831-633-6698
Authorized Person to Sign and Submit Reports	Mike Batte, Managing Director, 831-633-6698
Mailing Address	P. O. Box 690 Moss Landing, CA 95039
Billing Address	Same as Facility Address
Type of Facility	Electric Power Generation
Major or Minor Facility	Major
Threat to Water Quality	1
Complexity	A
Pretreatment Program	Not Applicable
Recycling Requirements	Not Applicable
Facility Permitted Flow	362 million gallons per day (MGD) - Discharge Point No. 002 0.0063 MGD – Discharge Point No. 004
Facility Design Flow	362 MGD – Discharge Point No. 002
Watershed	Monterey Bay and Moss Landing Harbor
Receiving Water	Pacific Ocean (Monterey Bay National Marine Sanctuary) and Moss Landing Harbor
Receiving Water Type	Ocean waters

- A.** Dynegy Moss Landing, LLC is the owner and operator of Moss Landing Power Plant (Facility or MLPP), an electric power generation facility. 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.

- B. The Facility discharges wastewater to the Pacific Ocean, a water of the United States. The Discharger was previously regulated by Order No. R3-2000-0041 and National Pollutant Discharge Elimination System (NPDES) Permit No. CA0006254 adopted on October 27, 2000, revised on October 15, 2004, and expired on October 27, 2005. Attachment B provides a map of the area around the Facility. Attachment C provides a flow schematic of the Facility.
- C. The Discharger filed a report of waste discharge and submitted an application for reissuance of its waste discharge requirements (WDRs) and NPDES permit by submittal dated April 21, 2017. Supplemental information was requested on November 17, 2017, and received on December 13, 2017. The application was deemed complete on December 13, 2017.
- D. Regulations at 40 C.F.R. section 122.46 limit the duration of NPDES permits to a fixed term not to exceed five years. Accordingly, Table 3 of this Order limits the duration of the discharge authorization. However, pursuant to California Code of Regulations, title 23, section 2235.4, the terms and conditions of an expired permit are automatically continued pending reissuance of the permit if the Discharger complies with all federal NPDES requirements for continuation of expired permits.

## II. FACILITY DESCRIPTION

MLPP is located at the intersection of Highway 1 and Dolan Road, P. O. Box 690, Moss Landing, California, 95039-0690. Dynegy Moss Landing, LLC, owns and operates this natural gas power plant located near Moss Landing Harbor. Moss Landing Harbor lies to the west of the plant and is used for recreational marine sports and commercial fishing. Land use in the area mostly consists of agricultural, industrial, and commercial land use.

MLPP originally consisted of seven generating units. Units 1–5 were built in the early 1950s and were retired in 1995. Units 6 and 7 were built in the late 1960s and were retired permanently on December 31, 2016. In 1999, the Discharger modernized the power plant to produce additional electric power more efficiently and reduce environmental impacts on water resources. The modernization process is described in the Application for Certification filed with the California Energy Commission for the MLPP modernization. The field studies and data analyses for the proposed modernization project at the MLPP for installation of Units 1 and 2 followed a study plan developed in coordination with a technical working group established under the auspices of the Central Coast Water Board. In spring 2002, two new high efficiency combined-cycle generating units (Units 1 and 2) began commercial operation. Units 1 and 2 each generate 510 net megawatts.

The other significant change that occurred since the effective date of the existing permit is that the facility now discharges stormwater under the State Water Resources Control Board (State Water Board) Industrial General Stormwater Permit. The Facility currently consists of two generating units (Units 1 and 2) with a total combined power generating capacity of 1,020 megawatts.

### A. Description of Wastewater Treatment and Controls

MLPP has one cooling water intake station located on Moss Landing Harbor.

The wastewater treatment units at the Facility consist of an oil/water separator and two retention basins (the north and south basins). Stormwater and some low volume wastes are treated by an oil/water separator and are conveyed to a treated wastewater sump. Other low volume wastes are discharged directly to the treated wastewater sump.

Flow of stormwater and all low volume wastes are intermittent. All internal waste streams are routed to combine with the once-through cooling water stream prior to discharge through Discharge Point No. 002. The Facility has two discharge outfalls, Discharge Point No. 002, which discharges to the Pacific Ocean, and Discharge Point No. 004, which discharges to

Moss Landing Harbor. The discharge of cooling water and other wastewaters associated with Units 1 and 2 is divided between two separate conduits that convey to a submerged offshore discharge structure located in Monterey Bay about 2,400 feet from the plant and approximately 600 feet offshore.

The Facility is permitted to discharge up to 362 MGD through Discharge Point No. 002 at peak power demand. Internal discharge point designations (INT-002B and INT-002C) are based on discrete locations at which the in-plant waste stream discharges to the main waste stream or following initial treatment, as specified in the Monitoring and Reporting Program. According to available flow data, the maximum daily average flow between October 2009 and June 2017 was 1,223.4 MGD. This flow was allowed under Order No. R3-2000-0041 when Units 1,2, 6 and 7 were all operational. Cooling water flow rates will depend on energy demand and the available power at any given point in time. The typical or average cooling water flow rate for future conditions is unknown due to the deregulated energy market.

The Discharger also uses sodium hypochlorite as an alternative to gaseous chlorine for bio-fouling reduction, while calcium hypochlorite is used as a backup. The Discharger continues to evaluate other alternatives. The Discharger periodically discharges dye, such as rhodamine, during testing of its facilities. Domestic waste generated by plant employees is discharged to onsite septic tanks and leach field systems and does not enter Discharge Point No. 002.

Since issuance of Order No. R3-2000-0041, standard naming conventions for outfalls/discharge points and monitoring locations have changed and are updated in this permit. In addition, this Order establishes fewer monitoring locations to simplify compliance determination for technology-based effluent limitations. Further discussion of internal monitoring is provided in sections IV.B.II and VII of this Fact Sheet. Wastewaters and associated monitoring locations for compliance determination are described in Table F-2 as follows:

**Table F-2. Discharges and Contributing Waste Streams**

Discharge Point <sup>[1]</sup>	Order No. 2000-0041 Monitoring Location Designation <sup>[3]</sup>	New Monitoring Location Designation <sup>[3]</sup>	Discharge Description <sup>[4]</sup>	Waste Type <sup>[5]</sup>	Average Flow (GPD)
002	EFF-002	EFF-002	Once Through Cooling (Units 1 and 2)	Cooling Water	3.6 x 10 <sup>8</sup>
	002A	--	Intake Screen Wash	Wash Water	5.2 x 10 <sup>5</sup>
	002B	INT-002B <sup>[6]</sup>	Seawater Evaporator Blowdown	LVW	5.5 x 10 <sup>5</sup>
	002C1 <sup>[2]</sup>	INT-002C <sup>[6]</sup>	Oil Water Separator	LVW	6.5 x 10 <sup>4</sup>
	002C2 <sup>[2]</sup>		HRSG Blowdown (Units 1 and 2)	LVW	3.5 x 10 <sup>5</sup>
	002C4 <sup>[2]</sup>		Bearing Cooling Water	LVW	2.0 x 10 <sup>2</sup>
	002C5 <sup>[2]</sup>		Ammonia Storage System Stormwater (to Oil Water Separator)	Storm Water	3.0 x 10 <sup>3</sup>
	002C6 <sup>[2]</sup>		Drains from Oil Handling Areas-Retired Units 6 and 7, and Units 1 and 2	LVW	6.2 x 10 <sup>4</sup>
002C3 <sup>[2]</sup>	INT-002C3 <sup>[6]</sup>	HRSG Fireside Wash Water	MCW	2.2 x 10 <sup>3</sup>	
004	004A	004A	Intake Screen Wash Over-flow for Units 1 and 2	Wash Water	3.3 x 10 <sup>3</sup>
	004B	004B	Intakes Cleaning Wastewater for Units 1 and 2	Wash Water	3.0 x 10 <sup>3</sup>



Notes:

- [1] As described in the application submitted by the Discharger.
- [2] Wastewater is treated and/or conveyed to the treated wastewater sump 002C before discharging to Discharge Outfall No. 002.
- [3] Monitoring locations and internal outfalls have been re-named for the application of effluent limitations guidelines and standards in this permit.
- [4] HRSG = a total of four Heat Recovery Steam Generators for Units 1 and 2 (two HRSGs per unit). The HRSGs are also referred to as boilers.
- [5] LVW=Low Volume Waste, MCW=Metal Cleaning Waste.
- [6] The combination of INT-002B, INT-002C and INT-002C3 is designated by monitoring location INT-002E.

## 1. Once-Through Cooling Water

Units 1 and 2 are two 510 megawatt combined-cycle generating units that began commercial operation in spring 2002. Each unit is cooled by three circulating water pumps having a total combined flow of 180 MGD (125,000 gallons per minute (GPM)). Cooling water is drawn from Moss Landing Harbor, entering the system through an intake structure located on the east side of the Harbor, about 500 feet south of the entrance to Elkhorn Slough. The concrete intake structure was originally built to serve the plant's now retired Units 1-5 that were constructed in the 1950s. Units 1-5 were permanently retired in 1995, and the intake was later upgraded to meet the debris filtration needs of the new Units 1 and 2.

Water entering the system initially passes through a bank of bar racks, which are positioned with approximately 4-inch center-to-center spacing. The bar racks extend from the deck of the intake structure, 9.6 feet above mean lower low water (MLLW), down to the Harbor bottom at a depth of 20.1 feet below MLLW. Debris impinged on the bars is removed by an automated raking system and deposited in a receptacle for subsequent disposal in a landfill. Located approximately 20 feet behind the bar racks are the traveling water screens (TWS).

The TWS remove most of the debris that is small enough to pass through the bar racks but large enough to potentially clog the plant's condenser tubes. Each generating unit has a bank of three screens. Each of the screens is 10 feet wide and extends down to the floor of the intake structure, 20 feet below MLLW. When the TWS are in operation, cooling water passes through an upward rotating belt of stainless steel screen with an effective mesh size of 3/8 inch. The screen belt lifts debris out of the flow stream and carries it to the top of the TWS where a seawater screen wash system sprays the debris off the screen and onto a conveyor belt. The conveyor belt carries the debris to the same receptacle utilized by the bar rack rake system. The Units 1 and 2 TWS are inclined 35 degrees from vertical to increase their ability to retain debris. This also reduces the through-screen velocity by presenting a larger screen area to the flow than would be presented by a vertical TWS. The traveling screens are normally operated (rotated) every four hours for a period of 20 to 30 minutes. They can also be activated automatically during periods of high debris loading if the differential water height between the upstream and downstream sides of the TWS exceeds a predetermined value due to clogging of the stationary screen.

During the September 2011 survey when all six circulating water pumps were operating at full flow, water velocity immediately in front of the Units 1 and 2 bar racks ranged from 0.39 to 0.42 feet per second (fps) among the six intake bays and averaged 0.41 fps over the entire intake. The circulating water pumps that supply cooling water to Units 1 and 2 are located approximately 300 feet downstream of the TWS. Each generating unit has

three pumps that provide a total cooling water flow of 180 MGD (125,000 GPM) to its steam condenser and other heat exchangers. Each of the three circulating water pumps discharges into individual 48-inch pipes which, after a run of about 200 feet, join together into a single 84-inch diameter conduit.

The two 84-inch conduits (one per unit) carry the cooling water a distance of about 2,000 feet to the Units 1 and 2 condensers. Upon exiting the condensers, the two discharge lines feed into a single 120-inch discharge pipe that runs about 1,400 feet to the disengaging basin. The disengaging basin is a concrete reservoir, open to the atmosphere, where turbulent mixing aerates the discharge flow and provides some cooling. The basin also acts as a vacuum breaker and prevents siphoning of the discharge flow. The discharge exits the disengaging basin via two discharge conduits that run about 600 feet to a point just west of the Units 6 and 7 turbine building where they join the retired Unit 6 and 7 discharge lines. Stop logs can be inserted at the disengaging basin to direct the Units 1 and 2 discharge into either of the discharge lines or, as is normally the case, they can be removed to allow the flow to be split between the two discharge lines. The two discharge conduits carry the combined discharge of Units 1 and 2 approximately 2,400 feet from the plant to the discharge structure located approximately 600 feet offshore in Monterey Bay.

## 2. Low Volume Wastes

The Facility generates a number of internal low volume wastes which commingle with the once-through cooling water prior to discharge to Discharge Point No. 002, including seawater evaporator blowdown, oil water separator discharge (from drains of Units 1 and 2 and retired Units 6 units 7), boiler blowdown, and bearing cooling water from Units 1 and 2. Most of these wastes are routed to the treated wastewater sump after treatment for storage before combining with the once-through cooling water and will be collectively monitored at internal Monitoring Location INT-002B and INT-002C.

- a. **Sea Water Evaporator:** This waste stream includes blowdown of brine from the seawater evaporator. The maximum daily flow is  $5.5 \times 10^5$  GPD.
- b. **Oil Water Separator:** The oil water separator, with tertiary treatment equipment, receives and treats oily wastewater from oil handling areas of Units 1 and 2, and retired Units 6 and 7 building sumps. The average daily flow is  $6.5 \times 10^4$  GPD.
- c. **Heat Recovery Steam Generator (HRSG) Blowdown:** This waste stream is blowdown of non-hazardous boiler water from the four boilers in Units 1 and 2.
- d. **Bearing Cooling Water:** A corrosion inhibitor in this closed system cools and protects bearings for primarily the turbines, generators, and fuel gas compressor skid. Thirty additional pieces of auxiliary equipment are also cooled and protected with lower flows. The average daily flow is  $2.0 \times 10^2$  GPD.

## 3. Metal Cleaning Wastes

Metal cleaning wastes may be generated when the metallic surfaces of Facility systems are cleaned. Facility equipment requires non-chemical or chemical-based cleanings to remove scale, rust, and corrosion accumulated during normal operation. The Facility is operating on natural gas firing; therefore, metal cleaning wastes are only generated from the Facility on rare occasions.

The firesides of Units 1 and 2 HRSGs are periodically washed with water (no chemicals) during maintenance outages to increase efficiency. These washes are non-hazardous and are performed using an aboveground temporary tankage system that recycles the

water. Residual solids are filtered and the treated water flows to a treated wastewater sump, where it combines with low volume wastes and stormwater from the ammonia storage containment area. The HRSGs are water washed for efficiency every 1-3 years. The average daily flow is  $2.2 \times 10^3$  GPD.

#### **4. Intake Cleaning Wash Water**

Intake cleaning wash water from Units 1 and 2 overflows may flow back into the Moss Landing Harbor, but the majority of wash water flows through the condensers to Discharge Point No. 002. Screen wash occurs on a timer for 60 minutes, 4 times daily. The screen wash can also be operated automatically (on screen differential) when debris disrupts the flow through the screen. Similarly, effluent from intake systems which includes intake cleaning wash water (discharges from operation and maintenance activities associated with Units 1 and 2) is discharged through Discharge Point No. 004.

#### **5. Stormwater**

The facility generates stormwater from the ammonia storage containment area. The stormwater from the ammonia storage containment area is pumped to the oil water separator. The average daily flow is  $3.0 \times 10^3$  gallons depending on the rainy season.

### **B. Discharge Points and Receiving Waters**

This Facility has two discharge outfalls, Discharge Point Nos. 002 and 004. Cooling water effluent from the Facility's from Units 1 and 2 commingles with stormwater runoff and industrial wastewater and discharges through an outfall that is 600-foot offshore in Monterey Bay. The outfall terminates at a depth of approximately 30 feet in the Pacific Ocean at latitude  $36^{\circ}48'14''$  N and longitude  $121^{\circ}47'23''$  W.

Effluent through Discharge Point No. 002 is discharged to Monterey Bay adjacent to Monterey Bay National Marine Sanctuary (MBNMS) and the zone of influence of the effluent is within MBNMS. The National Marine Sanctuaries Act (NMSA) of 1972 authorizes the Secretary of Commerce to designate and protect areas of the marine environment with special national significance due to their conservation, recreational, ecological, historical, scientific, cultural, archeological, educational, or esthetic qualities as national marine sanctuaries. MBNMS was designated on September 15, 1992, for its unique and diverse biological and physical characteristics. The MBNMS superintendent may consider authorizing prohibited activities such as discharging into the sanctuary, if the activities have been authorized by a valid lease, permit, license, approval, or other authorization issued after the effective date of sanctuary designation by any federal, state, or local authority of competent jurisdiction.

Effluent from the intake system, which includes intake cleaning wash water (discharges from operation and maintenance activities associated with Units 1 and 2), are discharged through Discharge Point No. 004.

The discharge structure provides a minimum probable initial dilution ratio (seawater to effluent) of 7.4 to 1 at Discharge Point No. 002. This is the ratio used by the Central Coast Water Board to determine the need for water quality-based effluent limitations and to calculate those limitations. However, no dilution ratio has been approved for Discharge Point No. 004.

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

Effluent limitations contained in the existing Order for discharges from Monitoring Location EFF-002 and representative monitoring data from the term of the previous Order are as follows:

**Table F-3. Historic Effluent Limitations and Monitoring Data at EFF-002 (Formerly Discharge Point No. 002)**

Parameter <sup>[1]</sup>	Units	Effluent Limitation			Monitoring Data (From October 2009 – To June 2017)		
		Average Monthly	Average Weekly	Maximum Daily	Highest Average Monthly Discharge	Highest Average Weekly Discharge	Highest Maximum Daily Discharge
Flow	GPD	--	--	362,000,000	--	--	1,223,400,000
Oil and Grease	mg/L	25	40	75	--	--	--
Suspended Solids	mg/L	--	60	--	--	--	--
Settleable Solids	ml/L	1.0	1.5	3.0	--	--	0.20
Turbidity	NTU	75	100	225	--	--	--
Temperature <sup>[2]</sup>	°F	--	--	[3]	--	--	80.5 °F
pH	pH units	--	6.0 – 9.0 at all times	--	--	--	7.75 –9.0

**Notes:**

- [1] For California Ocean Plan Table 4 parameters, the table reflects California Ocean Plan limits for which data was available.
- [2] Reported as 24-hour average value.
- [3] Daily average temperature of the discharge shall not exceed the daily average natural temperature of the receiving water by more than 20°F (11.1°C) during the days in which either one or both Units 1 and 2 are operating. The instantaneous maximum temperature of the discharge shall not exceed the natural temperature of the receiving water by more than 26°F (14.4°C) during the days in which either one or both of Units 1 and 2 are operating.

**Table F-4. Historic Effluent Limitations and Monitoring Data at EFF-002 (Formerly Discharge Point No. 002) for the Protection of Marine Aquatic Life**

Parameter <sup>[1]</sup>	Units	Effluent Limitation <sup>[2]</sup>			Monitoring Data (From October 2009 – To June 2017)	
		Six Month Median	Maximum Daily	Instantaneous Maximum	Six Month Median	Highest Instantaneous Maximum Discharge
Ammonia, Total (as N)	mg/L	5.04	20.160	50.40	0.246	0.5
Arsenic	µg/L	45	246.6	649.8	4.41	10.5
Cadmium	µg/L	8.4	33.6	84	0.19	5.275
Total Chlorine Residual	µg/L	--	--	504	--	480
Chromium (VI)	µg/L	16.8	67.2	168	2.5	3.2

Parameter <sup>[1]</sup>	Units	Effluent Limitation <sup>[2]</sup>			Monitoring Data (From October 2009 – To June 2017)	
		Six Month Median	Maximum Daily	Instantaneous Maximum	Six Month Median	Highest Instantaneous Maximum Discharge
Copper	µg/L	10.4	86	237.2	12	82.18
Lead	µg/L	16.8	67.2	168	3.9	5.8
Mercury	µg/L	0.3323	1.3403	3.3563	0.02	0.20
Nickel	µg/L	42	168	420	21.5	165.4
Selenium	µg/L	126	504	1260	46	91
Silver	µg/L	4.7	22.34	57.62	1.25	1.43
Zinc	µg/L	108.8	612.8	1620.8	61	100
Cyanide	µg/L	8.4	33.6	84	--	--
Toxicity	TUc	--	8.4	--	--	10
Phenols, Chlorinated <sup>[3]</sup>	µg/L	8.4	33.6	84	--	ND (<24)
Phenols, Non-chlorinated <sup>[3]</sup>	µg/L	252	1008	2520	--	24
Endosulfan	ng/L	75.6	151.2	226.8	--	--
Endrin	ng/L	16.8	33.6	50.4	--	--
HCH	ng/L	33.6	67.2	100.8	--	--
Radioactivity	Not to exceed limits specified in Title 17, Division 1, Chapter 5, Subchapter 4, Group 3, Article 3, Section 30269 of the California Code of Regulations				--	--

Notes:

- [1] For California Ocean Plan Table 3 parameters, the table reflects California Ocean Plan limits for which data was available.
- [2] Based on California Ocean Plan criteria using a minimum initial dilution ratio of 7.4:1 (seawater:effluent). If the actual dilution is found to be different from this value, it will be recalculated and the limits in the Order revised.
- [3] Reported as annual average value.

