
State Water Resources Control Board

October 23, 2020

Mr. Mike Batte
Plant Manager
Moss Landing Power Plant
P.O. Box 690
Moss Landing, CA 95039

Dear Mr. Batte:

RE: OTC POLICY COMPLIANCE DETERMINATION FOR DYNEGY'S MOSS LANDING POWER PLANT

On August 3, 2020, the State Water Resources Control Board (State Water Board) received a letter from Dynegy containing information requested by the State Water Board to assess Moss Landing Power Plant's (MLPP) compliance status with the Water Quality Control Policy on the Use of Coastal and Estuarine Waters for Power Plant Cooling (Once-Through Cooling or OTC Policy). MLPP's OTC Policy compliance date is December 31, 2020.

The State Water Board has determined that MLPP is in compliance with the OTC Policy and the terms of the 2014 Settlement Agreement and Release Regarding the [OTC Policy] between the State Water Board and Dynegy (Settlement Agreement) based on review of Dynegy's August 3, 2020 letter (Enclosure 1) and evaluation of additional information in Dynegy's September 24, 2020 letter.

Track 2 Requirements

In 2011, Dynegy demonstrated to the State Water Board that Track 1 compliance with the OTC Policy for MLPP was not feasible, and therefore Dynegy chose to comply via Track 2. In section 2.A(2) of the OTC Policy, Track 2 requires the owner or operator of a facility to 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. A comparable level is a level that achieves at least 90 percent of the reduction in impingement and entrainment mortality required under Track 1. Attachment A of Enclosure 1 details Dynegy's compliance with the OTC Policy and the terms in the Settlement Agreement, including submission of the implementation plan, baseline study, technology pilot study, technology confirming studies, annual progress reports, installation dates for control and technology upgrades, and compliance with the OTC Policy via achieving 83.7 percent

E. JOAQUIN ESQUIVEL, CHAIR | EILEEN SOBECK, EXECUTIVE DIRECTOR

(which is equivalent to 90 percent of the 93 percent reduction required under Track 1) or greater reduction in impingement and entrainment at MLPP from design flow rates.

Section 2.1.7.d of the Settlement Agreement established the parameters for MLPP to comply with Sections 4.A(2) and 4.B(2) of the OTC Policy. In accordance with Section 2.1.7.d.i of the Settlement Agreement, compliance with the OTC Policy shall be monitored using a Compliance Tracking Tool that relies on:

1. Data on the densities of representative site-specific species as approved in the September 21, 2017 Baseline Study Report, which allows the calculation of the percent reduction in impingement mortality and entrainment, assuming a mortality rate of 100 percent;
2. Actual records of cooling water flow; and
3. Technology performance as verified in technology confirming studies, which were submitted to the State Water Board on May 3, 2019, and June 22, 2020, and approved by the State Water Board on August 18, 2020.

As stated in Section 2.1.7.d.ii of the Settlement Agreement, compliance with the OTC Policy is determined based on the average annual reduction in impingement and entrainment calculated across each National Pollution Discharge Elimination System (NPDES) permit term. The reductions in impingement and entrainment are based on the reduced intake flows, calculated as the difference between the maximum permitted flow for MLPP prior to the installation of combined-cycle Units 1 and 2 (1,450 MGD) and the maximum permitted flow after installation of the new units (362 MGD). Attachment C of Enclosure 1 presents an Annual Report from Dynegy's Compliance Tracking Tool showing that MLPP is achieving compliance via an average 87.18 percent reduction in impingement and entrainment mortality from January 1, 2015, through June 30, 2020.

Interim Mitigation Requirements

Section 2.C(3) of the OTC Policy requires owners and operators to implement measures to mitigate the interim impingement and entrainment impacts resulting from the cooling water intake structures, commencing October 1, 2015, and continuing up to and until the owner or operator achieves final compliance. In accordance with Section 2.1.1 of the Settlement Agreement, Dynegy's prior \$7 million contribution to the Elkhorn Slough Foundation satisfies the requirements under OTC Policy section 2.C(3)(a) for interim mitigation requirements through the December 31, 2020 final compliance date for MLPP.

