



Cabrillo Power I LLC
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November 29, 2016

Mr. Thomas Howard
Executive Director
State Water Resources Board
Division of Water Quality, 15th Floor
1001 I Street
Sacramento, CA 95814

Re: Once Through Cooling Policy Implementation Plan Update for Encina Power Station, NPDES CA0001350, Order R9-2006-0043; Letter dated September 26, 2016

Dear Mr. Howard,

Cabrillo Power I LLC (Cabrillo), owner of the Encina Power Station (EPS) and wholly owned subsidiary of NRG Energy, Inc. (NRG), submits its response to the State Water Resources Control Board's (SWRCB) September 26, 2016 letter in which the SWRCB requested information in order to calculate the Interim Mitigation Requirements for EPS pursuant to the Use of Coastal and Estuarine Water for Power Plant Cooling (Policy). Cabrillo respectfully submits the requested information as described below.

1. Valid entrainment data, if available;

On January 7, 2008 Cabrillo submitted the "Clean Water Act 316(b) Impingement Mortality and Entrainment Characterization Study Report, January 2008" (IM&E Report) to the San Diego Regional Water Quality Control Board (RWQCB). The results in this 12-month study are the most recent entrainment data available. Three assessment modeling techniques used were Adult Equivalent Loss (AEL), Fecundity Hindcasting (FH), and Empirical Transport Modeling (ETM), which are described in Section 3.2.3 of the IM&E Report. Cabrillo believes that these assessments fulfill the requirement for an appropriate oceanographic model as described in the September 26, 2016 letter. The IM&E Report is included herein as Attachment A.

2. Monthly and total intake volume for October 1, 2015 thru September 30, 2016;

The monthly and total discharge volumes for EPS from October 1, 2015 thru September 30, 2016 period are summarized in Attachment B. EPS' once-through-cooling (OTC) water structure is designed such that the amount of water drawn in by the pump system is the same amount discharged from the condensers to the EPS outfall. The Carlsbad Desalination Project (CDP) removes and returns a portion of this intake volume for their plant operations. The data are organized into columns: actual gross volume drawn by the pump system, volume removed by

CDP for desalination purposes, volume returned by CDP, and the net amount discharged to the EPS outfall. Note these are the same data reported to the RWQCB in the CIWQS reporting system per the requirements of NPDES Permit CA0001350, Order No. R9-2006-0043. EPS' total gross intake volume between October 1, 2015 and September 30, 2016 is 140,684 million gallons. EPS OTC system actual discharge volume for this period is 126,704 million gallons, which is the difference between the total gross intake volume and the volume removed by CDP for potable water supply (i.e., 13,980 million gallons).

On February 12, 2016 Cabrillo requested SWRCB's concurrence on the interim mitigation fee proposal presented. SWRCB's draft determination was posted to the website on September 2, 2016. Based on this draft determination, EPS has a total intake volume of 80,125 million gallons, which is the difference between the total gross intake flow and the intake flow required solely for CDP operations (i.e., 60,559 million gallons - the volume used to produce the potable water supply) between October 1, 2015 and September 30, 2016. Attachment B illustrates "CDP Exclusive Withdrawal" and "EPS Adjusted Intake Volume" referenced above. Thus, EPS' mitigation fee for this time period should be based on the adjusted intake volume of 80,125 million gallons.

3. *If considering installing an intake flow measuring device for measuring future intakes, feasibility and timeframe needed for completion; and*

Cabrillo does not intend to install an intake flow measuring device for measuring future intake flow.

4. *Actual annual impingement data in total pounds of fishes impinged from October 1, 2015 thru September 30, 2016, or the annual total of fishes impinged on previous years.*

Cabrillo does not monitor impingement or entrainment data on a routine basis. The most recent data are provided in Attachment A, IM&E Report, and were collected during normal operation impingement sampling at the EPS traveling screens during 52 weekly surveys between June 24, 2004 and June 15, 2005. The Impingement estimates from this Impingement Study can be found in Section 5.2.2 of the IM&E Report. The combined counts from all plant mortality sources based on maximum OTC flows were used to estimate a maximum annual impingement of 289,562 fishes weighing 5,841 kg (12,877 lb) and 22,714 shellfishes weighing 233 kg (514 lb). The best estimate of actual impingement using actual OTC flows measured during the sampling period (June 24, 2004 to June 15, 2005) is 215,583 fishes weighing 4,358 kg (11,069 lb) and 14,474 shellfishes weighing 138 kg (304 lb). We believe this latter estimate is representative of "the annual total fishes impinged on previous years."

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I anticipate the above response has addressed the SWRCB's information request. If you have any questions, comments, or concerns, please do not hesitate to contact me at george.piantka@nrg.com or (760) 710-2156, or Jerry Carter at jerry.carter@nrg.com or (760) 268-4011.

Sincerely,
Cabrillo Power I LLC



George L. Piantka, PE
Sr. Director, Regulatory Environmental Services
NRG Energy, West Region

cc: Jerry Carter, Cabrillo Power I LLC
Sheila Henika, Cabrillo Power I LLC
Peter Landreth, NRG West Region
Tim Sisk, NRG West Region
Dave Gibson, San Diego Regional Water Quality Control Board

Attachments:

- Attachment A - "Clean Water Act 316(b) Impingement Mortality and Entrainment Characterization Study Report, January 2008" (IM&E Report)
- Encina Power Station Flow Data, October 2015 to September 2016

Attachment A
Clean Water Act Section 316(b)
Impingement Mortality and Entrainment Characterization Study
January 2008
[Included on Compact Disk]

Attachment B
Encina Power Station Flow Data,
October 2015 to September 2016

APPENDIX B

Month	Year	EPS Intake Volume	CDP Withdrawal Volume	CDP Brine Return Volume	CDP Delta	EPS Net Reported Discharge Volume	CDP Exclusive Withdrawal Volume	EPS Adjusted Intake Volume
October	2015	16,754	3,366	3,366	0	16,754	600	16,153
November	2015	14,105	3,212	2,186	-1,021	13,084	6,857	7,248
December	2015	14,957	2,876	1,429	-1,446	13,511	5,420	9,537
January	2016	9,675	2,726	1,392	-1,321	8,354	5,693	3,982
February	2016	9,669	2,364	1,177	-1,148	8,520	6,295	3,374
March	2016	8,747	1,498	702	-797	7,951	6,212	2,536
April	2016	9,482	2,339	1,362	-977	8,505	6,462	3,020
May	2016	10,092	3,167	1,673	-1,494	8,598	6,450	3,641
June	2016	13,192	3,133	1,609	-1,523	11,668	1,965	11,227
July	2016	11,807	3,058	1,566	-1,493	10,315	3,993	7,815
August	2016	12,521	3,227	1,716	-1,510	11,011	4,757	7,764
September	2016	9,682	2,787	1,538	-1,249	8,433	5,855	3,828
2015 Subtotal		45,816	9,454	6,981	-2,467	43,349	12,877	32,939
2016 Subtotal		94,868	24,299	12,736	-11,512	83,355	47,681	47,187
Period Total		140,684	33,753	19,717	-13,979	126,704	60,558	80,125

All Amounts in Million Gallons