**Table F-5. Historic Effluent Limitations and Monitoring Data at EFF-002 (Formerly Discharge Point No. 002) for the Protection of Human Health – Noncarcinogens**

Parameter <sup>[1]</sup>	Units	Effluent Limitation <sup>[2]</sup>	Monitoring Data (From October 2009 – To June 2017)	
			Six Month Median	30-Day Average
Acrolein	µg/L	1848	--	--
Antimony	mg/L	100.8	--	--
Bis(2-chloroethoxy) methane	µg/L	37	--	--
Bis(2-chloroisopropyl) ether	mg/L	100.8	--	--
Chlorobenzene	µg/L	4,788	--	--
Chromium (III)	mg/L	1,596	--	--
Di-n-butyl phthalate	mg/L	294	--	--
Dichlorobenzenes	mg/L	428.4	--	--
1,1-dichloroethylene	mg/L	596.4	--	--
Diethyl phthalate	mg/L	277.2	--	--
Dimethyl phthalate	mg/L	6,888	--	--
4,6-dinitro-2-methylphenol	µg/L	1,848	--	--
2,4-dinitrophenol	µg/L	33.6	--	--

Parameter <sup>[1]</sup>	Units	Effluent Limitation <sup>[2]</sup>	Monitoring Data (From October 2009 – To June 2017)	
			30-Day Average	Six Month Median
Ethylbenzene	mg/L	34.4	--	--
Fluoranthene	µg/L	126	--	--
Hexachlorocyclopentadiene	µg/L	487.2	--	--
Isophorone	mg/L	1,260	--	--
Nitrobenzene	µg/L	41.2	--	--
Thallium	µg/L	117.6	--	--
Toluene	mg/L	714	--	--
1,1,2,2-tetrachloroethane	mg/L	10.1	--	--
Tributyltin	ng/L	11.8	--	--
1,1,1-trichloroethane	mg/L	4,536	--	--
1,1,2-trichloroethane	mg/L	361.2	--	--

Notes:

- [1] For California Ocean Plan Table 3 parameters, the table reflects California Ocean Plan limits for which data was available.
- [2] Based on California Ocean Plan criteria using a minimum initial dilution ratio of 7.4:1 (seawater : effluent). If the actual dilution is found to be different from this value, it will be recalculated and the Order revised.

**Table F-6. Historic Effluent Limitations and Monitoring Data at EFF-002 (Formerly Discharge Point No. 002) for the Protection of Human Health – Carcinogens**

Parameter <sup>[1]</sup>	Units	Effluent Limitation <sup>[2]</sup>	Monitoring Data (From October 2009 – To June 2017)	
			30-Day Average	Six Month Median
Acrylonitrile	µg/L	0.8	--	--
Aldrin	ng/L	0.185	--	--
Benzene	µg/L	49.6	--	--
Benzidine	ng/L	0.58	--	--
Beryllium	ng/L	277.2	--	--
Bis(2-chloroethyl) ether	µg/L	0.378	--	--
Bis(2-ethylhexyl) phthalate	µg/L	29.4	--	--
Carbon tetrachloride	µg/L	7.6	--	--
Chlordane	ng/L	0.193	--	--
Chloroform	mg/L	1.09	--	--
DDT	ng/L	1.43	--	--
1,4-dichlorobenzene	µg/L	151.2	--	--
3,3'-dichlorobenzidine	ng/L	68	--	--
1,2-dichloroethane	mg/L	1.09	--	--
Dichloromethane	mg/L	3.78	--	--
1,3-dichloropropene	µg/L	74.8	--	--
Dieldrin	ng/L	0.34	--	--
2,4-dinitrotoluene	µg/L	21.8	--	--
1,2-diphenylhydrazine	µg/L	1.34	--	--
Halomethanes	mg/L	1.09	--	--
Heptachlor	ng/L	6.05	--	--
Hexachlorobenzene	ng/L	1.76	--	--
Hexachlorobutadiene	µg/L	117.6	--	--

Parameter <sup>[1]</sup>	Units	Effluent Limitation <sup>[2]</sup>	Monitoring Data (From October 2009 – To June 2017)	
		30-Day Average	Six Month Median	30-day Average
Hexachloroethane	µg/L	21	--	--
N-nitrosodimethylamine	µg/L	61.3	--	--
N-nitrosodiphenylamine	µg/L	21	--	--
PAHs	ng/L	73.9	--	--
PCBs	ng/L	0.16	--	ND <sup>[3]</sup> (<0.049)
TCDD Equivalents	pa/L	0.0328	--	--
Tetrachloroethylene	µg/L	831.6	--	--
Toxaphene	ng/L	1.76	--	--
Trichloroethylene	µg/L	226.8	--	--
2,4,6-trichlorophenol	µg/L	2.44	--	--
Vinyl chloride	µg/L	302.4	--	--

Notes:

- [1] For California Ocean Plan Table 3 parameters, the table reflects California Ocean Plan limits for which data was available.
- [2] Based on California Ocean Plan criteria using a minimum initial dilution ratio of 7.4:1 (seawater : effluent). If the actual dilution is found to be different from this value, it will be recalculated and the limits in the Order revised.
- [3] Reported as annual average value.

**Table F-7. Historic Effluent Limitations and Monitoring Data at INT-002B (Formerly Discharge No. 002B)**

Parameter	Units	Effluent Limitations		Monitoring Data (From October 2009 – To June 2017)	
		30-Day Average	Maximum at any time	Highest Average Monthly Discharge	Highest Maximum Discharge
Oil and Grease	mg/L	15.0	20.0	--	21.7
Total Suspended Solids	mg/L	30.0	100.0	--	68.2

**Table F-8. Historic Effluent Limitations and Monitoring Data at INT-002C3 (Formerly Discharge No. 002E6 from chemical metal cleaning)**

Parameter	Units	Effluent Limitations <sup>[1]</sup>		Monitoring Data	
		30-Day Average	Daily Average	Highest Average Monthly Discharge	Highest Maximum Discharge
Copper	mg/L	1.0	1.0	--	--
Iron	mg/L	1.0	1.0	--	--

Notes:

- [1] Order No. 2000-0041 included effluent limitations applicable prior to modernization, and a separate set of limitations applicable after modernization. The limitations and effluent monitoring data reflect the period after modernization. There were no cleanings involving chemicals after 1995, so therefore, no data.

**D. Compliance Summary**

A summary of the violations that occurred during the term of Order No. R3-2000-0041 are included in the table below.

**Table F-9. Summary of Compliance History**

Date	Violation Type	Description	Discharge Point No.	Effluent Limit	Reported Value
6/30/2003	Limit Exceedance	The reported six-month median value of copper was 10.8 µg/L, which exceeded the permit six-month median value of 10.4 µg/L. The reason behind this exceedance event was investigated and it was found that the exceedance was caused by the elevated copper levels in source water due to U.S. Army Corps of Engineers dredging in the harbor.	002	10.4 µg/L	10.8 µg/L
1/6/2004	Limit Exceedance	The reported daily maximum temperature was 20.3°F, which exceeded the permit daily maximum temperature value of 20.0 °F.	002	20.0 °F	20.3 °F
5/4/2005	Limit Exceedance	The reported value of zinc was 114.5 µg/L, which exceeded the permit limit of 108.8 µg/L. As a corrective measure, the Discharger increased metal sampling from quarterly to monthly.	002	108.8 µg/L	114.5 µg/L
5/4/2005	Limit Exceedance	The reported value of silver was less than 15 µg/L, which exceeded the permit limit of 4.7 µg/L. As a corrective measure, the Discharger increased metal sampling from quarterly to monthly.	002	4.7 µg/L	15 µg/L
5/4/2005	Limit Exceedance	The reported value of total chromium was less than 20.5 µg/L, which exceeded the permit limit of 16.8 µg/L. As a corrective measure, the Discharger increased metal sampling from quarterly to monthly.	002	16.8 µg/L	20.5 µg/L
5/5/2005	Limit Exceedance	The reported value of chronic toxicity was greater than 10.0 TU <sub>c</sub> , which exceeded the permit limit of 8.4 TU <sub>c</sub> .	002	8.4 TU <sub>c</sub>	10.0 TU <sub>c</sub>
6/3/2005	Limit Exceedance	The reported value of total residual chlorine was 680 µg/L, which exceeded the permit limit of 504 µg/L. This limit exceedance event was caused by low circulating cooling water flow and low chlorine demand. As a corrective measure the Discharger reprogrammed computers to shut down the chlorine system if less than two circulating water pumps are operating.	002	504 µg/L	680 µg/L
6/30/2005	Monitoring Failure	Failure to monitor settleable solids and dissolved oxygen for April/ May/ June quarterly report received on 8/1/05.	002	--	--
4/10/2006	Limit Exceedance	The reported value of total residual chlorine was 850 µg/L, which exceeded the permit limit of 504 µg/L. This violation occurred due to a computer malfunction	002	504 µg/L	850 µg/L



Date	Violation Type	Description	Discharge Point No.	Effluent Limit	Reported Value
		which caused two valves to open simultaneously instead of twenty minutes apart. The Discharger corrected the problem.			
4/27/2006	Limit Exceedance	The reported value of total residual chlorine was 550 µg/L, which exceeded the permit limit of 504 µg/L. This violation occurred due to a computer malfunction which caused two valves to open simultaneously instead of twenty minutes apart. The Discharger corrected the problem.	002	504 µg/L	550 µg/L
5/17/2010	Limit Exceedance	The reported value of toxicity daily maximum (greater than 10.0 TU <sub>c</sub> ) exceeded the permit limit of 8.4 TU <sub>c</sub> . This exceedance event was a result of collecting a non-representative sample from a discharge location where the discharge was contaminated by the toxins from the foam created from the chelating process. As a corrective action, Discharger decided to use prior approved sample points at surge chambers (Unit 6 and 7) for future sampling and increase sampling frequency.	002	8.4 TU <sub>c</sub>	>10 TU <sub>c</sub>
12/17/2010	Limit Exceedance	The reported value of total residual chlorine was 1150 µg/L, which exceeded the permit limit of 504 µg/L. The oil water separator system was contaminated with sodium hypochlorite from a release to the containment area. Corrective measures were taken to prevent the problem. They are as follows: removing sodium hypochlorite from oil water separator system, providing additional training for the operations department, and permanently plugging the sodium hypochlorite containment drain line to Units 1 and 2 oil water sump to prevent any future oil water separator system contamination.	002	504 µg/L	1150 µg/L
1/8/2014	Limit Exceedance	The monthly average limit for oil and grease (20 mg/L) was exceeded (21.7 mg/L) at 002E. Discharge Point No. 002E was thoroughly investigated for all sources of oil that could have caused the exceedance, but the source was not found. The Discharger indicated that they would continue to monitor and investigate to identify the source of this contamination.	002E	20 mg/L	21.7 mg/L
5/19/2014	Limit Exceedance	The reported value of chronic toxicity daily maximum was 10.0 TU <sub>c</sub> at 002, which exceeded the permit limit of 8.4 TU <sub>c</sub> .	002	8.4 TU <sub>c</sub>	10.0 TU <sub>c</sub>

Date	Violation Type	Description	Discharge Point No.	Effluent Limit	Reported Value
7/27/2016	Faulty monitoring	TSS and oil & grease samples were not collected for the month of June 2016. In addition to that, a laboratory error was also identified in reporting TSS and oil & grease values. As a corrective action, to prevent this from occurring in the future, a check-off sheet showing the months in which sampling occurred was created.	002D	--	--
1/31/2017	Limit Exceedance	The 30-day average limit for TSS is 30.0 mg/L and reported value was 42.0 mg/L at monitoring location 002B. The reason behind this exceedance event was the seawater evaporator shut down for most of February and March and heavy rain and run-off made the Moss Landing Harbor very muddy with high TSS from Elkhorn & Moro Coho Sloughs and the Old Salinas River until rain subsided.	002B	30.0 mg/L	42.0 mg/L

**E. Planned Changes**

Significant planned changes that will affect this Order were indicated in the application submitted by the Discharger.

The Discharger indicated in their application that in 2019, the surface impoundments were certified clean closed by the Department of Toxic Substances Control (DTSC) in accordance with section 13.0 of the Hazardous Waste Part B Permit Application and subsequently all groundwater monitoring wells have also been properly destroyed. The Discharger received a closure letter from DTSC on April 24, 2019. Therefore, since the surface impoundments at MLPP have been clean closed, WDR Order No. 2014-0029 has expired and is no longer in effect.

**III. APPLICABLE PLANS, POLICIES, AND REGULATIONS**

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

**A. Legal Authorities**

This Order serves as WDRs pursuant to article 4, chapter 4, division 7 of the California 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 U.S. EPA and chapter 5.5, division 7 of the California 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 2 subject to the WDRs in this Order.

**B. California Environmental Quality Act (CEQA)**

Under California 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.

**C. State and Federal Laws, Regulations, Policies, and Plans**

- 1. Water Quality Control Plan.** The Central Coast Water Board adopted *Water Quality Control Plan for the Central Coastal Basin* (Basin Plan), which designates beneficial uses, establishes water quality objectives, and contains implementation programs and policies to achieve those objectives for the Pacific Ocean. To address ocean waters, the Basin Plan incorporates by reference *Water Quality Control Plan for Ocean Waters of California* (California Ocean Plan). Requirements in this Order implement the Basin Plan.

The Basin Plan implements State Water Board Resolution No. 88-63, which establishes that all waters, with certain exceptions, should be considered suitable or potentially suitable for municipal or domestic supply (MUN). Because of very high levels of total dissolved solids (TDS) in the Pacific Ocean, the receiving waters for discharges from the Facility meet an exception to Resolution No. 88-63, which precludes waters with TDS levels greater than 3,000 mg/L from the MUN designation.

Beneficial uses applicable to the coastal waters between Soquel Point and the Salinas River are as follows

**Table F-10. Basin Plan Beneficial Uses**

Discharge Point	Receiving Water Name	Beneficial Use(s)
002	Pacific Ocean (Monterey Bay)	Contact water recreation (REC-1); Non-contact water recreation (REC-2); Industrial service supply (IND); Navigation (NAV); Marine habitat (MAR); Shellfish harvesting (SHELL); Commercial and sport fishing (COMM); Rare, threatened, or endangered species (RARE); Wildlife habitat (WILD).
004	Moss Landing Harbor	Contact water recreation (REC-1); Non-contact water recreation (REC-2); Industrial service supply (IND); Navigation (NAV); Marine habitat (MAR); Shellfish harvesting (SHELL); Commercial and sport fishing (COMM); Rare, threatened, or endangered species (RARE); Wildlife habitat (WILD).

- 2. 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, and amended this plan on September 18, 1975. This plan contains temperature objectives for enclosed bays and coastal waters.

The discharge from MLPP is a new discharge within the meaning of the Thermal Plan. The Thermal Plan temperature objective for new discharges to coastal waters of California is:

- (1) Elevated temperature wastes shall be discharged to the open ocean away from the shoreline to achieve dispersion through the vertical water column.
- (2) Elevated temperature wastes shall be discharged a sufficient distance from areas of special biological significance to assure the maintenance of natural temperature in these areas.
- (3) The maximum temperature of thermal waste discharges shall not exceed the natural temperature of receiving waters by more than 20°F.
- (4) The discharge of elevated temperature wastes shall not result in increases in the natural water temperature exceeding 4°F at (a) the shoreline, (b) the surface of any ocean substrate, or (c) the ocean surface beyond 1,000 feet from the discharge

system. The surface temperature limitation shall be maintained at least 50 percent of the duration of any complete tidal cycle.

(5) Additional limitations shall be imposed when necessary to assure protection of beneficial uses.

The Thermal Plan defines elevated temperature wastes as:

Liquid, solid, or gaseous material discharged at a temperature higher than the natural temperature of receiving water.

Requirements of this Order implement the Thermal Plan.

3. **California Ocean Plan.** The State Water Board adopted the *Water Quality Control Plan for Ocean Waters of California* (California Ocean Plan) in 1972 and amended it in 1978, 1983, 1988, 1990, 1997, 2000, 2005, 2009, 2012, 2015 and 2019. The State Water Board adopted the latest amendment on August 7, 2019, and it became effective on February 4, 2019. The California Ocean Plan is applicable, in its entirety, to point source discharges to the ocean. The California Ocean Plan identifies beneficial uses of ocean waters of the state to be protected as summarized below:

**Table F-11. California Ocean Plan Beneficial Uses**

Discharge Point	Receiving Water	Beneficial Uses
Outfall 002	Pacific Ocean	Industrial water supply; water contact and non-contact recreation, including aesthetic enjoyment; navigation; commercial and sport fishing; mariculture; preservation and enhancement of designated Areas of Special Biological Significance (ASBS); rare and endangered species; marine habitat; fish spawning and shellfish harvesting

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

4. **Antidegradation Policy.** Federal regulation 40 C.F.R. 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 No. 68-16 (“Statement of Policy with Respect to Maintaining High Quality of Waters in California”). Resolution No. 68-16 is deemed to incorporate the federal antidegradation policy where the federal policy applies under federal law. Resolution No. 68-16 requires that existing water quality be maintained unless degradation is justified based on specific findings. The Central Coast 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 C.F.R. section 131.12 and State Water Board Resolution No. 68-16.
5. **Anti-Backsliding Requirements.** Sections 402(o) and 303(d)(4) of the CWA and federal regulations at 40 C.F.R. 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.
6. **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 the *Statewide Water Quality Control Policy on the Use of Coastal and Estuarine Waters for Power Plant Cooling* (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, and was amended in 2012, 2014, 2016, and 2017.

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 BTA.

The Policy requires compliance under two alternatives:

- (1) 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
- (2) 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 Discharger submitted an implementation plan for the OTC Policy on April 1, 2011, selecting Track 2 as its compliance option for MLPP. Per the submitted information, the Discharger and State Water Board agreed that the proposed mechanism to bring existing operating Units 1 and 2 into compliance with the OTC Policy was via Track 2 (based on operational control measures to reduce flow), since Track 1 was not a feasible option for MLPP. The Discharger and the State Water Board therefore executed a settlement agreement (Settlement Agreement) on October 9, 2014, regarding the OTC Policy. In accordance with the Settlement Agreement, the Discharger submitted an updated implementation plan in November 2014 that described the compliance alternative for MLPP. The Settlement Agreement requires the Discharger to conduct baseline studies pursuant to OTC Policy sections 4.A.(1) and 4.B.(1) and in December 2014 the Discharger submitted its impingement mortality and entrainment (IM&E) baseline study plan to the State Water Board for approval. The MLPP Implementation plan was most recently updated in February 2017 (2017 Implementation Plan).

The Discharger indicated in a letter submitted to the State Water Board dated January 9, 2017, that the Discharger is on track to achieve Track 2 compliance for MLPP Units 1 and 2.

To comply with Track 2, the Discharger has taken the measures described below.

- The Discharger retired Units 6 and 7 on January 1, 2017.

- Beginning in 2016, the Discharger limited the duration of circulating water pump operation during unit start up and shutdown and limited the number of circulating water pumps in operation during various unit operating configurations at less than full utilization.
- To reduce overall impingement and entrainment, the Discharger strategically reduced flow during the spring and fall, when highest impingement and entrainment occurs. This was accomplished by scheduling a total of 69 days of maintenance outages in February, March, October and November 2016.
- In the email response received on December 13, 2017, concerning the State Water Board's request about 316(b) study information, the Discharger indicated that through the first three quarters of 2017, the average reduction in IM&E was 95.1%, which is well above the 83.7% impingement mortality reduction required by Track 2 compliance under the OTC Policy.
- On December 16, 2016, the Discharger completed the installation of variable speed drive controls on four circulating water pumps for Units 1 and 2.

Additional measures to achieve compliance with Track 2 include:

- a. Usage of the prior flow reduction credit provided in Policy section 2.A.(2)(d), calculated and applied as described in Settlement Agreement paragraph 2.1.4. for MLPP Units 1 and 2.
  - b. Usage of operational controls to further reduce flow.
  - c. Installation of technology controls, through which compliance can be calculated based on total numbers of fish larvae and other meroplankton, or by calculating the effects of the technology controls on the numbers of organisms of a specific size or age class.
- 7. 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 U.S.C.A. sections 1531 to 1544). This Order requires compliance with effluent limits, receiving water limits, and other requirements to protect the beneficial uses of waters of the state, including protecting rare and endangered species. The Discharger is responsible for meeting all requirements of the applicable endangered species act.

The Discharger conducted IM&E studies from 2015-2017 to comply with the requirements of the OTC Policy. The *Moss Landing Power Plant Impingement Mortality and Entrainment Study 2015-2017* was submitted to the Central Coast Water Board and the U.S. Fish and Wildlife Service (USFWS) in September 2017. Appendix D of the report contained information regarding the collection of tidewater goby (*Eucyclogobius newberryi*). The tidewater goby is a federally listed endangered species under the U.S. Endangered Species Act.

Low numbers (mainly larval stages) of tidewater goby were collected during the entrainment portion of the studies near the MLPP intakes. Impingement sampling of adult and juvenile fishes on the intake traveling screens was also conducted concurrently with the entrainment sampling, but no adult or juvenile tidewater goby were collected during the impingement sampling. The Discharger has been communicating with USFWS since the suspected tidewater goby larvae were collected in February 2016 and

identified in April 2016. During 2016 and 2017, the Discharger provided updated technical memos to USFWS regarding the status of sample processing and the number and life stages of tidewater goby specimens collected in the entrainment samples, conducted a site visit with USFWS, and participated in several conference calls with USFWS.