Conclusion

Based on the information presented above, the State Water Board determines that Dynegy MLPP is in compliance with the OTC Policy and the Settlement Agreement. Compliance shall continue to be determined by assessing the average annual impingement and entrainment reduction calculated across each NPDES permit term (i.e., an average over a 5-yr period). MLPP's current NPDES permit, Order No. R3-2020-0031, was approved by the Central Coast Regional Water Quality Control Board

on July 16, 2020, and took effect on September 4, 2020. The NPDES permit expires on September 3, 2025, at which time Dynegy shall submit a report from the Compliance Tracking Tool for a continuing compliance confirmation assessment.

If there are any questions, please contact Julie Johnson at (916) 341-5687 or Julie.Johnson@waterboards.ca.gov.

Sincerely,



Eileen Sobeck
Executive Director

Enclosure 1: August 3, 2020 Letter from Dynegy to the State Water Board titled:
July 29, 2020 Meeting Follow Up and Information Request

cc:

Mr. Jonathan Bishop, Jonathan.Bishop@waterboards.ca.gov
Ms. Karen Mogus, Karen.Mogus@waterboards.ca.gov
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Mr. Matthew Keeling, Matthew.Keeling@waterboards.ca.gov
Mr. Peter Von Langen, Peter.VonLangen@waterboards.ca.gov
Mr. Vincent Dodge, Vincent.Dodge@vistracorp.com

DYNEGY MOSS LANDING, LLC

Moss Landing Power Plant
P.O. Box 690.
Moss Landing CA 95039
831-633-6700

Enclosure 1

**CERTIFIED MAIL # 7019 0700 0001 5470 2836
RETURN RECEIPT**

**CERTIFIED MAIL # 7019 0700 0001 5470 2713
RETURN RECEIPT**

August 3, 2020

Julie A. Johnson, PG
Engineering Geologist
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Re: July 29, 2020 Meeting Follow Up and Information Request

Dear Ms. Johnson and Ms. Walsh:

Thank you very much for making time to meet with us on July 29, 2020 to discuss the recent submittal of the Unit 1 Moss Landing Power Plant (MLPP) Traveling Water Screens (TWS) Velocity Study, and review

the facility's compliance with 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 Resources Control Board (SWRCB) and Dynegy (Settlement Agreement), as executed on October 9, 2014. Dynegy Moss Landing, LLC (Dynegy) submits this letter as a follow up to the meeting to provide the information requested by the SWRCB during the meeting.

Please see the attachments to this letter for the following information:

- Attachment A – Settlement Agreement Compliance Summary
- Attachment B – Traveling Water Screens Velocity Data Summary
- Attachment C – Compliance Tool Status and Annual Report Summary

As discussed during the meeting this week, MLPP is at risk of not being able to provide contracted System and Local Resource Adequacy (RA) to Southern California Edison (SCE) which would cause reliability and economic harm in 2021 if the SWRCB does not take action before October 30, 2020 to certify MLPP's compliance with the OTC policy IAW the Settlement Agreement.

Dynegy Moss Landing, LLC is in full compliance as demonstrated by the evidence put forward in its prior submissions and summarized in Attachment A of this letter. Dynegy continues to seek written confirmation from the SWRCB of their concurrence that MLPP is in compliance with the terms of the Settlement Agreement and OTC Policy. We request that the SWRCB responds in accordance with paragraph 2.1.7.e of the Settlement Agreement, "... 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 sixty (60) days after receipt of the information and request." Dynegy therefore requests that the SWRCB respond by August 21, 2020, within 60 days of our initial request and the submittal of the final compliance requirement, Unit 1 TWS Velocity Study, submitted June 22, 2020,

If you have any questions or if you require further information, please contact Vince Dodge, Director Environmental Compliance, 315-657-0762 or by email at vincent.dodge@vistraenergy.com.

Regards,



Mike Batte
Plant Manager
Moss Landing and Oakland Power Plants

cc:

via email - Ms. Mariela Carpio-Obeso, Karen Mogus, Rebecca Fitzgerald

Bcc: File: 403.40.09 MLPP 2020

Elizabeth Ewens, STOEL RIVES L.L.P. (via email w/enclosure)

David Mitchell (via email w/enclosure)

Attachment A - Settlement Agreement Compliance Summary:

Table 11 below is taken from the Dynegy Moss Landing, LLC NPDES permit which was approved for reissuance by the Central Coast Regional Water Control Board on July 16, 2020. Dates have been added to the "Completed (Yes/No)" column to indicate when the compliance requirements were completed and or submitted.