CWA section 316(b) requires that NPDES permits address monitoring recommendations for federally listed endangered species. The Discharger submitted an entrainment monitoring plan to USFWS in January 2018 and USFWS approval of the monitoring plan is pending. Continuous monitoring of salinity at the Units 1 and 2 intake was conducted to help identify water quality conditions associated with the occurrence of tidewater goby larvae at the intake. This monitoring was continued through December 2019.

The Discharger is working with the USFWS to obtain incidental take coverage for the MLPP cooling water intake system effects. The Discharger submitted a letter on May 23, 2018, to the USFWS requesting incidental take coverage under the *Endangered Species Act Section 7 Consultation Programmatic Biological Opinion on the U.S. EPA's Issuance and Implementation of the Final Regulations for Section 316(b) of the Clean Water Act*. The letter provided a description of regulatory background pertaining to the National Marine Fisheries Service (NMFS)/USFWS 2013 Programmatic Biological Opinion concerning the take of Endangered Species Act species during operation of power plants. The letter also described minimization measures implemented at MLPP designed to reduce entrainment of tidewater goby, proposed monitoring and reporting requirements, and suggested mitigation.

Minimization measures to reduce entrainment effects to tidewater goby include retirement of MLPP Units 6 and 7 (total cooling water flow reduction from 1,224 MGD to 360 MGD), installation of variable speed pump drives on MLPP Units 1 and 2 that allow cooling water flow to be adjusted from 50% to 100% of maximum flow, and new protocols to reduce pump operation during unit start up and shut down. These minimization measures were reviewed by USFWS and have been in place since late December 2016.

Mitigation measures were discussed in the May 23, 2018 letter to USFWS. The Discharger proposed to fund Moss Landing Marine Laboratories students to conduct fishery studies in Moro Cojo Slough, the area thought to be the source of the larval tidewater gobies found near the MLPP intake in Moss Landing Harbor. The proposed mitigation would meet one or more of the goals of the Tidewater Goby Recovery Plan, specifically the goals of monitoring current habitat and continued research to address data gaps needed for effective management of the land and water use policies to aid in the recovery of tidewater goby. USFWS approval of the proposed mitigation measure is pending.

#### **D. Impaired Water Bodies on the CWA section 303(d) List**

Under section 303(d) of the 1972 CWA, states, territories and authorized tribes are required to develop lists of water quality limited segments. The waters on these lists do not meet water quality standards, even after point sources of pollution have installed the minimum required levels of pollution control technology.

CWA section 303(d) requires states to identify specific water bodies where water quality standards are not expected to be met after implementation of technology-based effluent limitations on point sources. For all 303(d) listed water bodies and pollutants, the Central Coast Water Board must develop and implement Total Maximum Daily Loads (TMDLs) that

will specify waste load allocations for point sources and load allocations for non-point sources.

In April 6, 2018, the U.S. EPA approved the *2016 303(d) List of Water Quality Limited Segments in California*. The 303(d) list identifies Moss Landing Harbor as impaired. Moss Landing Harbor impairments are due to low dissolved oxygen, nickel, indicator bacteria, pesticides, sediment toxicity, sedimentation/siltation, dieldrin, arsenic, PCBs, DDT and pH. The discharge is to the main body of Monterey Bay and the discharge is not expected to contribute to impairments within Moss Landing Harbor. The main body of Monterey Bay is not identified on the 303(d) list as impaired.

#### **E. Other Plans, Policies and Regulations**

1. **Discharges of Stormwater.** For the control of stormwater discharged from the Facility, the Discharger will discharge under the State Water Board's Water Quality Order 2014-0057-DWQ, NPDES General Permit CAS000001, *General Permit for Storm Water Discharges Associated with Industrial Activities*.

#### **IV. RATIONALE FOR EFFLUENT LIMITATIONS AND DISCHARGE SPECIFICATIONS**

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

##### **A. Discharge Prohibitions**

###### **1. California Ocean Plan Discharge Prohibitions**

This permit implements discharge prohibitions that are applicable under sections III.I.1.a through III.I.6.c of the California Ocean Plan.

- a. Discharge Prohibition III.A (No discharge to Monterey Bay at a location other than as described by this Order). This Order authorizes a single, specific point of discharge to Monterey Bay. This prohibition reflects CWA section 402's prohibition against discharges of pollutants except in compliance with the act's permit requirements, effluent limitations, and other enumerated provisions. This prohibition is also retained from the previous permit. Discharge at any location other than that described in the Permit application is prohibited.
- b. Discharge Prohibition III.B (Discharges in a manner except as described by this Order are prohibited). Because limitations and conditions of this Order have been prepared based on specific information provided by the Discharger and specific wastes described by the Discharger, the limitations and conditions of this Order do not adequately address waste streams not contemplated during drafting of this Order. To prevent the discharge of such waste streams that may be inadequately regulated, this Order prohibits the discharge of any waste that was not described by to the Central Coast Water Board during the process of permit reissuance.
- c. Discharge Prohibition III.C (The daily maximum rate of discharge to Monterey Bay from Discharge Point No. 002 shall not exceed 362 MGD). This flow limitation reflects the current design capacity of the Facility.



- d. Discharge Prohibition III.D (Wastes shall not be discharged to State Water Quality Protection Areas, described as Areas of Special Biological Significance by the California Ocean Plan, except in accordance with Chapter III.E of the California Ocean Plan.) This prohibition restates a discharge prohibition established in Chapter III.E of the California Ocean Plan.
- e. Discharge Prohibition III.E (Discharges of radiological, chemical, or biological warfare agent or high-level radioactive waste to the ocean is prohibited). This prohibition restates a discharge prohibition established in section III. H of the California Ocean Plan.
- f. Discharge Prohibition III.F (The overflow or bypass of wastewater from the Discharger's collection, treatment, or disposal facilities and the subsequent discharge of untreated or partially treated wastewater, except as provided for in Attachment D, Standard Provision I.G. (Bypass), or elsewhere in this Order, is prohibited). The discharge of untreated or partially treated wastewater from the Discharger's collection, treatment, or disposal facilities represents an unauthorized bypass pursuant to 40 C.F.R. section 122.41(m) or an unauthorized discharge, which poses a threat to human health or aquatic life, and therefore, is explicitly prohibited by this Order.
- g. Discharge Prohibition III.G (Federal law prohibits the discharge of sludge by pipeline to the ocean. The discharge of municipal or 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, without further treatment, directly to the ocean or to a waste stream that discharges to the ocean, is prohibited.) This prohibition reflects the prohibition in Chapter III. H of the California Ocean Plan.
- h. Discharge Prohibition III.H (Discharge of polychlorinated biphenyl compounds is prohibited). This Prohibition is based on 40 C.F.R section 423.13(a).
- i. Discharge Prohibition III.I (Discharge of domestic wastewater or solid waste to surface waters is prohibited). This prohibition is required because the permit conditions do not anticipate the discharge of domestic waste.
- j. Discharge Prohibition III.J (Discharges of pollutants which are not otherwise authorized by this NPDES permit, to a storm drain system or waters of the state, are prohibited). This prohibition is required because the permit does not reflect unanticipated discharges of pollutants which are not otherwise authorized by this NPDES permit.
- k. Discharge Prohibition III.K (Stormwater discharges shall not cause pollution, contamination, or nuisance). This prohibition is necessary to ensure the discharger implements proper measures to prevent stormwater pollution.
- l. Discharge Prohibition III.L (Adverse effects of the discharge to beneficial uses of water or threatened or endangered species are prohibited). This prohibition prevents discharges from impacting beneficial uses and endangered species.

## **B. Technology-Based Effluent Limitations**

### **1. Scope and Authority**

Section 301(b) of the CWA and implementing U.S. EPA permit regulations at 40 C.F.R. 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 California Ocean Plan Table 4 and best professional judgment (BPJ) in accordance with 40 C.F.R. section 125.3.

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

- a. 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.
- b. 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.
- c. 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.
- d. 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 U.S. EPA to develop effluent limitations guidelines and standards (ELGs) representing application of BPT, BAT, BCT, and NSPS. Section 402(a)(1) of the CWA and 40 C.F.R. section 125.3 authorize the use of 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 Central Coast Water Board must consider specific factors outlined in 40 C.F.R. section 125.3.

### **2. Applicable Technology-Based Effluent Limitations**

#### **a. California Ocean Plan**

The California Ocean Plan is applicable, in its entirety, to point source discharges to the ocean. However, Table 4 effluent limitations apply only to publicly owned treatment works and industrial discharges for which ELGs have not been established pursuant to sections 301, 302, 304, or 306 of the CWA.

Order No. R3-2000-0041 included technology-based effluent limitations based on the California Ocean Plan Table 4 parameters at Discharge Point No. 002.

However, this Order removes these limitations, as ELGs have been established for steam electric generating stations. As described in section IV.D, the removal of these limitations is an allowable exception to anti-backsliding requirements specified in 40 C.F.R. section 402(o)(2).

**b. ELGs 40 CFR Part 423**

Pursuant to section 306(b)(1) of the CWA, U.S. EPA has established standards of performance for the steam electric power point source category, for existing and new sources at 40 C.F.R part 423. These regulations apply to the Facility as “an establishment primarily engaged in the generation of electricity for distribution and sale which results primarily from a process utilizing fossil-type fuel...in conjunction with a thermal cycle employing the steam water system as the thermodynamic medium”(40 C.F.R section 423.10). Standards of performance for existing facilities (instead of new source performance standards) are applicable to discharges originating from the Facility because its 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 from ELGs for existing sources at 40 C.F.R part 423. At this time, the guidelines do not include standards of performance based on BCT.

The table below lists the Facility’s waste streams subject to the ELGs for steam electric power generating point sources.

**Table F-12. Plant Waste Streams Subject to Effluent Limit Guidelines**

Discharge No.	Monitoring Location No.	Waste Stream	ELG Classification
002	EFF-002	Once-through cooling water	Once-through cooling water
	INT-002B	Seawater evaporator blowdown	Low volume waste
	INT-002C (Combined flow from 002C1 to 002C6) <sup>[1]</sup>	Oil/water separator	Low volume waste
		Boiler blowdown	Low volume waste
		Bearing cooling water	Low volume waste
		Ammonia storage system, stormwater	Not Subjected to ELGs
		Drains from oil handling areas, Units 1 and 2 and retired Units 6 and 7	Low volume waste
	INT-002C3	HRSG fireside wash water	Metal cleaning waste

Notes:

<sup>[1]</sup> Internal discharge (monitoring stations) identified as 002C1, 002C2, and 002C4 through 002C6 in the previous Order have been combined to a single internal discharge and named as INT-002C, as waste waters from these internal discharges (INT-002C1 through INT-002C6) are conveyed to the treated wastewater sump before discharge into Discharge Point No. 002. In this way compliance with ELGs is determined after treatment is provided.

ELGs at 40 C.F.R. part 423 contain standards applicable to the following process waters: low volume wastes, fly ash transport water, bottom ash transport water, metal cleaning wastes (both chemical and non-chemical), cooling tower blowdown,

discharges of coal pile runoff, and once-through cooling water. Discharges from the Facility covered under 40 C.F.R. part 423 include low volume wastes, metal cleaning wastes, and once-through cooling water.

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

Applicable effluent limitations established on the basis of BPT are summarized as follows:

- (a) The pH of all discharges, except once-through cooling water, shall be within the range of 6.0 – 9.0 standard units [40 C.F.R. § 423.12(b)(1)].
- (b) There shall be no discharge of polychlorinated biphenyl (PCB) compounds such as those commonly used for transformer fluid [40 C.F.R. § 423.12(b)(2)].
- (c) Low volume wastes are defined as those non-cooling wastewater sources for which specific limitations are not established by the effluent limitation guidelines at 40 C.F.R. part 423. The quantity of pollutants discharged from low volume waste sources shall not exceed the quantity determined by multiplying the flow of the low volume waste sources times the concentration listed in the following table [40 C.F.R. § 423.12(b)(3)]:

**Table F-13. BPT Effluent Limitations for Low Volume Wastes**

Parameter	Units	Effluent Limitations					
		Average Monthly	Average Weekly	Maximum Daily	Instantaneous Minimum	Instantaneous Maximum	Six-Month Median
TSS	mg/L	30.0	--	100.0	--	--	--
Oil and Grease	mg/L	15.0	--	20.0	--	--	--

- (d) Metal cleaning wastes are defined as any wastewater resulting from cleaning (with or without chemical cleaning compounds) any metal process equipment including, but not limited to, boiler tube cleaning, boiler fireside cleaning, and air preheater cleaning. The quantity of pollutants discharged in metal cleaning wastes shall not exceed the quantity determined by multiplying the flow of metal cleaning wastes times the concentration listed in the following table 40 C.F.R. section 423.12(b)(5):

**Table F-14. BPT Effluent Limitations for Metal Cleaning Wastes**

Parameter	Units	Effluent Limitations					
		Average Monthly	Average Weekly	Maximum Daily	Instantaneous Minimum	Instantaneous Maximum	Six-Month Median
TSS	mg/L	30.0	--	100.0	--	--	--
Oil and Grease	mg/L	15.0	--	20.0	--	--	--
Copper, Total Recoverable	mg/L	1.0	--	1.0	--	--	--

Parameter	Units	Effluent Limitations					
		Average Monthly	Average Weekly	Maximum Daily	Instantaneous Minimum	Instantaneous Maximum	Six-Month Median
Iron, Total Recoverable	mg/L	1.0	--	1.0	--	--	--

In 1974, U.S. EPA originally developed BPT limitations for metal cleaning wastes without specific differentiation of waste originating from water cleaning operations versus metal cleaning using chemical agents. Furthermore, there was ambiguity in distinguishing certain non-chemical metal cleaning wastes from low volume wastes. To address the ambiguity, U.S. EPA provided permitting guidance in 1975, referred to as the Jordan Memorandum<sup>1</sup>, which advised “all water washing operations are ‘low volume’ while any discharge from an operation involving chemical cleaning should be included in the metal cleaning category.” U.S. EPA revisited this issue in 1980 when proposing new BAT regulations for the Steam Electric category. As explained in the preamble to the 1982 final regulations, U.S. EPA rejected the position of the Jordan memorandum, but conceded that with respect to non-chemical metal cleaning wastes, there are potential differences for pollutant concentrations in waste streams from coal-fired versus oil-fired operations and that the costs to comply with the existing BPT limitations would create an economic burden.

In the 1982 final regulations, U.S. EPA promulgated BAT limitations for chemical metal cleaning wastes, but because of a lack of data, reserved BAT requirements for non-chemical metal cleaning wastes. Furthermore, U.S. EPA allowed for nonchemical metal cleaning wastes, that did not previously have limitations for iron and copper, to continue to be permitted using BPT ELGs for low volume wastes [See 47 C.F.R. section 52297 (November 19, 1982)]. The existing Order includes effluent limitations for total suspended solids and oil and grease that reflect the identical BPT limitations for low volume wastes and metal cleaning wastes. In following guidance provided in the Jordan memorandum, as currently allowed by U.S. EPA, no new BPT limitations [40 C.F.R section 423.12 (b)(5)] for copper and zinc are included in this Order for non-chemical metal cleaning wastes.

- (e) **Once-through cooling water** is defined as water passed through the main cooling condensers in one or two passes for the purpose of removing waste heat. The quantity of pollutants discharged in once through cooling water shall not exceed the quantity determined by multiplying the flow of once through cooling water sources times the concentration listed in the following table: [40 C.F.R. section 423.12(b)(6)]:

<sup>1</sup> Memorandum from J, William Jordan, Chemical Engineer, U.S. EPA Permit Assistance and Evaluation Division, to Bruce P, Smith, Biologist, Enforcement Division, Region III, Re: Response to Request for Interpretation of the Chemical Effluent Limitation Guidelines for the Steam Electric Power Generation Industry.

**Table F-15. BPT Effluent Limitations for Once-Through Cooling Water**

Parameter	Units	Effluent Limitations					
		Average Monthly	Average Weekly	Maximum Daily	Instantaneous Minimum	Instantaneous Maximum	Six-Month Median
Free Available Chlorine	mg/L	--	--	0.2 <sup>[1]</sup>	--	0.5	--

Notes:

[1] Applied as an average daily concentration.

(f) 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 may discharge free available or total residual chlorine at any one time unless the utility can demonstrate to the Central Coast Water Board that the units in a particular location cannot operate at or below this level or chlorination [40 C.F.R. section 423.12(b)(8)].

ii. **Standards of Performance Based on BAT**

- (a) There shall be no discharge of polychlorinated biphenyl compounds such as those commonly used for transformer fluid [40 C.F.R. section 423.13(a)].
- (b) For any plant with a total rated electric generating capacity of 25 or more megawatts, the quantity of pollutants discharged in once through cooling water from each discharge point shall not exceed the quantity determined by multiplying the flow of once through cooling water from each discharge point times the concentration listed in the following table [40 C.F.R. section 423.13(b)(1)]:

**Table F-16. BAT Effluent Limitations for Once-Through Cooling Water**

Parameter	Units	Effluent Limitations					
		Average Monthly	Average Weekly	Maximum Daily	Instantaneous Minimum	Instantaneous Maximum	Six-Month Median
Total Residual Chlorine	mg/L	--	--	--	--	0.2	--

- (c) 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 microorganism control [40 C.F.R. section 423.13(b)(2)].
- (d) The quantity of pollutants discharged in chemical metal cleaning wastes shall not exceed the quantity determined by multiplying the flow of chemical metal cleaning wastes times the concentration listed in the following table [40 C.F.R. section 423.13(e)]:

**Table F-17. BAT Effluent Limitations for Chemical Metal Cleaning Wastes**

Parameter	Units	Effluent Limitations					
		Average Monthly	Average Weekly	Maximum Daily	Instantaneous Minimum	Instantaneous Maximum	Six-Month Median
Copper, Total Recoverable	mg/L	1.0	--	1.0	--	--	--
Iron, Total Recoverable	mg/L	1.0	--	1.0	--	--	--

**3. Summary of Technology-based Effluent Limitations**

The Facility discharges once-through cooling water to the Pacific Ocean via Discharge Point No. 002. The total flow volume into the Pacific Ocean through Discharge Point No. 002 is a combination of once-through cooling water, stormwater, and in-plant waste streams that consist of low volume waste source wastewater and metal cleaning wastes, as defined in 40 C.F.R. part 423.

40 C.F.R. section 423.12(b)(12) and section 423.13(h) state that in the event that waste streams from various sources are combined for treatment or discharge, the quantity of each pollutant or pollutant property shall not exceed the limitations specified. In order to ensure that the discharge from each individual waste stream is in compliance with 40 C.F.R. part 423 and effluent limitations for Discharge Point No. 002, effluent limitations have been applied at the discharge of each waste stream from treatment, but before commingling with other waste streams and being discharged through Discharge Point No. 002.

This Order establishes the following technology-based effluent limitations.

**a. Discharge Point No. 002 (Monitoring Location EFF-002)**

- i. PCBs. There shall be no discharge of PCBs. This limitation is based on 40 C.F.R. sections 423.12(b)(2) and 423.13(a). This limitation has been applied in this Order as a Discharge Prohibition.
- ii. The Discharger shall maintain compliance with the effluent limitations contained in the following table. The limitation for total residual chlorine is based on 40 C.F.R. section 423.13(b)(1), and free available chlorine is based on 40 C.F.R. section 423.12(b)(6).
- iii. Neither free available chlorine nor total residual chlorine may 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 microorganism control. This limitation is based on 40 C.F.R. section 423.12(b)(8) and 40 C.F.R. section 423.12(b)(6).

**Table F-18. Effluent Limitations at Discharge Point No. 002 (Monitoring location EFF-002)**

Parameter	Units	Effluent Limitations					
		Average Monthly	Average Weekly	Maximum Daily	Instantaneous Minimum	Instantaneous Maximum	Six-Month Median
Total Residual Chlorine	µg/L	--	--	--	--	200 <sup>[1]</sup>	--
Free Available Chlorine	µg/L	--	--	200 <sup>[1]</sup>	--	500	--

Notes:

<sup>[1]</sup> Applied as an average daily concentration.

Although additional internal wastewaters are commingled with once-through cooling water prior to the monitoring location, the non-cooling water components compose less than 0.01 percent of the total flow through Discharge Point 002. As a result, dilution provided by these waste streams is negligible and compliance with ELGs for once through cooling water can be determined based on the total discharge through Discharge Point No. 002 at monitoring location EFF-002.

**b. Internal Monitoring Location INT-002B (Seawater Evaporator Blowdown)**

The discharge of low volume wastes from seawater evaporator blowdown shall be monitored at INT-002B. The Discharger shall maintain compliance with the following effluent limitations at Discharge Point 002 with compliance measured at Monitoring Location INT-002B as described in the Monitoring and Reporting Program, Attachment E:

- i. The pH shall be within the range of 6.0 - 9.0. This limitation is based on 40 C.F.R. section 423.12(b)(1).
- ii. There shall be no discharge of PCBs. This limitation is based on 40 C.F.R. sections 423.12(b)(2) and 423.13(a).
- iii. The quantity of pollutants discharged from low volume waste sources shall not exceed the quantity determined by multiplying the flow of the low volume waste sources times the concentration listed in the following table. These limitations are based on 40 C.F.R. section 423.12(b)(3).