Table 11 – 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, Submitted 11/6/2014
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, implemented operational control measure as reported in 2014 annual update
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, Submitted 2/26/2015
4. Submit second progress report on the status of measures discussed in Task 3 above	March 1, 2016	Yes, Submitted 2/25/2016
5. Install controls on the circulating water pumps for Units 1 and 2	December 31, 2016	Yes, completed 12/16/2016
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, Submitted 2/28/2017
8. Submit fourth progress report on the status of measures discussed in Task 3 above	March 1, 2018	Yes, Submitted 3/9/2018
9. Submit fifth progress report on the status of measures discussed in Task 3 above	March 1, 2019	Yes, Submitted 2/28/2019
10. Submit sixth and final progress report	March 1, 2020	Yes, submitted 2/28/2020
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, Unit 2 completed/tested submitted 5/3/2019 Intake #1 completed/tested t submitted 6/22/2020
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, Units 6 & 7 retired 12/31/2016
13. Achieve full compliance with Units 1, 2, 6, and 7	December 31, 2020	Yes

Attachment B - Traveling Water Screen Velocity Data:

The results from studies of the screen velocities at the MLPP Units 1 & 2 intake structure TWSs are presented in Tables 1 through 9. All the information in these tables has been previously submitted in the appendixes of the applicable reports but is summarized here for ease of review.

These tables include dates, times, screen tested, tide level during sampling, and location on the screen for each set of samples collected. The data collected are shown by the three component velocities (fps = feet per second) (V_{xP} , V_{yP} , V_{zP}) which are rotated from the original data from the instrument to account for the angles of the instrument and the screens. The velocity perpendicular to the screen face is V_{xP} and is highlighted for easier review. The other two vectors represent velocities along the screen face. These values are vector quantities, so the negative signs indicate relative direction only.

It is important to recognize that the average velocity is representative of the flow across the whole surface of the screen during each data collection period of approximately 30 minutes. Each data point is taken at a single location on the screen and the set of data points represent a snapshot of the velocity profile across the surface of the screen.

Tables 1 through 4 - show the data from the pilot study prior to the intake modifications. The average values for each velocity data set ranged from a high of -0.585 fps at TWS 2-C on Unit 2 on Dec 13, 2017 to a low of -0.437fps at TWS 2-A on Unit 2 on Dec 13, 2017. The maximum data point velocity was -0.708 fps on 12/12/17 at 11:35. However, as previously discussed on page 5 this is a single point, out of 8 data points in a profile, taken across the surface of the screen over approximately a 30-minute time frame where the minimum was -0.213 fps.

Table 1. Pilot study results from Dec 12, 2017 prior to intake modifications for three TWSs at Unit 1.

Date	TWS	PST	Sample Depth (ft MLLW)	Tide (ft MLLW)	VxP (fps)	VyP (fps)	VzP (fps)	Sweep Velocity (fps)	N
12/12/17	1-A	10:28	1.6	2.4	-0.276	0.028	0.253	0.255	2602
12/12/17	1-A	10:31	-1.3	2.4	-0.585	0.095	0.657	0.664	2852
12/12/17	1-A	10:35	-3.1	2.3	-0.551	0.088	0.625	0.631	2850
12/12/17	1-A	10:39	-5.7	2.3	-0.590	0.025	0.585	0.586	2854
12/12/17	1-A	10:45	-8.3	2.2	-0.582	0.001	0.496	0.496	2855
12/12/17	1-A	10:48	-10.7	2.2	-0.464	0.004	0.504	0.504	2861
12/12/17	1-A	10:52	-13.4	2.1	-0.638	0.052	0.429	0.432	2820
12/12/17	1-A	10:55	-15.7	2.1	-0.563	0.037	0.341	0.343	2862
12/12/17	1-A	11:01	-16.5	2.0	-0.590	0.021	0.353	0.354	2869
Averages					-0.538	0.039	0.471	0.474	
12/12/17	1-B	12:16	-0.6	1.2	-0.360	0.037	0.503	0.504	2853
12/12/17	1-B	12:20	-3.1	1.2	-0.511	0.059	0.601	0.604	2845
12/12/17	1-B	12:25	-5.7	1.2	-0.569	0.062	0.485	0.489	2848
12/12/17	1-B	12:29	-9.1	1.1	-0.599	0.022	0.428	0.429	2842
12/12/17	1-B	12:33	-11.6	1.1	-0.526	-0.006	0.351	0.351	2855
12/12/17	1-B	12:36	-14.0	1.1	-0.552	-0.011	0.407	0.407	2845
12/12/17	1-B	12:39	-16.5	1.1	-0.592	-0.025	0.365	0.366	2849
Averages					-0.530	0.020	0.449	0.450	
12/12/17	1-C	13:13	-0.4	1.1	-0.290	0.023	0.426	0.427	2784
12/12/17	1-C	13:16	-3.1	1.1	-0.430	0.033	0.617	0.618	2847
12/12/17	1-C	13:20	-4.8	1.1	-0.390	0.077	0.574	0.579	2855
12/12/17	1-C	13:25	-7.4	1.1	-0.473	0.001	0.582	0.582	2853
12/12/17	1-C	13:30	-11.1	1.1	-0.445	-0.012	0.466	0.466	2855
12/12/17	1-C	13:36	-13.2	1.1	-0.502	0.010	0.384	0.384	2856
12/12/17	1-C	13:40	-14.9	1.1	-0.546	0.000	0.330	0.330	2853
Averages					-0.439	0.019	0.483	0.484	