**Table F-19. Final Technology-based Effluent Limitations for Seawater Evaporator Blowdown Low Volume Wastes (Monitoring Location INT-002B)**

Parameter	Units	Effluent Limitations <sup>[1]</sup>					
		Average Monthly	Average Weekly	Maximum Daily	Instantaneous Minimum	Instantaneous Maximum	Six-Month Median
Total Suspended Solids	mg/L	30.0	--	100.0	--	--	--
	lbs/day <sup>[2]</sup>	138	--	459	--	--	--
Oil and Grease	mg/L	15	--	20	--	--	--
	lbs/day <sup>[2]</sup>	69	--	92	--	--	--

Notes:

<sup>[1]</sup> According to 40 CFR 423.12.



[2] Mass-based limitations are based on the flow of 0.55 MGD at internal monitoring location INT-002B reported by the Discharger as shown on the schematic water flow in Attachment B and are calculated as follows:

$$\text{Mass Limit (lbs/day)} = 8.34 \times C_e \times Q$$

Where,

$C_e$  = The effluent concentration limitation specified in Table F-19 for the specific pollutant considered (in units of mg/L).

$Q$  = Observed flow rate discharged at Monitoring Location INT-002B (in units of MGD).

**c. Internal Monitoring Location INT-002C (Wastewater Sump)**

Internal monitoring location INT-002C receives the combination of low volume waste (from former internal discharges 002C1, 002C2, 002C4, 002C5, and 002C6) and metal cleaning waste from former internal discharge 002C3. For simplicity, monitoring requirements and effluent limitations for the former six internal discharges (002C1 through 002C6) have been removed and only one internal monitoring location has been specified at 002C, where treated wastewater from 002C1 through 002C6 commingles. Technology-based effluent limitations based on ELGs are re-evaluated and adjusted appropriately for this combined internal monitoring location to ensure compliance for each waste stream.

As technology-based limits for pH, PCBs, TSS, and oil and grease have the same numeric limitations for both low volume waste and metal cleaning wastes, the limitations do not require any adjustment. However, chemical metal cleaning wastes require application of two additional numeric ELG limits (copper and iron). The limits for copper and iron are therefore applied at INT-002C3, after treatment, but prior to the treated wastewater sump.

The stormwater from the ammonia storage containment area is also conveyed to the oil/water separator and treated water sump. In order to ensure that the discharge is achieving ELG effluent limitations through treatment system performance and not through dilution, the Monitoring and Reporting Program (MRP) requires sampling to occur during dry weather periods when no stormwater from the ammonia storage containment area is contributing to the treated wastewater sump.

The Discharger shall maintain compliance with the following effluent limitations at Discharge Point No. 002, with compliance measured at Monitoring Location INT-002C as described in the MRP, Attachment E:

- i. The pH shall be within the range of 6.0 - 9.0. This limitation is based on 40 C.F.R. section 423.12(b)(1).
- ii. There shall be no discharge of PCBs. This limitation is based on 40 C.F.R. sections 423.12(b)(2) and 423.13(a).
- iii. The Discharger shall maintain compliance with the effluent limitations contained in the following table.

**Table F-20. Final Technology-based Effluent Limitations at Monitoring Location INT - 002C**

Parameter	Units	Effluent Limitations <sup>[1]</sup>					
		Average Monthly	Average Weekly	Maximum Daily	Instantaneous Minimum	Instantaneous Maximum	Six-Month Median
	mg/L	30	--	100	--	--	--

Parameter	Units	Effluent Limitations <sup>[1]</sup>					
		Average Monthly	Average Weekly	Maximum Daily	Instantaneous Minimum	Instantaneous Maximum	Six-Month Median
Total Suspended Solids	lbs/day <sup>[2]</sup>	59	--	196.9	--	--	--
Oil and Grease	mg/L	15	--	20	--	--	--
	lbs/day <sup>[2]</sup>	29.54	--	39.38	--	--	--

Notes:

<sup>[1]</sup> Based on 40 CFR part 423.

<sup>[2]</sup> Mass-based limitations are based on the combined flow of 0.48 MGD at internal monitoring location INT-002C reported by the Discharger as shown on the schematic water flow (Attachment B) and are calculated as follows:  
Mass Limit (lbs/day) = 8.34 x Ce x Q

Where,

Ce = The effluent concentration limitation specified in Table F-20 for the specific pollutant considered (in units of mg/L).

Q = Observed flow rate discharged at Monitoring Location INT-002C (in units of MGD).

- d. The discharge of metal cleaning wastes shall be monitored at INT-002C3. The Discharger shall maintain compliance with the following effluent limitations at Discharge Point 002 with compliance measured at Monitoring Location INT-002C3 as described in the MRP, Attachment E:
  - i. The pH shall be within the range of 6.0 -9.0. This limitation is based on 40 C.F.R. section 423.12(b)(1).
  - ii. There shall be no discharge of PCBs. This limitation is based on 40 C.F.R. sections 423.12(b)(2) and 423.13(a).
  - iii. The Discharger shall maintain compliance with the effluent limitations contained in the following table.

**Table F-21. Final Technology-based Effluent Limitations at Monitoring Location INT-002C3**

Parameter	Units	Effluent Limitations <sup>[1]</sup>					
		Average Monthly	Average Weekly	Maximum Daily	Instantaneous Minimum	Instantaneous Maximum	Six-Month Median
Total Suspended Solids	mg/L	30	--	100	--	--	--
	lbs/day <sup>[2]</sup>	0.55	--	1.84	--	--	--
Oil and Grease	mg/L	15	--	20	--	--	--
	lbs/day <sup>[2]</sup>	0.28	--	0.37	--	--	--
Copper, Total Recoverable	mg/L	1.0	--	1.0	--	--	--
	lbs/day <sup>[2]</sup>	0.018	--	0.018	--	--	--
Iron, Total Recoverable	mg/L	1.0	--	1.0	--	--	--
	lbs/day <sup>[2]</sup>	0.018	--	0.018	--	--	--

Notes:

<sup>[1]</sup> Based on 40 CFR part 423.

<sup>[2]</sup> Mass-based limitations are based on a flow of 2.2 x 10<sup>-3</sup> MGD at internal monitoring location INT-002C3 reported by the Discharger as shown on the schematic water flow (Attachment B) and are calculated as follows:

Mass Limit (lbs/day) = 8.34 x Ce x Q

Where,

Ce = The effluent concentration limitation specified in Table F-21 for the specific pollutant considered (in units of mg/L).

Q = Flow rate discharged at Monitoring Location INT-002C3 (in units of MGD).

## **C. Water Quality-Based Effluent Limitations (WQBELs)**

### **1. Scope and Authority**

CWA section 301(b) and 40 C.F.R. 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, including numeric and narrative objectives within a standard.

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

Section 122.44(d)(1)(i) of 40 C.F.R. 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) U.S. EPA criteria guidance under CWA section 304(a), supplemented where necessary by other relevant information; (2) an indicator parameter for the pollutant of concern; or (3) a calculated numeric water quality criterion, such as a proposed state criterion or policy interpreting the state's narrative criterion, supplemented with other relevant information, as provided in section 40 C.F.R. section 122.44(d)(1)(vi).

When numeric water quality objectives have not been established, but a discharge has the reasonable potential to cause or contribute to an excursion above a narrative criterion, WQBELs may be established using one or more of three methods described at 40 C.F.R. section 122.44 (d): 1) WQBELs may be established using a calculated water quality criterion derived from a proposed State criterion or an explicit State policy or regulation interpreting its narrative criterion; 2) WQBELs may be established on a case-by-case basis using U.S. EPA criteria guidance published under CWA section 304 (a); or 3) WQBELs may be established using an indicator parameter for the pollutant of concern.

### **2. Applicable Beneficial Uses and Water Quality Criteria and Objectives**

Beneficial uses for ocean waters of the Central Coast Region are established by the Basin Plan and California Ocean Plan and are described in sections III.C.1 and III.C.3, respectively, of the Fact Sheet. The water quality objectives from the California Ocean Plan are incorporated as receiving water limitations into this Order.

Water quality objectives applicable to ocean waters of the Central Coast region include water quality objectives for bacterial characteristics, physical characteristics, chemical characteristics, biological characteristics, and radioactivity. In addition, Table 1 of the California Ocean Plan contains numeric water quality objectives for 83 toxic pollutants for the protection of marine aquatic life and human health. Pursuant to NPDES regulations at 40 C.F.R. section 122.44(d)(1) and in accordance with procedures established by the California Ocean Plan, the Central Coast Water Board has performed a reasonable

potential analysis (RPA) to determine the need for effluent limitations for the Table 1 toxic pollutants.

### 3. Determining the Need for WQBELs

Procedures for performing an RPA for ocean dischargers are described in Section III.C and Appendix VI of the California Ocean Plan. The procedure is a statistical method that projects an effluent data set while taking into account the averaging period of water quality objectives, the long term variability of pollutants in the effluent, limitations associated with sparse data sets, and uncertainty associated with censored data sets. The procedure assumes a lognormal distribution of the effluent data set and compares the 95th percentile concentration at 95th percent confidence of each Table 1 pollutant, accounting for dilution, to the applicable water quality criterion. The RPA results in one of the three following endpoints.

- Endpoint 1 - There is “reasonable potential.” An effluent limitation must be developed for the pollutant. Effluent monitoring for the pollutant, consistent with the monitoring frequency in California Ocean Plan Appendix III is required.
- Endpoint 2 - There is no “reasonable potential.” An effluent limitation is not required for the pollutant. California Ocean Plan Appendix III effluent monitoring is not required for the pollutant. However, the Central Coast Water Board may require occasional monitoring for the pollutant or for whole effluent toxicity as appropriate.
- Endpoint 3 - The RPA is inconclusive. Monitoring for the pollutant or whole effluent toxicity testing, consistent with the monitoring frequency in California Ocean Plan Appendix III is required. An existing effluent limitation for the pollutant shall remain in the permit; otherwise, the permit shall include a reopener clause to allow for subsequent modification of the permit to include an effluent limitation if the monitoring establishes that the discharge causes, has the reasonable potential to cause, or contribute to an excursion above a Table B water quality objective.

The State Water Board has developed a reasonable potential calculator (RPcalc 2.2), which is available at:

[http://www.swrcb.ca.gov/water\\_issues/programs/ocean/docs/trirev/stakeholder050505/rp\\_calc22\\_setup.zip](http://www.swrcb.ca.gov/water_issues/programs/ocean/docs/trirev/stakeholder050505/rp_calc22_setup.zip)

RPcalc 2.2 was used in the development of this Order and considers several pathways in the determination of reasonable potential.

#### a. First Path

If available information about the receiving water or the discharge supports a finding of reasonable potential without analysis of effluent data, the Central Coast Water Board may decide that WQBELs are necessary after a review of such information. Such information may include facility or discharge type; solids loading; lack of dilution; history of compliance problems; potential toxic effects; fish tissue data; CWA section 303(d) status of the receiving water; the presence of threatened or endangered species or their critical habitat; or other information.

#### b. Second Path

If any pollutant concentration, adjusted to account for dilution, is greater than the most stringent applicable water quality objective, there is reasonable potential for that pollutant.

c. Third Path

If the effluent data contain three or more detected and quantified values (i.e., values that are at or above the minimum level (ML)) and all values in the data set are at or above the ML, a parametric RPA is conducted to project the range of possible effluent values. The 95th percentile concentration is determined at 95 percent confidence for each pollutant and compared to the most stringent applicable water quality objective to determine reasonable potential. A parametric analysis assumes that the range of possible effluent values is distributed log-normally. If the 95th percentile value is greater than the most stringent applicable water quality objective, there is reasonable potential for that pollutant.

d. Fourth Path

If the effluent data contains three or more detected and quantified values (i.e., values that are at or above the ML), but at least one value in the data set is less than the ML, a parametric RPA is conducted according to the following steps.

- i. If the number of censored values (those expressed as a “less than” value) account for less than 80 percent of the total number of effluent values, calculate the ML (the mean of the natural log of transformed data) and SL (the standard deviation of the natural log of transformed data) and conduct a parametric RPA, as described above for the Third Path.

If the number of censored values accounts for 80 percent or more of the total number of effluent values, conduct a non-parametric RPA, as described below for the Fifth Path. A non-parametric analysis becomes necessary when the effluent data is limited, and no assumptions can be made regarding its possible distribution.

e. Fifth Path

A non-parametric RPA is conducted when the effluent data set contains less than three detected and quantified values or when the effluent data set contains three or more detected and quantified values but the number of censored values accounts for 80 percent or more of the total number of effluent values. A non-parametric analysis is conducted by ordering the data, comparing each result to the applicable water quality objective and accounting for ties. The sample number is reduced by one for each tie, when the dilution-adjusted method detection limit (MDL) is greater than the water quality objective. If the adjusted sample number, after accounting for ties, is greater than 15, the pollutant has no reasonable potential to exceed the water quality objective. If the sample number is 15 or less, the RPA is inconclusive, monitoring is required, and any existing effluent limitations in the expiring permit are retained.

An RPA was conducted using effluent monitoring data reported for November 2009 to May 2017. The implementation provisions for Table 3 in Section III.C of the California Ocean Plan specify that the minimum initial dilution is the lowest average initial dilution within any single month of the year. Initial dilution is the process that results in the rapid and irreversible turbulent mixing of wastewater with ocean water around the point of discharge. Dilution estimates shall 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. Order No. R3-2000-0041 established the minimum initial dilution factor ( $D_m$ ) for the discharge to be 7.4 to 1 (seawater to effluent). This  $D_m$  of 7.4:1 is retained from the current Order and applied to the WQBELs established herein.

A summary of the RPA results is provided below. As shown in the table, due to insufficient data, the RPA frequently leads to Endpoint 3 meaning that the RPA inconclusive. In these circumstances, the California Ocean Plan requires that existing effluent limitations for those pollutants (for which the RPA is inconclusive) remain in the reissued permit. The Endpoint 3 constituents included chlorinated phenolics, non-chlorinated phenolics, and PCBs. In these circumstances, additional monitoring is required for those pollutants during the term of the reissued permit and existing effluent limitations are retained. RPA results that did not result in Endpoint 3 are bolded in Table F-5 and discussed further in the sections that follow.

When the RPA resulted in Endpoint 2, meaning there is no reasonable potential for that pollutant, the limit has been removed for this permit term. Endpoint 2 was concluded for arsenic, ammonia, cadmium, chromium VI, lead, mercury, selenium, silver, and zinc.

Where RPA Endpoint 1 resulted, reasonable potential to exceed water quality objectives has been determined and effluent limitations are established in the Order. Endpoint 1 was concluded for chronic toxicity, total chlorine residual, copper and nickel.

**Table F-22. RPA Results for Discharge Point No. 002 Discharges to the Pacific Ocean**

Table 1 Pollutant	Most Stringent Water Quality Objective (µg/L)	No. of Samples	No. of Non-Detects	Maximum Effluent Conc. (µg/L)	RPA Result, Comment <sup>[1][2][3][4]</sup>
<b>Objectives for Protection of Marine Aquatic Life</b>					
Arsenic	8	40	2	4.41	Endpoint 2 – Effluent limitation not required.
Ammonia	600	32	16	246	Endpoint 2 – Effluent limitation not required.
Cadmium	1	40	7	0.19	Endpoint 2 – Effluent limitation not required.
Chromium VI	2	40	7	3.2	Endpoint 2 – Effluent limitation not required.
Copper	3	40	5	82.18	<b>Endpoint 1 – Effluent limitation is necessary.</b>
Lead	2	40	6	5.8	Endpoint 2 – Effluent limitation not required.
Mercury	0.04	40	20	0.02	Endpoint 2 – Effluent limitation not required.
Nickel	5	40	2	165.4	<b>Endpoint 1 – Effluent limitation is necessary.</b>

Table 1 Pollutant	Most Stringent Water Quality Objective (µg/L)	No. of Samples	No. of Non-Detects	Maximum Effluent Conc. (µg/L)	RPA Result, Comment <sup>[1][2][3][4]</sup>
Selenium	15	40	27	91	Endpoint 2 – Effluent limitation not required.
Silver	0.7	40	25	1.43	Endpoint 2 – Effluent limitation not required.
Zinc	20	40	5	100	Endpoint 2 – Effluent limitation not required.
Total Chlorine Residual	2	343	235	480	<b>Endpoint 1 – Effluent limitation is necessary.</b>
Chronic Toxicity	NA	33	0	10	<b>Endpoint 1 – Effluent limitation is necessary.</b>
Phenolic Compounds (non-chlorinated)	30	6	5	24	<b>Endpoint 3 – RPA is inconclusive and Effluent limitation is retained from previous permit.</b>
Chlorinated Phenolics	1	6	6	ND	<b>Endpoint 3 – RPA is inconclusive and Effluent limitation is retained from previous permit.</b>
<b>Objectives for Protection of Human Health - Carcinogens</b>					
PCBs	0.000019	42	42	ND	<b>Endpoint 3 – RPA is inconclusive and Effluent limitation is retained from previous permit.</b>

Notes:

- [1] NA indicates that effluent data are not available.
- [2] ND indicates that the pollutant was not detected.
- [3] Minimum probable initial dilution for this Discharger is 7.4:1.
- [4] Effluent data used for this RPA were collected from November 2009 to May 2017.

As there is no data available for Discharge Point No. 004, no RPA was conducted for Discharge Point No. 004.

**4. WQBEL Calculations**

Based on results of the RPA, the Central Coast Water Board is establishing WQBELs for copper, nickel, chronic toxicity, and total residual chlorine based on a conclusion of Endpoint 1. An Endpoint 2 was concluded for ammonia, arsenic, cadmium, chromium (VI), lead, mercury, selenium, silver, and zinc. Effluent limitations are not required for pollutants resulting in an Endpoint 2. All other California Ocean Plan Table 3

pollutants resulted in an Endpoint 3; therefore, the limits for these pollutants are retained in this Order.

As described by Section III. C of the California Ocean Plan, effluent limitations for Table 3 pollutants are calculated according to the following equation.

$$C_e = C_o + D_m (C_o - C_s)$$

Where

- $C_e$  = the effluent limitation ( $\mu\text{g/L}$ )
- $C_o$  = the concentration (the water quality objective) to be met at the completion of initial dilution ( $\mu\text{g/L}$ ).
- $C_s$  = background seawater concentration ( $\mu\text{g/L}$ )
- $D_m$  = minimum probable initial dilution expressed as parts seawater per part wastewater (here,  $D_m = 7.4$ )

For this Facility, the  $D_m$  of 7.4 is unchanged from Order No. R3-2000-0041. Initial dilution is the process that results in the rapid and irreversible turbulent mixing of wastewater with ocean water around the point of discharge. In accordance with Table 1 implementing procedures,  $C_s$  equals zero for all pollutants, except the following:

**Table F-23. Background Concentrations ( $C_s$ ) – California Ocean Plan (Table 5)**

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

For all other California Ocean Plan Table 1 parameters,  $C_s=0$

Section III.C.8.d of the California Ocean Plan describes compliance determination for Table 3 pollutants for dischargers that use a large volume of ocean water for once-through cooling and states:

*“...Effluent concentration values ( $C_e$ ) shall be determined through the use of equation 1 considering the minimum probable initial dilution of the combined effluent (in-plant waste streams plus cooling water flow). These concentration values shall then be converted to mass emission limitations as indicated in equation 3. The mass emission limits will then serve as requirements applied to all in-plant waste streams taken together which discharge into the cooling water flow, except for total chlorine residual, acute [if applicable per Section 3(c)] and chronic toxicity, and instantaneous maximum concentrations in Table 1 shall apply to, and be measured in, the combined final effluent, as adjusted for dilution with ocean water...”*

In accordance with California Ocean Plan implementation procedures for dischargers using a large volume of ocean water for once-through cooling, this Order establishes WQBELs applicable to the combined discharge through Discharge Point 002 as concentration based limitations for all California Ocean Plan Table 3 parameters requiring instantaneous maximum limitations, and as both concentration- and mass-based limitations for all California Ocean Plan Table 3 parameters requiring 6-month median, average monthly (30-day average), and daily maximum effluent limitations. This Order also establishes WQBELs applicable to the low volume in-plant waste streams as mass-based limitations for all Table 1 parameters requiring 6-month median, average



monthly (30-day average), and daily maximum effluent limitations, with compliance determined by the total in-plant waste streams mass discharge taken together, which will be calculated as the sum of the mass discharges from the individual in-plant waste streams.

Consistent with water quality objectives contained in the 2019 California Ocean Plan, this Order establishes WQBELs for the parameters that demonstrated reasonable potential on a 6-month median, daily maximum, and instantaneous maximum-basis.

For an example, copper is a pollutant that is included in California Ocean Plan Table 3 as well as in the in-plant waste streams which discharges into the cooling water. In addition, copper demonstrated reasonable potential in the RPA analysis. Therefore, this Order establishes both concentration- and mass-based limitations (6-month median and maximum daily), and concentration-based limitations (instantaneous maximum effluent limitation) for copper at Discharge Point No. 002. This Order also establishes effluent limitations for copper for the combined in plant wastes (i.e., low volume wastes and chemical metal cleaning wastes) and the concentration must be monitored at a point prior to comingling with the once through cooling water.

Limitations for other Table 1 parameters for which effluent limitations were established in the previous Order, but data is unavailable for this Order, are retained.

Applicable water quality objectives from Table 3 of the California Ocean Plan are as follows:

**Table F-24. Water Quality Objectives (Co) – California Ocean Plan (Table 3) Objectives for Protection of Marine Aquatic Life**

Pollutant	Units	6-Month Median	Daily Maximum	Instantaneous Maximum
Arsenic	µg/L	8	32	80
Cadmium	µg/L	1	4	10
Chromium (VI)	µg/L	2	8	20
Copper	µg/L	3	12	30
Lead	µg/L	2	8	20
Mercury	µg/L	0.04	0.16	0.4
Nickel	µg/L	5	20	50
Selenium	µg/L	15	60	150
Silver	µg/L	0.7	2.8	7
Zinc	µg/L	20	80	200
Cyanide	µg/L	1	4	10
Total Chlorine Residual <sup>[1]</sup>	µg/L	2	8	60
Ammonia	µg/L	600	2,400	6,000
Acute Toxicity	TU <sub>a</sub>	---	0.3	---
Chronic Toxicity	TU <sub>c</sub>	---	1	---
Non-chlorinated Phenolics	µg/L	30	120	300
Chlorinated Phenolics	µg/L	1	4	10
Endosulfan	µg/L	0.009	0.018	0.027
Endrin	µg/L	0.002	0.004	0.006
HCH	µg/L	0.004	0.008	0.012
Radioactivity	µg/L	---	---	---

Notes:

<sup>[1]</sup> Water quality objectives for total chlorine residual applying to intermittent discharges not exceeding two hours shall be determined through the use of the following equation:  
 $\log y = -0.43 (\log x) + 1.8$

where:

y = the water quality objective (in µg/L) to apply when chlorine is being discharged;

x = the duration of uninterrupted chlorine discharge in minutes

**Table F-25. Water Quality Objectives (Co) – California Ocean Plan (Table 3) Objectives for Protection of Human Health**

Pollutant	Units	30-day Average
<b>Non-Carcinogens</b>		
Acrolein	µg/L	220
Antimony	µg/L	1,200
Bis(2-chloroethoxy) Methane	µg/L	4.4
Bis(2-chloroisopropyl) ether	µg/L	1,200
Chlorobenzene	µg/L	570
Chromium (III)	µg/L	190,000
Di-n-butyl Phthalate	µg/L	3,500
Dichlorobenzenes	µg/L	5,100
Diethyl Phthalate	µg/L	33,0000
Dimethyl Phthalate	µg/L	820,000
4,6-dinitro-2-methylphenol	µg/L	220
2,4-dinitrophenol	µg/L	4.0
Ethylbenzene	µg/L	4,100
Fluoranthene	µg/L	15
Hexachlorocyclopentadiene	µg/L	58
Nitrobenzene	µg/L	4.9
Thallium	µg/L	2
Toluene	µg/L	85,000
Tributyltin	µg/L	0.0014
1,1,1-trichloroethane	µg/L	540,000
<b>Carcinogens</b>		
Acrylonitrile	µg/L	0.10
Aldrin	µg/L	0.000022
Benzene	µg/L	5.9
Benzidine	µg/L	0.000069
Beryllium	µg/L	0.033
Bis(2-chloroethyl) Ether	µg/L	0.045
Bis(2-ethylhexyl) Phthalate	µg/L	3.5
Carbon Tetrachloride	µg/L	0.90
Chlorodane	µg/L	0.000023
Chlorodibromomethane	µg/L	8.6
Chloroform	µg/L	130
DDT	µg/L	0.00017
1,4-dichlorobenzene	µg/L	18
3,3'-dichlorobenzidine	µg/L	0.0081
1,2-dichloroethane	µg/L	28
1,1-dichloroethylene	µg/L	0.9
Dichlorobromomethane	µg/L	6.2
Dichloromethane	µg/L	450
1,3-dichloropropene	µg/L	8.9
Dieldrin	µg/L	0.00004

Pollutant	Units	30-day Average
2,4-dinitrotoluene	µg/L	2.6
1,2-diphenylhydrazine	µg/L	0.16
Halomethanes	µg/L	130
Heptachlor	µg/L	0.00005
Heptachlor Epoxide	µg/L	0.00002
Hexachlorobenzene	µg/L	0.00021
Hexachlorobutadiene	µg/L	14
Hexachloroethane	µg/L	2.5
Isophorone	µg/L	730
N-nitrosodimethylamine	µg/L	7.3
N-nitrosodi-N-propylamine	µg/L	0.38
N-nitrosodiphenylamine	µg/L	2.5
PAHs	µg/L	0.0088
PCBs	µg/L	0.000019
TCDD equivalents	µg/L	0.0000000039
1,1,2,2-tetrachloroethane	µg/L	2.3
Tetrachloroethylene	µg/L	2.0
Toxaphene	µg/L	0.00021
Trichloroethylene	µg/L	27
1,1,2-trichloroethane	µg/L	9.4
2,4,6-trichlorophenol	µg/L	0.29
Vinyl Chloride	µg/L	36

Effluent limitations are calculated using the equation  $C_e = C_o + D_m(C_o - C_s)$  as outlined above. For example, the effluent limitations for copper are calculated as follows (all limits calculated are expressed with two significant digits).

Copper

At Discharge Point No. 002:

Compute effluent concentration limitations and values at Discharge Point No. 002 using the formula:

$$C_e = C_o + D_m(C_o - C_s)$$

$$C_e = 3 + 7.4(3 - 2) = 10 \text{ µg/L (6-Month Median)}$$

$$C_e = 12 + 7.4(12 - 2) = 86 \text{ µg/L (Daily Maximum)}$$

$$C_e = 30 + 7.4(30 - 2) = 240 \text{ µg/L (Instantaneous Maximum)}$$

Compute mass emission limitation (lbs/day; (Le) for Discharge Point 002 using the Formula:

$$Le \text{ (lbs/day)} = C_e \times Q \times 0.00834$$

The mass-based limitations (Le) applicable at the combined effluent flow at Discharge Point No. 002 are based on a maximum flow of 362 MGD at Monitoring Location EFF-002.

$$Le = 10 \text{ µg/L} \times (362 \text{ MGD}) \times 0.00834 = 30 \text{ lbs/day (6-Month Median)}$$

$$Le = 86 \text{ µg/L} \times (362 \text{ MGD}) \times 0.00834 = 259 \text{ lbs/day (Daily Maximum)}$$

**Table F-26. Effluent Limitations for the Protection of Marine Aquatic Life at Discharge Point No. 002**

Pollutant <sup>[5]</sup>	6-Month Median		Daily Maximum		Instantaneous Maximum <sup>[3]</sup>	
	Concentration (µg/L)	Mass Loading (lbs/day)	Concentration (µg/L)	Mass Loading (lbs/day)	Concentration (µg/L)	Mass Loading (lbs/day)
Copper	10	30	86	258.2	237.2	--
Nickel	42	126.1	168	504.4	420	--
Total Chlorine Residual	--	50.4	--	201.8	504	--
Chronic Toxicity	--	--	8.4 <sup>[2]</sup>	--	--	--
Cyanide <sup>[1]</sup>	8.4	25.36	33.6	101.44	84	--
Phenolic Compounds (Non-chlorinated Phenolics)	252	760.81	1008	3043.23	2520	--
Chlorinated Phenolics	8.4	25.36	33.6	101.44	84	--
Endosulfan	0.0756	0.23	0.1512	0.46	0.2268	--
Endrin	0.0168	0.05	0.0336	0.10	0.0504	--
HCH	0.0336	0.10	0.0672	0.20	0.1008	--
Radioactivity <sup>[4]</sup>	Not to exceed limits specified in California Code of Regulations, Title 22, Division 4, Chapter 15, Article 5, Section 64443					

**Notes:**

- [1] If the Discharger can demonstrate to the satisfaction of the Central Coast Water Board staff (subject to U.S. EPA 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 C.F.R. part 136, as revised May 14, 1999.
- [2] Units are TU<sub>c</sub> for chronic toxicity.
- [3] According to the 2019 California Ocean Plan Section III.C.4.d (compliance determination of power plant and heat exchanger dischargers), instantaneous maximum concentrations in Table 1 shall apply to, and be measured in, the combined final effluent, as adjusted for dilution with ocean water.
- [4] The Table 1 objective for radioactivity shall apply to the undiluted combined final effluent.
- [5] See Attachment A for applicable definitions.

**Table F-27. Effluent Limitations for the Protection of Human Health (Non-carcinogenic) at Discharge Point No. 002**

Pollutant <sup>[1]</sup>	30-day average	
	Concentration (µg/L)	Mass Loading (lbs/day)
Acrolein	1848.00	5579.26
Antimony	100800.00	304323.33
Bis(2-chloroethoxy) methane	36.96	111.59
Bis(2-chloroisopropyl) ether	100800.00	304323.33
Chlorobenzene	4788.00	14455.36
Chromium (III)	1596000.00	4818451.68
Di-n-butyl phthalate	294000.00	88760.95
Dichlorobenzene	428400.00	1293373.39
1,1-dichloroethylene	596400.00	1800579.31
Diethyl phthalate	277200.00	836888.98

Pollutant <sup>[1]</sup>	30-day average	
	Concentration (µg/L)	Mass Loading (lbs/day)
Dimethyl phthalate	6888000.00	20795423.04
4,6-dinitro-2-methylphenol	1848.00	5579.26
2,4-dinitrophenol	33.60	101.44
Ethylbenzene	34400.00	103977.12
Fluoranthene	126.00	380.40
Hexachlorocyclopentadiene	487.20	1470.90
Isophorone	1260000.00	3804040.80
Nitrobenzene	41.16	124.27
Thallium, total recoverable	16.80	50.72
Toluene	714000.00	2155623.12
1,1,2,2-tetrachloroethane	10100.00	30492.71
Tributyltin	0.01	0.04
1,1,1-trichloroethane	4536000.00	13694546.88
1,1,2-trichloroethane	361200.00	1090491.70

<sup>[1]</sup> See Attachment A for applicable definitions

**Table F-28. Effluent Limitations for the Protection of Human Health (Carcinogenic) at Discharge Point No. 002**

Pollutant <sup>[1]</sup>	30-day average	
	Concentration (µg/L)	Mass Loading (lbs/day)
Acrylonitrile	0.840	2.536
Aldrin	0.0002	0.001
Benzene	49.560	149.626
Benzidine	0.001	0.002
Beryllium	0.277	0.837
bis(2-chloroethyl) ether	0.378	1.141
bis(2-ethylhexyl) phthalate	29.400	88.761
Carbon tetrachloride	7.560	22.824
Chlordane <sup>[2]</sup>	0.0002	0.001
Chloroform	1092.000	3296.835
DDT <sup>[3]</sup>	0.001	0.004
1,4-dichlorobenzene	151.200	456.485
3,3'-dichlorobenzidine	0.068	0.205
1,2-dichloroethane	235.200	710.088
Dichloromethane	3780.000	11412.122
1,3-dichloropropene	74.760	225.706
Dieldrin	0.0003	0.001
2,4-dinitrotoluene	21.840	65.937
1,2-diphenylhydrazine	1.344	4.058
Halomethanes	1092.000	3296.835
Heptachlor	0.0004	0.001
Hexachlorobenzene	0.002	0.005
Hexachlorobutadiene	117.600	355.044
Hexachloroethane	21.000	63.401
N-nitrosodimethylamine	61.320	185.130
N-nitrosodiphenylamine	21.000	63.401
PAHs <sup>[4]</sup>	0.0740	0.223

Pollutant <sup>[1]</sup>	30-day average	
	Concentration (µg/L)	Mass Loading (lbs/day)
PCBs <sup>[5]</sup>	0.00016	0.0005
TCDD equivalents <sup>[6]</sup>	3.28E-08	9.89E-08
Tetrachloroethylene	16.800	50.721
Toxaphene	0.002	0.005
Trichloroethylene	226.80	684.727
2,4,6-trichlorophenol	2.436	7.354
Vinyl chloride	302.400	912.970

**Notes:**

- <sup>[1]</sup> See Attachment A for applicable definitions
- <sup>[2]</sup> Chlordane shall mean the sum of chlordane-alpha, chlordane-gamma, chlordene-alpha, chlordene- gamma, nonachlor-alpha, nonachlor-gamma, and oxychlordane.
- <sup>[3]</sup> Sum of 4,4'-DDT, 2,4'-DDT, 4,4'-DDE, 2,4'-DDE, 4,4'-DDD, and 2,4'-DDD.
- <sup>[4]</sup> PAHs (polynuclear aromatic hydrocarbons) shall mean the sum of acenaphthylene; anthracene; 1,2- benzanthracene; 3,4-benzofluoranthene; benzo[k]fluoranthene; 1,12benzoperylene; benzo(a)pyrene; chrysene; dibenzo(a,h)anthracene; fluorine; indeno(1,2,3-cd)pyrene; phenanthrene; and pyrene.
- <sup>[5]</sup> PCBs (polychlorinated biphenyls) shall mean 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.
- <sup>[6]</sup> TCDD equivalents shall mean 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, as shown below:

Isomer Group	Toxicity Equivalence Factor
2,3,7,8 – tetra CDD	1.0
2,3,7,8 – penta CDD	0.5
2,3,7,8 – hexa CDDs	0.1
2,3,7,8 – hepta CDD	0.01
octa CDD	0.001
2,3,7,8 – tetra CDF	0.1
1,2,3,7,8 – penta CDF	0.05
2,3,4,7,8 – penta CDFs	0.5
2,3,7,8 – hexa CDFs	0.1
2,3,7,8 – hepta CDFs	0.01
Octa CDF	0.001

**For the Total In-plant Waste Streams (i.e., Low Volume Wastes and Metal Cleaning Wastes at Monitoring Location INT-002E):**

As per Section II.C.8.d. of the California Ocean Plan, this Order establishes mass limitations for the total in-plant waste streams (low volume wastes and chemical metal cleaning wastes) for California Ocean Plan Table 3 parameters for which RP has been triggered (i.e., copper).

Compute maximum mass limitations for the Total In-plant Waste Streams at INT-002C that include Low Volume Wastes [Oil Water Separator (0.065 MGD), Boiler Blowdown (0.35 MGD), Bearing Cooling Water (0.0002 MGD), Boiler Lay-up Water (0.0007 MGD), and Drains from Oil Handling Areas, Retired Units 6&7 and Units 1 & 2 (0.062 MGD)], Seawater Evaporator Blowdown (0.55 MGD) and Chemical Metal Cleaning Wastes from Fireside Water Wash (HRSG) from Unit 1 & 2 (0.0022 MGD).

Total In-plant Waste Streams Flow = 0.065 + 0.35 + 0.0002 + 0.0007 + 0.062 + 0.0022 + 0.55 = 1.03 MGD

For copper, using the calculated concentration (Ce) from Tables F-26 through F-28 above, the mass emission limitations (lbs/day) for the combined in plant wastes (L<sub>t</sub>) are as follows:

$$L_t = 0.00834 \times 10.4 \mu\text{g/L} \times 1.03 \text{ MGD} = 0.089 \text{ lbs/day (6-Month Median)}$$

$$L_t = 0.00834 \times 86 \mu\text{g/L} \times 1.03 \text{ MGD} = 0.739 \text{ lbs/day (Daily Maximum)}$$

**Table F-29. Summary of Effluent Limitations for the Total In-Plant Waste Streams at Monitoring Location INT-002E**

Effluent Limitations for the Protection of Marine Aquatic Life						
Pollutant <sup>[2]</sup>	Units	Effluent Limitations				
		6-month median	Average Monthly	Maximum Daily	Instantaneous Minimum	Instantaneous Maximum
Copper	lbs/day	0.068	--	0.5645	--	1.557
Nickel	lbs/day	0.276	--	1.1027	--	2.757
Cyanide <sup>[1]</sup>	lbs/day	0.055	--	0.22	--	0.55
Total Chlorine Residual	lbs/day	0.110	--	--	--	3.308
Phenolic Compounds (Non-chlorinated Phenolics)	lbs/day	1.654	--	6.616	--	16.540
Chlorinated Phenolics	lbs/day	0.055	--	0.221	--	0.551
Endosulfan	lbs/day	0.0005	--	0.001	--	0.002
Endrin	lbs/day	0.0001	--	0.0002	--	0.0003
HCH	lbs/day	0.0002	--	0.0004	--	0.0007
Effluent Limitations for the Protection of Human Health (Non-Carcinogenic)						
Pollutant	Units	30-day average				
Acrolein	lbs/day	12.13				
Antimony	lbs/day	66.16				
Bis(2-chloroethoxy) methane	lbs/day	0.24				
Bis(2-chloroisopropyl) ether	lbs/day	66.16				
Chlorobenzene	lbs/day	31.43				
Chromium (III)	lbs/day	10475.47				
Di-n-butyl phthalate	lbs/day	192.97				
Dichlorobenzene	lbs/day	281.18				
1,1-dichloroethylene	lbs/day	3914.52				
Diethyl phthalate	lbs/day	1819.42				
Dimethyl phthalate	lbs/day	45209.94				
4,6-dinitro-2-methylphenol	lbs/day	12.13				
2,4-dinitrophenol	lbs/day	0.22				
Ethylbenzene	lbs/day	225.79				
Fluoranthene	lbs/day	0.83				
Hexachlorocyclopentadiene	lbs/day	3.20				
Isophorone	lbs/day	8270.11				

Nitrobenzene	lbs/day	0.27
Thallium	lbs/day	0.11
Toluene	lbs/day	4686.40
1,1,2,2-tetrachloroethane	lbs/day	66.29
Tributyltin	lbs/day	0.0001
1,1,1-trichloroethane	lbs/day	29772.40
1,1,2-trichloroethane	lbs/day	2370.77
<b>Effluent Limitations for the Protection of Human Health (Carcinogenic)</b>		
<b>Pollutant</b>	<b>Units</b>	<b>30-day Average</b>
Acrylonitrile	lbs/day	0.01
Aldrin	lbs/day	0.000001
Benzene	lbs/day	0.33
Benzidine	lbs/day	0.000004
Beryllium	lbs/day	0.002
Bis(2-chloroethyl) ether	lbs/day	0.002
Bis(2-ethylhexyl) phthalate	lbs/day	0.19
Carbon tetrachloride	lbs/day	0.05
Chlordane	lbs/day	0.000001
Chloroform	lbs/day	7.15
DDT	lbs/day	0.00001
1,4-dichlorobenzene	lbs/day	0.99
3,3'-dichlorobenzidine	lbs/day	0.0004
1,2-dichloroethane	lbs/day	7.15
Dichloromethane	lbs/day	24.81
1,3-dichloropropene	lbs/day	0.49
Dieldrin	lbs/day	0.000002
2,4-dinitrotoluene	lbs/day	0.14
1,2-diphenylhydrazine	lbs/day	0.01
Halomethanes	lbs/day	7.15
Heptachlor	lbs/day	0.00004
Hexachlorobenzene	lbs/day	0.00001
Hexachlorobutadiene	lbs/day	0.77
Hexachloroethane	lbs/day	0.14
N-nitrosodimethylamine	lbs/day	0.40
N-nitrosodiphenylamine	lbs/day	0.14
PAHs	lbs/day	0.0005
PCBs	lbs/day	0.000001
TCDD equivalents	lbs/day	0.00
Tetrachloroethylene	lbs/day	0.11
Toxaphene	lbs/day	0.00001
Trichloroethylene	lbs/day	1.49
2,4,6-trichlorophenol	lbs/day	0.02
Vinyl chloride	lbs/day	1.98

**Notes:**

- <sup>[1]</sup> If the Discharger can demonstrate to the satisfaction of Central Coast Water Board staff (subject to U.S. EPA 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 C.F.R. part 136, as revised May 14, 1999.



[2] See Attachment A for definitions.

## 5. Whole Effluent Toxicity (WET)

WET limitations protect receiving water quality from the aggregate toxic effect of a mixture of pollutants in the effluent. WET tests measure the degree of response of exposed aquatic test organisms to an effluent. The WET approach allows for protection of the narrative “no toxics in toxic amounts” criterion while implementing numeric criteria for toxicity. There are two types of WET tests - acute and chronic. An acute toxicity test is conducted over a short time period and measures mortality. A chronic toxicity test is conducted over a longer period of time and may measure mortality, reproduction, and growth.

The Basin Plan requires that all waters shall be maintained free of toxic substances in concentrations which are toxic to, or which produce detrimental physiological responses in, human, plant, animal, or aquatic life. Survival of aquatic organisms in surface waters subjected to a waste discharge or other controllable water quality conditions shall not be less than that for the same water body in areas unaffected by the waste discharge or for another control water.

The Central Coast Water Board has determined that treated wastewater from the Facility has a reasonable potential to cause or contribute to chronic toxicity in the discharge. Such a determination is consistent with the RPA procedure of the California Ocean Plan, which requires consideration of all available information, including the “potential toxic impact of the discharge” to determine if WQBELs are necessary, notwithstanding the statistical procedure with which the RPA is conducted for most pollutants. Chronic toxicity limitations are retained from the previous permit.

The Discharger must also maintain a toxicity reduction evaluation (TRE) workplan, which describes steps that the Discharger intends to follow in the event that acute and/or chronic toxicity limitations are exceeded. When monitoring measures WET in the effluent above the limitations established by the Order, the Discharger must resample, if the discharge is continuing, and retest. The Executive Officer will then determine whether to initiate enforcement action, require the Discharger to implement a TRE, or to implement other measures.

## 6. Thermal Plan and 316(a) Requirement

Discharge from Units 6 and 7, which ceased operation in 2017, had been an “existing discharge” within the meaning of the Thermal Plan. Discharge from the remaining portion of the MLPP, referred to as the “upgraded plant” or “modernized power plant,” in Order No. R3-2000-0041, is a “new discharge” under the Thermal Plan. Therefore, only the water quality objective for new discharges to coastal waters applies to discharges from the MLPP. The Thermal Plan requires:

- (1) Elevated temperature wastes shall be discharged to the open ocean away from the shoreline to achieve dispersion through the vertical water column.
- (2) Elevated temperature wastes shall be discharged a sufficient distance from areas of special biological significance to assure the maintenance of natural temperature in these areas.
- (3) The maximum temperature of thermal waste discharges shall not exceed the natural temperature of receiving waters by more than 20°F.

(4) The discharge of elevated temperature wastes shall not result in increases in the natural water temperature exceeding 4°F at (a) the shoreline, (b) the surface of any ocean substrate, or (c) the ocean surface beyond 1,000 feet from the discharge system. The surface temperature limitation shall be maintained at least 50 percent of the duration of any complete tidal cycle.

(5) Additional limitations shall be imposed when necessary to assure protection of beneficial uses.

Order No. R3-2000-0041 includes a variance from the Thermal Plan water quality objectives and implements alternative effluent limitations for discharges from the modernized power plant. The existing order has a daily averaged maximum temperature limit of 26°F and instantaneous maximum temperature limit of 32°F that applied when all units (1, 2, 6 and 7) were operating. When only Units 1 and 2 are operating, the daily averaged maximum and instantaneous maximum temperature limits are 20°F and 26°F, respectively.

The Thermal Plan provides that Regional Water Boards may grant exceptions to the specific water quality objectives of the Thermal Plan, in accordance with CWA section 316(a) and applicable federal regulations. Such exceptions are subject to concurrence by the State Water Board. CWA section 316(a) provides that an exception will be granted if the discharger can demonstrate, to the satisfaction of the applicable Regional Water Board, that an effluent limitation for heat is more stringent than necessary to ensure the protection and propagation of a balanced, indigenous community (BIP) of shellfish, fish, and wildlife in and on the body of water into which the discharge is to be made. If the exception is granted, the Regional Water Board adopts an alternative effluent limitation, taking into account the interaction of the heat component of the discharge with other pollutants that will protect the BIP.

According to the existing permit, it is anticipated that the combined discharges of the upgraded plant will meet the 20°F temperature limitation under most operating conditions. However, the discharge may exceed the 20°F limitation when only the older Units 6 and 7 are operating or during extended periods of high power generation with all units operating. As Units 6 and 7 are no longer operating, the discharge is unlikely to exceed the 20°F temperature limitation.

NPDES permits containing a 316(a) thermal variance must include a fact sheet that complies with the general requirements of 40 C.F.R. section 124.8. Among other things, the fact sheet must explain why the permitting authority believes any section 316(a) thermal variance included in the permit is justified, and it should contain a summary of any 316(a) thermal variance history from previous permits, if applicable (e.g., dates, determinations, limitations, etc.), as well as the basis for continuing the 316(a) thermal variance in the present permit<sup>2</sup>.

### **Original CWA Section 316(a) Demonstration**

Previous discharger Duke Energy (presently, Dynegy Moss Landing, LLC) requested the Central Coast Water Board consider and grant a specific exception to the 20°F thermal waste discharge limitation on March 17, 2000. In addition, on April 28, 2000, Duke Energy submitted a report titled *Evaluation of Proposed Discharge System with Respect*

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<sup>2</sup> Memorandum: Implementation of Clean Water Act Section 316(a) Thermal Variances in NPDES Permits (Review of Existing Requirements), by James A. Hanlon, Director, Office of Wastewater Management; To Water Division Directors, Regions 1 – 10; Dated October 28, 2008.

*to the Thermal Plan – Moss Landing Modernization Project (Thermal Plan-MLPP).* The Thermal Plan-MLPP was prepared under the direction of a technical working group that included the Central Coast Water Board's independent scientific experts and California Energy Commission, California Coastal Commission, and California Department of Fish and Game staff. The report describes the upgraded facility, estimates future operating parameters, and estimates the dispersion of the thermal plume under future operating conditions. The Thermal Plan-MLPP was used to evaluate Duke Energy's request for an exception to the Thermal Plan's 20°F thermal waste discharge limitation. The Thermal Plan-MLPP report indicates that because of rapid mixing of the thermal plume with the waters of the bay, the plume's heat quickly dissipates. The discharge is in an area of sandy substrate where degradation of species populations and communities should be minimal. The discharge location minimizes thermal plume contact with sensitive nearshore environments such as rocky intertidal habitat. Based on the evaluation of the thermal plume model and best professional judgment, the Central Coast Water Board determined there was no indication of significant adverse effect on Monterey Bay in the plume area due to the elevated temperature of the discharge.

The receiving water body segment where the BIP must be protected is defined as the area affected by the thermal plume. The thermal discharge occurs at an outfall 600 feet offshore, within Monterey Bay. There is rapid mixing of the discharge plume with Bay waters resulting in rapid reduction in plume temperature. The thermal plume is dispersed through the vertical water column. The extent of the thermal plume approaching 4°F over ambient temperatures is an approximate 1,000-foot radius around the discharge point within Monterey Bay under worst case conditions (maximum power loading, incoming tide, on-shore winds).

However, prior to adoption of Order No. R3-2000-0041, modeling and operating conditions indicated the thermal plume would not exceed the 4°F delta temperature limit at the shoreline for 50 percent of the tidal cycle, as required by the Thermal Plan. Duke Energy, in a 2002 Thermal Study, determined the actual (rather than modeled) dispersion of the thermal plume was in compliance per requirements in the Receiving Water Monitoring section of Order No. R3-2000-0041. That study included Units 6 and 7 (864 MGD) and Units 1 and 2 (360 MGD) operating at capacity, where the combined flow was at the daily averaged maximum temperature limit of 26°F delta temperature. With Units 6 and 7 retired and only Units 1 and 2 operating at capacity, the discharge will meet the existing order's daily averaged maximum limit of 20°F delta temperature. The heated discharge does not appear to enter Elkhorn Slough, or if it does, it has a minimal effect. Additionally, the naturally elevated temperature of the outflow from Elkhorn Slough to Monterey Bay during normal tidal action is a much larger temperature signal than the MLPP outfall discharge. Therefore, the heated discharge meets the requirements of the existing order.

#### **Basis for Continuing CWA Section 316(a) Variance in the Present Permit – Existing Thermal Plume Description**

The August 26, 2003 (and October 7, 2004 supplement) *Moss Landing Power Plant Post-Modernization Thermal Plume Evaluation* report (thermal plume evaluation report) verified temperature limits by the discharge plumes in Order No. R3-2000-0041 were met in all operating scenarios. As Units 6 and 7 of the MLPP have been retired, the MLPP is discharging less flow. Units 6 and 7 discharged a maximum of 864 MGD while the maximum discharge from Units 1 and 2 is only 360 MGD. Moreover, there were not any major upgrades conducted at the MLPP that would result in increased impacts from

temperature. Although Units 1 and 2 running at full capacity generally meet Thermal Plan requirements, there is a possibility that for intermittent short time periods the discharge temperature could exceed the 20°F delta instantaneous temperature limit of the Thermal Plan. Therefore, it is appropriate to retain temperature limitations based on the 316(a) variance. This variance is appropriate based on evidence that there is no appreciable harm to a balanced, indigenous community of shellfish, fish and wildlife (40 CFR 125.73(c)(1)(i)).

### **Central Coast Water Board Approval**

The Central Coast Water Board considered the interaction of the discharge thermal component with other pollutants being discharged to the applicable segment of Monterey Bay. There are no thermal point-source pollutant discharges in the segment, except for the MLPP discharge from Discharge Point No. 002. Effluent limitations for other pollutants in the discharge are set at levels necessary to protect beneficial uses and so other pollutants in the discharge should not interfere with BIP protection. Additionally, the Central Coast Water Board considered the cumulative impact of the discharge thermal component with the impact of entrainment from the MLPP intake facilities. In this case, there is no significant cumulative impact because the thermal plume impacts are limited to the applicable segment of Monterey Bay and the entrainment impacts are mostly in Moss Landing Harbor and Elkhorn Slough. Additionally, as described below, entrainment impacts are mitigated.

Because the thermal discharge of the modernized power plant will ensure protection and propagation of a BIP, an alternative effluent limitation for the thermal discharge from the modernized power plant was approved in the previous order. The alternative effluent limitation has been carried over in this Order.

## **D. Final Effluent Limitation Considerations**

Final, technology-based and water quality-based effluent limitations established by the Order are discussed in the preceding sections of the Fact Sheet.

### **1. Anti-Backsliding Requirements**

Sections 402(o) and 303(d)(4) of the CWA and federal regulations at 40 C.F.R. section 122.44(l) prohibit backsliding in NPDES permits. These anti-backsliding provisions require effluent limitations in a reissued permit to be as stringent as those in the previous permit, with some exceptions where limitations may be relaxed. All effluent limitations in this Order are at least as stringent as the effluent limitations in the previous Order, with the exception of oil and grease, TSS, settleable solids, turbidity and California Ocean Plan Table 3 parameters that had RPA Endpoint of 2.

However, CWA section 402(o)(2) lists exceptions to the general prohibition on backsliding. Section 402(o)(2)(B)(ii) allows for relaxation of effluent limitations where technical mistakes or mistaken interpretation of law were made in issuing the permit. In the previous Order No. 2000-0041, effluent limitations for California Ocean Plan Table 4 parameters were incorrectly established given that the ELGs for Steam Electric Generating Stations were applicable to the Facility and Table 4 effluent limitations only apply to publicly owned treatment works and industrial discharges for which ELGs have not been established. Therefore, effluent limitations established by the previous Order for TSS, oil and grease, settleable solids, and turbidity are not retained in this Order. This change is allowable according to CWA section 402(o)(2)(B)(ii).

When the RPA leads to Endpoint 2, meaning there is no reasonable potential for that pollutant, the limit has been removed for this permit term. Pollutants with endpoint 2 include arsenic, ammonia, cadmium, chromium VI, lead, mercury, selenium, silver, and zinc. The elimination of WQBELs for arsenic, ammonia, cadmium chromium VI, lead, mercury, selenium, silver, and zinc is consistent with the exception to the CWA's anti-backsliding requirements expressed at section 402(o)(2)(B)(i) of the Act, which allows a reissued permit to include less stringent limitations when "information is available" which was not available at the time of permit issuance (other than revised regulations, guidance, or test methods), would have justified the application of a less stringent effluent limitation at the time of permit issuance. In these circumstances, less stringent limitations (here, the removal or elimination of limitations) are based on new data, which was generated during the term of previous permit, and which demonstrates no reasonable potential for discharges from the Facility to cause or contribute to exceedances of applicable water quality standards.

This Order retains effluent limitations from the previous Order for California Ocean Plan Table 3 pollutants for which reasonable potential was determined and where the results of the RPA were inconclusive. The California Ocean Plan was amended in 2019 to include a procedure for determining "reasonable potential" by characterization of effluent monitoring data.

## **2. Antidegradation Policies**

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 No. 68-16. Resolution No. 68-16 incorporates the federal antidegradation policy where the federal policy applies under federal law. Resolution No. 68-16 requires that existing water quality be maintained unless degradation is justified based on specific findings. The Central Coast Water Board's Basin Plan and the California Ocean Plan implement, and incorporate by reference, the State and federal antidegradation policies. Compliance with these requirements will result in the use of best practicable treatment or control of the discharge.

Although this Order discontinues effluent limitations for California Ocean Plan Table 4 parameters (oil and grease, TSS, settleable solids, and turbidity), the relaxation of effluent limitations will not result in degradation of the receiving water. The Facility remains subject to ELGs for oil and grease and TSS at internal discharge INT-002B. The treatment provided prior to this location is designed to meet these limitations and will also reduce turbidity and settleable solids concentration. As such, the Facility is not expected to decrease the level of treatment as a result of the relaxation. In addition, other wastewaters at the facility are not expected to contribute elevated concentrations of Table 2 parameters.

The Order does not authorize increases in discharge rates or pollutant loadings. The Order's limitations and conditions ensure maintenance of the existing quality of receiving waters. Therefore, provisions of the Order are consistent with applicable antidegradation policy expressed by NPDES regulations at 40 C.F.R. section 131.12 and State Water Board Resolution No. 68-16.

## **3. Stringency of Requirements for Individual Pollutants**

This Order contains both technology-based and water quality-based effluent limitations for individual pollutants. The technology-based effluent limitations consist of restrictions on TSS, oil and grease, settleable solids, turbidity, and pH. Restrictions on TSS, oil and

grease, settleable solids, turbidity, and pH are discussed in section IV.B of the Fact Sheet. This Order's technology-based pollutant restrictions implement the minimum, applicable federal technology-based requirements. In addition, this Order contains effluent limitations more stringent than the minimum, federal technology-based requirements that are necessary to meet water quality standards. These limitations are not more stringent than required by the CWA.

Technology and water quality-based effluent limitations are summarized in sections IV.B and IV.C of this Fact Sheet.

**4. Summary of Final Effluent Limitations**

- a. Table F-30 and F-31 provides a summary of the final effluent limitations for Discharge Point No. 002

**Table F-30. Summary of Final Effluent Limitations for Discharge Point No. 002 for the Protection of Marine Aquatic Life**

Parameter	Units	Effluent Limitations						Rationale <sup>[1]</sup>
		6-month median	Average Monthly	Average Weekly	Maximum Daily	Inst. Minimum	Inst. Maximum	
pH	pH units	--	--	--	--	6.0	9.0	P, ELG
Temperature	°F	[2]						P, OP, TP
Free Available Chlorine	µg/L	--	--	--	200 <sup>[3]</sup>	--	500 <sup>[4]</sup>	P, ELG, OP
Total Residual Chlorine	µg/L	--	--	--	--	--	200	P, ELG
Copper	µg/L	10	--	--	86	--	237.2	P, OP
	lbs/day	30	--	--	258.2	--	--	
Nickel	µg/L	42	--	--	168	--	420	P, OP
	lbs/day	126.1	--	--	504.4	--	--	
Cyanide	µg/L	8.4	--	--	33.6	--	84	P, OP
	lbs/day	25.36	--	--	101.44	--	--	
Chronic Toxicity <sup>[5]</sup>	TUc	--	--	--	8.4	--	--	P, OP
Phenolic Compounds (Non-chlorinated Phenolics)	µg/L	252	--	--	1008	--	2520	P, OP
	lbs/day <sup>[6]</sup>	760.81	--	--	3043.23	--	--	
Chlorinated Phenolics	µg/L	8.4	--	--	33.6	--	84	P, OP
	lbs/day <sup>[6]</sup>	25.36	--	--	101.44	--	--	
Endosulfan	µg/L	0.0756	--	--	0.1512	--	0.2268	P, OP
	lbs/day <sup>[6]</sup>	0.23	--	--	0.46	--	0.68	
Endrin	µg/L	0.0168	--	--	0.0336	--	0.0504	P, OP
	lbs/day <sup>[6]</sup>	0.05	--	--	0.10	--	0.15	
HCH	µg/L	0.0336	--	--	0.0672	--	0.1008	P, OP
	lbs/day <sup>[6]</sup>	0.10	--	--	0.20	--	0.30	

Parameter	Units	Effluent Limitations						Rationale <sup>[1]</sup>
		6-month median	Average Monthly	Average Weekly	Maximum Daily	Inst. Minimum	Inst. Maximum	
Radioactivity	Not to exceed limits specified in California Code of Regulations, Title 22, Division 4, Chapter 15, Article 5, Section 64443						P, OP	

**Notes:**

- [1] P = Existing Order, OP = California Ocean Plan (effective February 4, 2019), ELG = Effluent Limitation Guidelines and Standards (40 C.F.R. 423), TP = Thermal Plan.
- [2] Daily average temperature of the discharge shall not exceed the daily average natural temperature of the receiving water by more than 20°F (11.1°C) during the days in which either one or both Units 1 and 2 are operating. The instantaneous maximum temperature of the discharge shall not exceed the natural temperature of the receiving water by more than 26°F (14.4°C) during the days in which either one or both of Units 1 and 2 are operating.
- [3] Applied as an average daily concentration. 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 of chlorination.
- [4] The ELG is more stringent than the WQBEL instantaneous maximum effluent limit and has therefore the more stringent ELG has been applied in this Order.
- [5] Chronic toxicity shall be reported as TUC for the maximum daily effluent limitation (MDEL).
- [6] These mass-based effluent limitations are based on a flow of 362 MGD and are calculated using the following formula:  
 Mass-based effluent limitation = C \* Q \* 0.00834  
 Where:  
 C = Concentration-based effluent limitation (µg/L) calculated in the combined discharge (cooling water and in-plant wastes)  
 Q = Maximum discharge flow rate (MGD) = 362 MGD of the combined cooling water and low volume wastes discharge to Discharge Point No. 002.

**Table F-31. Summary of Final Effluent Limitations for Discharge Point No. 002 for the Protection of Human Health**

Parameter	Unit	Effluent Limitations <sup>[1][2][3]</sup>				Rationale
		6-Month Median	Maximum Daily	Instantaneous Maximum	30-Day Average	
<b>OBJECTIVES FOR PROTECTION OF HUMAN HEALTH – NONCARCINOGENS</b>						
Acrolein	µg/L	--	--	--	1848.00	P, OP
	lbs/day	--	--	--	5579.26	P, OP
Antimony	µg/L	--	--	--	10080.00	P, OP
	lbs/day	--	--	--	30432.33	P, OP
Bis(2-chloroethoxy) Methane	µg/L	--	--	--	36.96	P, OP
	lbs/day	--	--	--	111.59	P, OP
Bis(2-chloroisopropyl) Ether	µg/L	--	--	--	10080.00	P, OP
	lbs/day	--	--	--	30432.33	P, OP
Chlorobenzene	µg/L	--	--	--	4788.00	P, OP
	lbs/day	--	--	--	14455.36	P, OP
Chromium (III)	µg/L	--	--	--	1596000	P, OP
	lbs/day	--	--	--	4818451.68	P, OP
Di-n-butyl Phthalate	µg/L	--	--	--	29400.00	P, OP
	lbs/day	--	--	--	88760.95	P, OP

Parameter	Unit	Effluent Limitations <sup>[1][2][3]</sup>				
		6-Month Median	Maximum Daily	Instantaneous Maximum	30-Day Average	Rationale
Dichlorobenzenes	µg/L	--	--	--	42840.00	P, OP
	lbs/day	--	--	--	129337.39	P, OP
Diethyl Phthalate	µg/L	--	--	--	277200.00	P, OP
	lbs/day	--	--	--	836888.98	P, OP
Dimethyl Phthalate	µg/L	--	--	--	6888000.00	P, OP
	lbs/day	--	--	--	20795423.04	P, OP
4,6-dinitro-2-methylphenol	µg/L	--	--	--	1848.00	P, OP
	lbs/day	--	--	--	5579.26	P, OP
2,4-dinitrophenol	µg/L	--	--	--	33.60	P, OP
	lbs/day	--	--	--	101.44	P, OP
Ethylbenzene	µg/L	--	--	--	34440.00	P, OP
	lbs/day	--	--	--	103977.12	P, OP
Fluoranthene	µg/L	--	--	--	126.00	P, OP
	lbs/day	--	--	--	380.40	P, OP
Hexachlorocyclopentadiene	µg/L	--	--	--	487.20	P, OP
	lbs/day	--	--	--	1470.90	P, OP
Nitrobenzene	µg/L	--	--	--	41.16	P, OP
	lbs/day	--	--	--	124.27	P, OP
Thallium, Total Recoverable	µg/L	--	--	--	16.80	P, OP
	lbs/day	--	--	--	50.72	P, OP
Toluene	µg/L	--	--	--	714000.00	P, OP
	lbs/day	--	--	--	2155623.12	P, OP
Tributyltin	µg/L	--	--	--	0.01	P, OP
	lbs/day	--	--	--	0.04	P, OP
1,1,1-trichloroethane	µg/L	--	--	--	4536000.00	P, OP
	lbs/day	--	--	--	13694546.88	P, OP
1,1,2-trichloroethane	µg/L	--	--	--	361200.00	P, OP
	lbs/day	--	--	--	1090491.70	P, OP
<b>OBJECTIVES FOR PROTECTION OF HUMAN HEALTH – CARCINOGENS</b>						
Acrylonitrile	µg/L	--	--	--	0.840	P, OP
	lbs/day	--	--	--	2.536	P, OP
Aldrin	µg/L	--	--	--	0.0002	P, OP
	lbs/day	--	--	--	0.001	P, OP
Benzene	µg/L	--	--	--	49.560	P, OP
	lbs/day	--	--	--	149.626	P, OP
Benzidine	µg/L	--	--	--	0.001	P, OP
	lbs/day	--	--	--	0.002	P, OP
Beryllium	µg/L	--	--	--	0.277	P, OP



Parameter	Unit	Effluent Limitations <sup>[1][2][3]</sup>				
		6-Month Median	Maximum Daily	Instantaneous Maximum	30-Day Average	Rationale
	lbs/day	--	--	--	0.837	P, OP
Bis(2-chloroethyl) Ether	µg/L				0.378	P, OP
	lbs/day				1.141	P, OP
Bis(2-chloroethyl) Phthalate	µg/L	--	--	--	29.400	P, OP
	lbs/day	--	--	--	88.761	P, OP
Carbon Tetrachloride	µg/L	--	--	--	7.560	P, OP
	lbs/day	--	--	--	22.824	P, OP
Chlordane	µg/L	--	--	--	0.0002	P, OP
	lbs/day	--	--	--	0.001	P, OP
Chloroform	µg/L	--	--	--	1092.000	P, OP
	lbs/day	--	--	--	3296.835	P, OP
DDT	µg/L	--	--	--	0.001	P, OP
	lbs/day	--	--	--	0.004	P, OP
1,4-dichlorobenzene	µg/L	--	--	--	151.200	P, OP
	lbs/day	--	--	--	456.485	P, OP
3,3'-dichlorobenzidine	µg/L	--	--	--	0.068	P, OP
	lbs/day	--	--	--	0.205	P, OP
1,2-dichloroethane	µg/L	--	--	--	235.200	P, OP
	lbs/day	--	--	--	710.088	P, OP
Dichloromethane	µg/L	--	--	--	3780.000	P, OP
	lbs/day	--	--	--	11412.122	P, OP
1,3-dichloropropene	µg/L	--	--	--	74.760	P, OP
	lbs/day	--	--	--	225.706	P, OP
Dieldrin	µg/L	--	--	--	0.0003	P, OP
	lbs/day	--	--	--	0.001	P, OP
2,4-dinitrotoluene	µg/L	--	--	--	21.840	P, OP
	lbs/day	--	--	--	65.937	P, OP
1,2-diphenylhydrazine	µg/L	--	--	--	1.344	P, OP
	lbs/day	--	--	--	4.058	P, OP
Halomethanes	µg/L	--	--	--	1092.000	P, OP
	lbs/day	--	--	--	3296.835	P, OP
Heptachlor	µg/L	--	--	--	0.0004	P, OP
	lbs/day	--	--	--	0.001	P, OP
Hexachlorobenzene	µg/L	--	--	--	0.002	P, OP
	lbs/day	--	--	--	0.005	P, OP
Hexachlorobutadiene	µg/L	--	--	--	117.600	P, OP
	lbs/day	--	--	--	355.044	P, OP
Hexachloroethane	µg/L	--	--	--	21.000	P, OP

Parameter	Unit	Effluent Limitations <sup>[1][2][3]</sup>				
		6-Month Median	Maximum Daily	Instantaneous Maximum	30-Day Average	Rationale
	lbs/day	--	--	--	63.401	P, OP
Isophorone	µg/L	--	--	--	730.000	P, OP
	lbs/day	--	--	--	2203.928	P, OP
N-nitrosodimethylamine	µg/L	--	--	--	61.320	P, OP
	lbs/day	--	--	--	185.130	P, OP
N-nitrosodiphenylamine	µg/L	--	--	--	21.000	P, OP
	lbs/day	--	--	--	63.401	P, OP
PAHs	µg/L	--	--	--	0.074	P, OP
	lbs/day	--	--	--	0.223	P, OP
PCBs <sup>[4]</sup>	µg/L	--	--	--	[ <sup>4</sup> ]	ELG
	lbs/day	--	--	--	[ <sup>4</sup> ]	
TCDD Equivalentents	µg/L	--	--	--	3.28E-08	P, OP
	lbs/day	--	--	--	9.89E-08	P, OP
Tetrachloroethylene	µg/L	--	--	--	16.800	P, OP
	lbs/day	--	--	--	50.721	P, OP
Toxaphene	µg/L	--	--	--	0.002	P, OP
	lbs/day	--	--	--	0.005	P, OP
Trichloroethylene	µg/L	--	--	--	226.800	P, OP
	lbs/day	--	--	--	684.727	P, OP
2,4,6-trichlorophenol	µg/L	--	--	--	2.436	P, OP
	lbs/day	--	--	--	7.354	P, OP
Vinyl Chloride	µg/L	--	--	--	302.400	P, OP
	lbs/day	--	--	--	912.970	P, OP

Notes:

- [1] 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 x 10<sup>-2</sup> or 0.061, 6.1E+02 represents 6.1 x 10<sup>2</sup> or 610, and 6.1E+00 represents 6.1 x 100 or 6.1.
- [2] P = Existing Order, OP = California Ocean Plan (effective February 4, 2019), ELG = Effluent Limitation Guidelines and Standards (40 C.F.R. 423), TP = Thermal Plan.
- [3] These mass-based effluent 362 MGD and are calculated using the following formula:  
 Mass-based effluent limitation = C \* Q \* 0.00834  
 Where:  
 C = Concentration-based effluent limitation (µg/L) calculated in the combined discharge (cooling water and in-plant wastes)  
 Q = Maximum discharge flow rate (MGD) = 362 MGD, the maximum permitted flow of the combined cooling water and low volume wastes discharge through Discharge Point No. 002.
- [4] The discharge of PCBs is prohibited. When analysis indicates noncompliance may be due to intake water quality, concurrent intake samples shall be collected to verify such is the case.

b. Table F- 32 provides a summary of the final effluent limitations for boiler blowdown low volume wastes (Monitoring Location INT-002B).

**Table F-32. Final Effluent Limitations for Low Volume Wastes (Monitoring Location INT-002B)**

Parameter	Units	Effluent Limitations						Rationale <sup>[1]</sup>
		Average Monthly	Average Weekly	Maximum Daily	Instantaneous Minimum	Instantaneous Maximum	Six-Month Median	
pH	pH Units	--	--	--	6.0	9.0	--	P, ELG
Total Suspended Solids	mg/L	30.0	--	--	100.0	--	--	P, ELG
	lbs/day <sup>[2]</sup>	138	--	--	459	--	--	P, ELG
Oil and Grease	mg/L	15	--	--	20	--	--	P, ELG
	lbs/day <sup>[2]</sup>	69	--	--	92	--	--	P, ELG

**Notes:**

<sup>[1]</sup> P = Existing Order, OP = California Ocean Plan (effective February 4, 2019), ELG = Effluent Limitation Guidelines and Standards (40 C.F.R. 423), TP = Thermal Plan.

<sup>[2]</sup> Mass-based limitations are based on the flow of 0.55 MGD at internal monitoring location INT-002B reported by the Discharger as shown on the schematic water flow in Attachment B and are calculated as follows:

$$\text{Mass Limit (lbs/day)} = 8.34 \times C_e \times Q$$

Where,

$C_e$  = The effluent concentration limitation specified in Table F-32 for the specific pollutant considered (in units of mg/L).

c. Table F-33 provides a summary of the final effluent limitations for all low volume treated wastewater sump wastes (Monitoring Location INT-002C).

**Table F-33. Final Effluent Limitations at Monitoring Location INT - 002C**

Parameter	Units	Effluent Limitations						Rationale <sup>[1]</sup>
		Average Monthly	Average Weekly	Maximum Daily	Instantaneous Minimum	Instantaneous Maximum	Six-Month Median	
pH	pH Units	--	--	--	6.0	9.0	--	P, ELG
Total Suspended Solids	mg/L	30	--	100	--	--	--	P, ELG
	lbs/day <sup>[2]</sup>	59	--	196.9	--	--	--	P, ELG
Oil and Grease	mg/L	15	--	20	--	--	--	P, ELG
	lbs/day <sup>[2]</sup>	29.54	--	39.38	--	--	--	P, ELG

**Notes:**

<sup>[1]</sup> P = Existing Order, OP = California Ocean Plan (effective February 4, 2019), ELG = Effluent Limitation Guidelines and Standards (40 C.F.R. 423), TP = Thermal Plan.

<sup>[2]</sup> Mass-based limitations are based on the flow of 0.48 MGD at internal monitoring location INT-002C reported by the Discharger as shown on the schematic water flow in Attachment B and are calculated as follows:

$$\text{Mass Limit (lbs/day)} = 8.34 \times C_e \times Q$$

Where,

$C_e$  = The effluent concentration limitation specified in Table F-33 for the specific pollutant considered (in units of mg/L).

d. Table F-34 provides a summary of the final effluent limitations for metal cleaning wastes (Monitoring Location INT-002C3).

**Table F-34. Final Effluent Limitations for Metal Cleaning Wastes at Monitoring Location INT-002C3**

Parameter	Units	Effluent Limitations <sup>[1]</sup>					
		Average Monthly	Average Weekly	Maximum Daily	Instantaneous Minimum	Instantaneous Maximum	Six-Month Median
Total Suspended Solids	mg/L	30	--	100	--	--	--
	lbs/day <sup>[2]</sup>	0.55	--	1.84	--	--	--
Oil and Grease	mg/L	15	--	20	--	--	--
	lbs/day <sup>[2]</sup>	0.28	--	0.37	--	--	--
Copper, Total Recoverable	mg/L	1.0	--	1.0	--	--	--
	lbs/day <sup>[2]</sup>	0.018	--	0.018	--	--	--
Iron, Total Recoverable	mg/L	1.0	--	1.0	--	--	--
	lbs/day <sup>[2]</sup>	0.018	--	0.018	--	--	--

**Notes:**

<sup>[1]</sup> Based on 40 CFR part 423.

<sup>[2]</sup> Mass-based limitations are based on a flow of  $2.2 \times 10^3$  MGD at internal monitoring location INT-002C3 reported by the Discharger as shown on the schematic water flow (Attachment B) and are calculated as follows:

Mass Limit (lbs/day) =  $8.34 \times C_e \times Q$

Where,

$C_e$  = The effluent concentration limitation specified in Table F-34 for the specific pollutant considered (in units of mg/L).

$Q$  = Flow rate discharged at Monitoring Location INT-002C3 (in units of MGD).

- e. Table F-35 provides a summary of the final effluent limitations for total in-plant waste streams taken together, with compliance determined by the sum of mass discharges measured at Monitoring Location INT-002B and INT-002C, as described in the monitoring and Reporting Program, Attachment E.

**Table F-35. Effluent Limitations for In-plant Wastes (Total)<sup>[2]</sup>**

Effluent Limitations for the Protection of Marine Aquatic Life							
Pollutant	Units	Effluent Limitations					Rationale <sup>[1]</sup>
		6-month median	Average Monthly	Maximum Daily	Instantaneous Minimum	Instantaneous Maximum	
Copper	lbs/day <sup>[3]</sup>	0.068	--	0.5645	--	1.557	OP
Nickel	lbs/day <sup>[3]</sup>	0.276	--	1.1027	--	2.757	OP
Cyanide	lbs/day <sup>[3]</sup>	0.055	--	0.22	--	0.55	OP
Total Chlorine Residual	lbs/day <sup>[3]</sup>	0.110	--	--	--	3.308	OP
Phenolic Compounds (Non-chlorinated Phenolics)	lbs/day <sup>[3]</sup>	1.654	--	6.616	--	16.540	OP
Chlorinated Phenolics	lbs/day <sup>[3]</sup>	0.055	--	0.221	--	0.551	OP
Endosulfan	lbs/day <sup>[3]</sup>	0.0005	--	0.001	--	0.002	OP
Endrin	lbs/day <sup>[3]</sup>	0.0001	--	0.0002	--	0.0003	OP
HCH	lbs/day <sup>[3]</sup>	0.0002	--	0.0004	--	0.0007	OP

<b>Effluent Limitations for the Protection of Human Health (Non-Carcinogenic)</b>			
<b>Pollutant</b>	<b>Units</b>	<b>30-day average</b>	<b>Rationale</b>
Acrolein	lbs/day <sup>[3]</sup>	12.13	OP
Antimony	lbs/day <sup>[3]</sup>	66.16	OP
Bis(2-chloroethoxy) methane	lbs/day <sup>[3]</sup>	0.24	OP
Bis(2-chloroisopropyl) ether	lbs/day <sup>[3]</sup>	66.16	OP
Chlorobenzene	lbs/day <sup>[3]</sup>	31.43	OP
Chromium (III)	lbs/day <sup>[3]</sup>	10475.47	OP
Di-n-butyl phthalate	lbs/day <sup>[3]</sup>	192.97	OP
Dichlorobenzene	lbs/day <sup>[3]</sup>	281.18	OP
1,1-dichloroethylene	lbs/day <sup>[3]</sup>	3914.52	OP
Diethyl phthalate	lbs/day <sup>[3]</sup>	1819.42	OP
Dimethyl phthalate	lbs/day <sup>[3]</sup>	45209.94	OP
4,6-dinitro-2-methylphenol	lbs/day <sup>[3]</sup>	12.13	OP
2,4-dinitrophenol	lbs/day <sup>[3]</sup>	0.22	OP
Ethylbenzene	lbs/day <sup>[3]</sup>	225.79	OP
Fluoranthene	lbs/day <sup>[3]</sup>	0.83	OP
Hexachlorocyclopentadiene	lbs/day <sup>[3]</sup>	3.20	OP
Isophorone	lbs/day <sup>[3]</sup>	8270.11	OP
Nitrobenzene	lbs/day <sup>[3]</sup>	0.27	OP
Thallium	lbs/day <sup>[3]</sup>	0.11	OP
Toluene	lbs/day <sup>[3]</sup>	4686.40	OP
1,1,2,2-tetrachloroethane	lbs/day <sup>[3]</sup>	66.29	OP
Tributyltin	lbs/day <sup>[3]</sup>	0.0001	OP
1,1,1-trichloroethane	lbs/day <sup>[3]</sup>	29772.40	OP
1,1,2-trichloroethane	lbs/day <sup>[3]</sup>	2370.77	OP
<b>Effluent Limitations for the Protection of Human Health (Carcinogenic)</b>			
<b>Pollutant</b>	<b>Units</b>	<b>30-day Average</b>	<b>Rationale</b>
Acrylonitrile	lbs/day <sup>[3]</sup>	0.01	OP
Aldrin	lbs/day <sup>[3]</sup>	0.000001	OP
Benzene	lbs/day <sup>[3]</sup>	0.33	OP
Benzidine	lbs/day <sup>[3]</sup>	0.000004	OP
Beryllium	lbs/day <sup>[3]</sup>	0.002	OP
Bis(2-chloroethyl) ether	lbs/day <sup>[3]</sup>	0.002	OP
Bis(2-ethylhexyl) phthalate	lbs/day <sup>[3]</sup>	0.19	OP
Carbon tetrachloride	lbs/day <sup>[3]</sup>	0.05	OP
Chlordane	lbs/day <sup>[3]</sup>	0.000001	OP
Chloroform	lbs/day <sup>[3]</sup>	7.15	OP
DDT	lbs/day <sup>[3]</sup>	0.00001	OP
1,4-dichlorobenzene	lbs/day <sup>[3]</sup>	0.99	OP
3,3'-dichlorobenzidine	lbs/day <sup>[3]</sup>	0.0004	OP
1,2-dichloroethane	lbs/day <sup>[3]</sup>	7.15	OP
Dichloromethane	lbs/day <sup>[3]</sup>	24.81	OP
1,3-dichloropropene	lbs/day <sup>[3]</sup>	0.49	OP
Dieldrin	lbs/day <sup>[3]</sup>	0.000002	OP
2,4-dinitrotoluene	lbs/day <sup>[3]</sup>	0.14	OP
1,2-diphenylhydrazine	lbs/day <sup>[3]</sup>	0.01	OP
Halomethanes	lbs/day <sup>[3]</sup>	7.15	OP
Heptachlor	lbs/day <sup>[3]</sup>	0.00004	OP

Hexachlorobenzene	lbs/day <sup>[3]</sup>	0.00001	OP
Hexachlorobutadiene	lbs/day <sup>[3]</sup>	0.77	OP
Hexachloroethane	lbs/day <sup>[3]</sup>	0.14	OP
N-nitrosodimethylamine	lbs/day <sup>[3]</sup>	0.40	OP
N-nitrosodiphenylamine	lbs/day <sup>[3]</sup>	0.14	OP
PAHs	lbs/day <sup>[3]</sup>	0.0005	OP
PCBs	lbs/day <sup>[3]</sup>	0.000001	OP
TCDD equivalents	lbs/day <sup>[3]</sup>	0.0000000002	OP
Tetrachloroethylene	lbs/day <sup>[3]</sup>	0.11	OP
Toxaphene	lbs/day <sup>[3]</sup>	0.00001	OP
Trichloroethylene	lbs/day <sup>[3]</sup>	1.49	OP
2,4,6-trichlorophenol	lbs/day <sup>[3]</sup>	0.02	OP
Vinyl chloride	lbs/day <sup>[3]</sup>	1.98	OP

Notes:

[1] OP = California Ocean Plan.

[2] Compliance shall be determined from the sum of mass discharges of each parameter in the individual in-plant waste streams. Total Mass Emission per day (lb/day) = Mass Emission at INT-002B (calculated using flow measured at INT-002B) (lbs/day) + Mass Emission at INT-002C (calculated using flow measured at INT-002C) (lbs/day).

The Total Mass Emission per day (lb/day) value from a single day will be compared with the maximum daily effluent limitations as set forth in this table for compliance determination; compliance with the 6-month median effluent limitations shall be determined by the median of Total Mass Emission per day values over any 180-day period.

[3] The mass-based effluent limitations are based on a maximum combined flow of 1.03 MGD for all in-plant waste streams, and are calculated using the following formula:

$$\text{Mass-based effluent limitation (lbs/day)} = C * Q * 0.00834$$

Where:

C = Concentration-based effluent limitation (µg/L) calculated in the combined discharge (cooling water and in-plant wastes).

Q = 1.03 MGD, the maximum total flow of all in-plant waste streams;

Where: Q = Total combined in-plant waste streams flow = 0.55 + 0.48 = 1.03 MGD

**E. Interim Effluent Limitations – Not Applicable**

The Order does not establish interim effluent limitations and schedules for compliance with final limitations. Interim limitations are authorized only in certain circumstances when immediate compliance with newly established final water quality based limitations is not feasible.

**F. Land Discharge Specifications– Not Applicable**

**G. Recycling Specifications– Not Applicable**

**V. RATIONALE FOR RECEIVING WATER LIMITATIONS**

**A. Surface Water**

Receiving water quality is a result of many factors, some unrelated to the discharge. This Order considers these factors and is designed to minimize the influence of the discharge on the receiving water. Receiving water limitations within this Order include the receiving water limitations of the previous order, however, these limitations have been supplemented and modified to reflect all applicable, general water quality objectives of the California Ocean Plan (2019).

**B. Groundwater – Not Applicable**

## VI. RATIONALE FOR PROVISIONS

### A. Standard Provisions

Standard Provisions, which apply to all NPDES permits in accordance with 40 C.F.R. section 122.41, and additional conditions applicable to specified categories of permits in accordance with 40 C.F.R. section 122.42, are provided in Attachment D to the order.

Sections 122.41(a)(1) and (b) through (n) of 40 C.F.R. 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) allows the state to omit or modify conditions to impose more stringent requirements. In accordance with 40 C.F.R. section 123.25, this Order omits federal conditions that address enforcement authority specified in 40 C.F.R. sections 122.41(j)(5) and (k)(2) because the enforcement authority under the California Water Code is more stringent. In lieu of these conditions, this Order incorporates by reference California Water Code section 13387(e).

### B. Special Provisions

#### 1. Reopener Provisions

The Order may be modified in accordance with the requirements set forth at 40 C.F.R. sections 122 and 124, to include appropriate conditions or limits based on newly available information, or to implement any, new state water quality objectives that are approved by U.S. EPA. As effluent is further characterized through additional monitoring, and if a need for additional effluent limitations becomes apparent after additional effluent characterization, the Order will be reopened to incorporate such limitations.

#### 2. Special Studies and Additional Monitoring Requirements

##### a. Toxicity Reduction Requirements

The requirement to maintain a toxicity reduction work plan is established in this Order. When toxicity monitoring measures chronic toxicity in the effluent above the limitation established by this Order, the Discharger is required to resample and retest, if the discharge is continuing. When all monitoring results are available, the Executive Officer can determine whether to initiate enforcement action, whether to require the Discharger to implement TRE requirements, or whether other measures are warranted.

##### b. Technology Verification Studies

As specified in the Settlement Agreement at paragraphs 2.1.7.c.i-iii, the Discharger will evaluate and report on resulting levels of entrainment and impingement following the implementation of the operational and technology controls using the Compliance Tool described in the Settlement Agreement.

#### 3. Best Management Practices and Pollution Prevention

##### a. Pollutant Minimization Program (PMP)

The 2019 California Ocean Plan establishes guidelines for the PMP. At the time of the adoption of this Order no known evidence was available that would require the Discharger to immediately develop and conduct a PMP. The Central Coast Water Board will notify the Discharger in writing if such a program becomes necessary.

##### b. Construction, Operation, and Maintenance Specifications – Not Applicable

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

**5. Other Special Provisions**

**a. Discharges of Stormwater**

For the control of stormwater discharges from the site, this permit requires the Discharger to obtain coverage by and comply with applicable provisions of General Permit CAS000001 - *Waste Discharge Requirements for Discharges of Storm Water Associated with Industrial Activities*.

**b. Intake Structure Monitoring**

Annually, the Discharger shall measure bar rack approach velocity and sediment deposition at intake structures. The Discharger shall dredge as necessary to eliminate sand and silt buildup at intake structures and shall routinely clean bar racks as necessary to maintain bar rack approach velocities as close as practicable to design velocities.

**6. Once-Through Cooling Water Implementation Plan and Schedules**

**a. Compliance Date and Alternatives**

Under Track 1 of the OTC Policy, an existing power plant must reduce the intake flow rate to a level commensurate with closed-cycle wet cooling such that the through-screen intake velocity does not exceed 0.5 foot per second.

Track 2 is available to existing plants that demonstrate that Track 1 is infeasible, and such plants must reduce impingement and entrainment by 90 percent unless the California Independent System Operator, California Energy Commission, or Public Utilities Commission determines there is continued need for the plant, in which event the State Water Board will hold a hearing to consider suspension of the compliance date. In the interim, the OTC Policy requires plants to implement measures to mitigate impingement and entrainment impacts.

The Discharger submitted an implementation plan for compliance with the State Water Board’s OTC Policy on March 01, 2017. Per its implementation plan, the Discharger has proposed to bring Units 1 and 2 into compliance using Track 2. The Track 2 compliance to be completed will consist of the implementation of operational control measures to reduce flow and installing variable speed drive controls on four circulating water pumps. The Discharger’s Track 2 Compliance obligations are defined by the terms of the Settlement Agreement. The final compliance date for Units 1 and 2 is December 31, 2020. Compliance with the OTC Policy shall be in accordance with the following schedule:

**Table F-36. Schedule of Compliance with OTC Policy**

Task	Compliance Date	Completed (Yes/No)
1. Submit an update to the MLPP Implementation Plan	November 8, 2014 (Within 30 days after the execution of the Settlement Agreement)	Yes
2. Submit an update on the implementation of operational control measures to reduce flow	November 8, 2014 (Within 30 days after the execution of the	Yes



Task	Compliance Date	Completed (Yes/No)
	Settlement Agreement)	
3. Submit an annual update to the State Water Board on the status of measures to reduce impingement mortality and entrainment (IM&E) and report the status of any studies undertaken in the previous calendar year to determine compliance options to meet Track 2	Beginning in 2015, by March 1 of each year	Yes
4. Submit second progress report on the status of measures discussed in Task 3 above	March 1, 2016	Yes
5. Install controls on the circulating water pumps for Units 1 and 2	December 31, 2016	Yes
6. Achieve 83.7% or greater reduction at MLPP in impingement mortality and entrainment from design flow using flow control and operational measures. Compliance will be determined as an annual average over the period December 31, 2016 to December 31, 2020.	Beginning December 31,2016 through the final compliance date of December 31,2020	Ongoing
7. Submit third progress report on the status of measures discussed in Task 3 above	March 1, 2017	Yes
8. Submit fourth progress report on the status of measures discussed in Task 3 above	March 1, 2018	Yes
9. Submit fifth progress report on the status of measures discussed in Task 3 above	March 1, 2019	Yes
10. Submit sixth and final progress Report	March 1, 2020	Yes
11. Install supplemental control technology at Units 1 and 2 to complement the operational control measures and achieve compliance pursuant to Policy sections 2.A.(2)(a)(ii) and 2.A.(2)(b)(ii);	December 31, 2020	Yes
12. Achieve compliance with Policy sections 2.A.(2)(a)(ii) and 2.A.(2)(b)(ii) at Units 6 and 7 or cease operations of such unit(s)until such time as compliance is achieved subject to Policy section 2.B.(2).	December 31, 2020	Yes
13. Achieve full compliance with Units 1, 2, 6, and 7.	December 31, 2020	Yes

In addition, the Settlement Agreement requires the Discharger to conduct and submit to the State Water Board baseline studies pursuant to the OTC Policy and evaluate technology controls by conducting a pilot study after completion of the baseline studies (see paragraph 2.1.7). The baseline IM&E study was submitted to the State Water Board on September 21, 2017, and approved by the State Water Board on December 1, 2017.

In accordance with Moss Landing Settlement Agreement section 2.1.7 d, after the Track 2 controls are implemented, and after the December 31, 2020 final compliance date, OTC Policy sections 4.A.(2) and 4.B.(2) specify the need for another study to confirm Track 2 compliance. For MLPP, the following will satisfy the requirements of OTC Policy sections 4.A.(2) and 4.B.(2).

- i. Monitor compliance utilizing a Compliance Tracking Tool that relies on: (1) data on the densities of representative site-specific species as approved in the Baseline Study Report that will allow the calculation of the percent reduction in impingement mortality and entrainment, (2) actual records of cooling water flow, and (3) technology performance as verified in in paragraph 2.1.7.c.iii of the Settlement Agreement.
- ii. Determine compliance based on the average annual reduction calculated across each NPDES permit term.

**b. Immediate and Interim Requirements**

The OTC Policy further requires the following immediate and interim requirements:

- i. As of October 1, 2011, the owner or operator of an existing power plant with an offshore intake shall install large organism exclusion devices having a distance between exclusion bars of no greater than nine inches, or install other exclusion devices, deemed equivalent by the State Water Board.
- ii. 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.
- iii. Commencing on October 1, 2015 and continuing up and until achieving final compliance with the OTC Policy, the owner or operator of the existing power plant must implement measures to mitigate the interim impingement and entrainment impacts resulting from the discharge.

In accordance with Section 2C(1) of the OTC Policy, dischargers with offshore intakes were required to install large-organism exclusion devices on intake structures no later than October 1, 2011. The MLPP does not have an offshore intake as the intake structure for Units 1 and 2 and retired Units 6 and 7 are located at the east shoreline in Moss Landing Harbor. Although this requirement is not applicable, bar racks and traveling screens at MLPP exclude large organisms at the Facility.

With regards to intake flows when the generating units are offline and no longer generating power, a minimal flow rate of circulating water is continuously required for safe operation of critical plant systems. As provided in paragraph 2.1.7.f. of the Settlement Agreement, the State Water Board recognizes that it may be necessary to continue intake flows at MLPP even when not directly engaging in power generating activities or critical system maintenance for short time periods while performing baseline, pilot, and/or verification studies. The Settlement Agreement (paragraph 2.1.7.f.) further provides that the Discharger shall include proposed testing schedules in the development of baseline, pilot, and technology study plans and coordinate the study designs with the State Water Board with the goal of minimizing the impacts on the biological community from the effects of the studies. Upon State Water Board confirmation of the relevant study, the Discharger shall be deemed to have demonstrated to the State Water Board that a reduced minimum flow is necessary for operations pursuant to Policy section 2.C.(2).

From October 1, 2015 to December 21, 2020, the Discharger was required to provide funding to the Elkhorn Slough to be used for mitigation projects directed toward increases in marine life associated with the State's Marine Protected Areas in the local region of the MLPP. Since the Discharger previously contributed seven million dollars (\$7,000,000.00) to the Elkhorn Slough Foundation, it satisfies the requirements under Policy section 2.C.(3)(a) from October 1, 2015 through the December 31, 2020 final compliance date for all MLPP units as determined by the State Water Board in the Settlement Agreement (paragraph 2.1.1).

## **7. Surface Impoundments**

As discussed in section VII.E.2 of the Fact Sheet, in 2019, the surface impoundments were certified clean closed by the Department of Toxic Substances Control (DTSC). The Discharger's facility operations at MLPP are no longer regulated under WDR Order No. R3-2014-0029 because the surface impoundments have been clean closed and WDR Order No. R3-2014-0029 has expired. In accordance with section 13.0 of the Hazardous Waste Part B Permit Application, all groundwater monitoring wells have also been properly destroyed.

## **8. Climate Change Adaption**

Climate change refers to observed changes in regional weather patterns such as temperature, precipitation, and storm frequency and size. The State Water Board's Resolution No. 2017-0012, *Comprehensive Response to Climate Change*, requires a proactive response to climate change in all California Water Board actions, with the intent to embed climate change consideration into all programs and activities. The Central Coast Water Board is addressing the threats of climate change, sea level rise, and flooding by including provisions in new orders that ensure climate change mitigation and adaptation strategies are implemented. There is widespread scientific consensus that climate change and sea-level rise are occurring and will continue at an accelerating rate into the future. Extreme weather events, including drought, high-intensity precipitation, flooding, and extreme heat have occurred through much of California in the recent years and are projected to increase in frequency, extent, or intensity due to climate change.

Significant changes to MLPP acknowledge the changing energy sector in California and requirements to decrease greenhouse gas emissions. The conversion of MLPP from oil to natural gas in 1998, construction of energy efficient modernized generating units 1 and 2, and shutdown of the old inefficient units 6 and 7 have decreased greenhouse gas emissions from MLPP. Additionally, MLPP is the site of new battery storage projects that support the increased use of renewable energy in the state.

The new MLPP Battery Energy Storage System (BESS) is a renewable energy storage system that reuses an existing three-story building that formerly housed antiquated generating units. The purpose of the BESS is to support state established renewable energy initiatives, by reducing the loss of energy procured from alternative energy sources (e.g. wind and solar). This project provides consistent reliable energy through storage of power during off-peak use times and dispersing that power back to the electrical grid for use during high-peak use times. The BESS has three major components consisting of battery energy storage, a power conversion system, and a substation. The substation receives energy from the electrical grid and the energy current is converted through the power conversion system (inverters and transformers) and stored within the battery energy storage. When needed during peak demand, the stored energy flows from the batteries through the power conversion system and

substation to the electrical transmission grid. The proposed project consists of a 300-megawatt (MW) transmission connected, standalone lithium-ion BESS with four hours of storage and a 20-year life span.

Due to the long-term nature of some climate change risks, such as sea level rise, there is a need to avoid piecemeal or reactionary adaptation and instead undertake proactive, long-term planning with consideration of various adaptation strategies that both keep facilities safe, maintain safe discharging practices, and avoid impacts to coastal resources. Although the facility is located at an elevation approximately 30 feet above Moss Landing Harbor and does not face an imminent threat from tidal flooding, the top of the seawater intake area is less than 9 feet above sea level and climate change may necessitate modification of the facility or its operations in the coming decades.

Climate change has the potential to impact coastal power plants through inundation, storm impacts, erosion, saltwater intrusion and backflows, ocean temperature increases, marine life changes, and other factors that could increase the risk of operational issues and potential discharge permit violations. These events could have significant implications for operations, such as increased corrosion, clogging of the intake screens by large blooms of marine organisms (e.g. jellyfish and siphonophores), deposition of solids, infiltration, overflows, inundation of facilities, impairment of treatment processes, and disruption of power or electrical components.

When the Report of Waste Discharge is submitted for reissuance of this Order in 2025, the Discharger is required to submit a Climate Change Response, Hazards, and Vulnerabilities Plan. This Plan will report on climate change activities, such as BESS, and describe the Discharger's long-term approach to identify and address climate change, as well as hazards and vulnerabilities at the facility.

## **9. Compliance Schedules**

The Order does not establish interim effluent limitations and schedules of compliance with final limitations

## **VII. RATIONALE FOR MONITORING AND REPORTING REQUIREMENTS**

CWA section 308 and 40 C.F.R. sections 122.41(h), (j)-(l), 122.44(i), and 122.48 require that all NPDES permits specify monitoring and reporting requirements. Water Code sections 13267 and 13383 also authorize the Central Coast Water Board to establish monitoring, inspection, entry, reporting, and recordkeeping requirements. The MRP, Attachment E of this Order establishes monitoring, reporting, and recordkeeping requirements that implement federal and state requirements. The following provides the rationale for the monitoring and reporting requirements contained in the MRP for this facility.

### **A. Influent Monitoring**

Section 316(b) of the CWA requires the location, design, construction, and capacity of cooling water intake structures reflect the best technology available for minimizing adverse environmental impact. These monitoring requirements for flow and temperature are necessary to evaluate compliance with effluent limitations contained in this Order and compliance with the requirements of the Thermal Plan. Cooling water intake monitoring requirements have been retained from the Order 2000-0041. Monitoring requirements for marine life impingement and entrainment have been retained in this Order

## **B. Effluent Monitoring**

Effluent monitoring requirements of the previous permit for Discharge Point 002 (the Ocean outfall) have been retained in this Order, with limited changes. Copper, nickel, and chronic toxicity sampling frequencies have been increased from quarterly to monthly as a result of the endpoint 1 conclusion for “reasonable potential” to cause or contribute to an exceedance of a receiving water quality objective. Also, the sampling frequency for total residual chlorine has been changed from “weekly during chlorination” to “daily.” Chlorine exhibited reasonable potential to exceed California Ocean Plan objectives. In addition, because of the large volume of chlorinated once through cooling water, concentrations above the objectives may have widespread impacts.

Additionally, effluent monitoring requirements have been established for Discharge Point No. 004. This change in monitoring frequency is consistent with the California Ocean Plan Appendices III and VI procedures.

## **C. WET Testing Requirements**

WET limitations protect receiving water quality from the aggregate toxic effect of a mixture of pollutants in the effluent. Acute toxicity testing measures mortality in 100 percent effluent over a short test period and chronic toxicity testing is conducted over a longer period of time and may measure mortality, reproduction, and/or growth. This Order retains chronic WET limitations and monitoring requirements from the previous permit for Discharge Point No. 002. The Order requires WET monitoring be conducted concurrently with Table 1 pollutant monitoring quarterly for each year.

## **D. Receiving Water Monitoring**

### **1. Surface Water**

#### **a. Thermal Plume Study**

The Discharger submitted a comprehensive thermal plume study that determined the dispersion of the thermal plume under actual operating conditions. The purpose of the study was to determine compliance with the Thermal Plan requirements regarding thermal plume contact with ocean substrates. The study covered a range of operating and environmental conditions, including worst-case scenarios. The thermal plume study was completed in 2002 under the direction of a technical working group that included the Central Coast Water Board’s independent scientific experts and staff from the California Energy Commission, California Coastal Commission, and California Department of Fish and Wildlife. Units 1 and 2 operating at capacity meet the Thermal Plan requirements that the temperature of discharge is within 20° F of the intake temperature.

#### **b. Water Quality Monitoring**

The monitoring requirements implement the California Ocean Plan and follow the monitoring guidance in Appendix III (Standard Monitoring Procedures) of the California Ocean Plan. The water quality monitoring requirements are included in the MRP (Attachment E) to determine compliance with the receiving water limitations established in this Order.

#### **c. Zone of Initial Dilution (ZID) Monitoring**

The California Ocean Plan stipulates beneficial uses for ocean waters of the State that shall be protected. The plan enumerates general provisions, bacterial characteristics, physical characteristics, and chemical characteristics of the

receiving water. The California Ocean Plan also enumerates numerical water quality objectives that are to be met outside of the zone of initial dilution in the receiving water when a dilution ratio is granted. This permit requires monitoring at the edge of the ZID to determine compliance with the water quality objectives for the receiving water and attainment of beneficial uses of the ocean waters as set forth by the provisions of the California Ocean Plan.

**d. CCLEAN Regional Monitoring Program**

The Discharger shall continue to participate in the implementation of the CCLEAN Regional Monitoring Program to fulfill receiving water compliance monitoring requirements and support CCLEAN Program objectives. The CCLEAN is a coordinated monitoring effort to address receiving water in the Monterey Bay and where necessary to assess whether beneficial uses are affected by discharges. The CCLEAN requirements specified in this Order are updated to reflect current program methods and pollutants of concern, and to align with requirements for other Dischargers participating in the program.

NPDES compliance monitoring focuses on the effects of a specific point source discharge. Generally, it is not designed to assess impacts from other sources of pollution (e.g., nonpoint source runoff, aerial fallout) or to evaluate the current status of important ecological resources in the waterbody. The scale of existing compliance monitoring programs does not match the spatial and, to some extent, temporal boundaries of the important physical and biological processes in the ocean. In addition, the spatial coverage provided by compliance monitoring programs is less than ten percent of the nearshore ocean environment. Better technical information is needed about status and trends in ocean waters to guide management and regulatory decisions, to verify the effectiveness of existing programs, and to shape policy on marine environmental protection.

Regional monitoring is focused on questions that are best answered by a region-wide approach that incorporates coordinated survey design and sampling techniques. The major objective of regional monitoring is to collect information required to assess how safe it is to swim in the ocean, how safe it is to eat seafood from the ocean, and whether the marine ecosystem is being protected. Key components of regional monitoring include elements to address pollutant mass emission estimations, public health concerns, monitoring of trends in natural resources, assessment of regional impacts from all contaminant sources, and protection of beneficial uses.

**2. Groundwater – Not Applicable**

**E. Other Monitoring Requirements**

**1. Discharge Monitoring Report-Quality Assurance (DMR-QA) Study Program**

Under the authority of section 308 of the CWA (33 U.S.C. section 1318), U.S. EPA requires all dischargers 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 U.S. EPA 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 U.S. EPA's DMR-QA Coordinator and Quality Assurance Manager.

## 2. Stormwater Monitoring

Stormwater monitoring and reporting shall be conducted in accordance with the *Industrial Activities Storm Water General Permit* for on-going industrial activities and the *Construction Activities Storm Water General Permit* for any construction activities at the plant.

## VIII. PUBLIC PARTICIPATION

The Central Coast Water Board considered the issuance of WDRs that serve as an NPDES permit for the Facility. As a step in the WDR adoption process, the Central Coast Water Board staff developed tentative WDRs and encouraged public participation in the WDR adoption process.

### A. Notification of Interested Persons

The Central Coast 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 on the Central Coast Water Board's website and by email to the interested persons list. The public had access to the agenda and any changes in dates and locations through the Central Coast Water Board's website at:

<http://www.waterboards.ca.gov/centralcoast/>

### B. 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, by mail, or by e-mail to the Executive Officer at the Central Coast Water Board at:

Central Coast Regional Water Quality Control Board  
895 Aerovista Place, Suite 101  
San Luis Obispo, CA 93401-7906

Centralcoast@waterboards.ca.gov

To be fully responded to by staff and considered by the Central Coast Water Board, the written comments were due at the Central Coast Water Board office by 5:00 p.m. on June 10, 2020. No comments were received during the public comment period.

### C. Public Hearing

The Central Coast Water Board held a public hearing on the tentative WDRs during its regular meeting on the following date and time, by video and teleconference as authorized by and in furtherance of Executive Orders N-29-20 and N-33-20:

Date: July 16-17, 2020

Time: 9:00 a.m. - 5:00 p.m.

Location: Link to video and teleconference was provided at

[https://www.waterboards.ca.gov/centralcoast/board\\_info/agendas/2020/2020\\_agendas.html](https://www.waterboards.ca.gov/centralcoast/board_info/agendas/2020/2020_agendas.html)

Interested persons were invited to participate using the video and teleconference service. At the public hearing, no members of the public provided oral or written testimony pertinent to the discharge, WDRs, and permit. For accuracy of the record, important testimony was requested in writing.

**D. Reconsideration of WDRs**

Any person aggrieved by this action of the Central Coast Water Board may petition the State Water Board to review the action in accordance with California Water Code section 13320 and California Code of Regulations, title 23, sections 2050 and following. The State Water Board must receive the petition by 5:00 p.m., within 30 calendar days of the date of adoption of this Order at the following address, except that if the thirtieth day following the date of this Order falls on a Saturday, Sunday, or state holiday, the petition must be received by the State Water Board by 5:00 p.m. on the next business day:

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

Or by email at:

[waterqualitypetitions@waterboards.ca.gov](mailto:waterqualitypetitions@waterboards.ca.gov)

For instructions on how to file a petition for review, see:

[http://www.waterboards.ca.gov/public\\_notices/petitions/water\\_quality/wqpetition\\_instr.shtml](http://www.waterboards.ca.gov/public_notices/petitions/water_quality/wqpetition_instr.shtml)

**E. Information and Copying**

The Report of Waste Discharge, other supporting documents, and comments received are on file and may be inspected at the address above at any time between 8:00 a.m. and 5:00 p.m., Monday through Friday. Copying of documents may be arranged through the Central Coast Water Board by calling the Central Coast Water Board at (805) 549-3147.

**F. 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 Central Coast Water Board, reference this facility, and provide a name, address, and phone number.

**G. Additional Information**

Requests for additional information or questions regarding this order should be directed to Peter von Langen at (805) 549-3688 or [peter.vonlangen@waterboards.ca.gov](mailto:peter.vonlangen@waterboards.ca.gov) or Phil Hammer at (805) 549-3882 or [phillip.hammer@waterboards.ca.gov](mailto:phillip.hammer@waterboards.ca.gov).