Table 2. Pilot study results from Dec 12, 2017 prior to intake modifications for three TWSs at Unit 2.

Date	TWS	PST	Sample Depth (ft MLLW)	Tide (ft MLLW)	VxP (fps)	VyP (fps)	VzP (fps)	Sweep Velocity (fps)	N
12/12/17	2-A	14:48	-0.4	1.6	-0.346	0.046	0.541	0.543	2815
12/12/17	2-A	14:52	-3.1	1.7	-0.467	0.078	0.512	0.518	2863
12/12/17	2-A	14:55	-5.7	1.7	-0.524	0.065	0.418	0.423	2851
12/12/17	2-A	15:01	-7.4	1.9	-0.442	0.064	0.426	0.431	2855
12/12/17	2-A	15:04	-9.9	2.0	-0.537	0.069	0.405	0.411	2853
12/12/17	2-A	15:08	-13.2	1.8	-0.506	0.049	0.334	0.338	2831
12/12/17	2-A	15:12	-15.7	1.9	-0.446	0.072	0.297	0.306	2862
Averages					-0.467	0.063	0.419	0.424	
12/12/17	2-B	11:45	-0.4	1.7	-0.358	-0.012	0.564	0.564	2816
12/12/17	2-B	11:48	-2.2	1.6	-0.502	0.052	0.595	0.597	2820
12/12/17	2-B	11:52	-4.8	1.5	-0.500	0.038	0.530	0.531	2855
12/12/17	2-B	11:55	-7.4	1.5	-0.512	0.016	0.534	0.534	2846
12/12/17	2-B	11:59	-11.1	1.4	-0.493	0.013	0.422	0.422	2833
12/12/17	2-B	12:02	-12.8	1.4	-0.593	0.021	0.409	0.410	2856
12/12/17	2-B	12:06	-15.7	1.3	-0.559	0.044	0.356	0.359	2854
Averages					-0.502	0.025	0.487	0.488	
12/12/17	2-C	11:11	0.6	2.1	-0.213	0.015	0.355	0.355	2630
12/12/17	2-C	11:14	-2.2	2.0	-0.535	0.041	0.653	0.654	2831
12/12/17	2-C	11:18	-4.8	2.1	-0.621	0.035	0.612	0.613	2853
12/12/17	2-C	11:22	-7.4	1.9	-0.586	0.116	0.570	0.582	2846
12/12/17	2-C	11:26	-9.5	1.8	-0.690	0.058	0.542	0.545	2849
12/12/17	2-C	11:32	-11.1	1.9	-0.561	0.013	0.448	0.448	2845
12/12/17	2-C	11:35	-14.0	1.8	-0.708	0.049	0.479	0.481	2822
12/12/17	2-C	11:39	-15.7	1.7	-0.647	0.047	0.375	0.378	2862
Averages					-0.570	0.047	0.504	0.507	

Table 3. Pilot study results from Dec 13, 2017 prior to intake modifications for three TWSs at Unit 1.

Date	TWS	PST	Sample Depth (ft MLLW)	Tide (ft MLLW)	VxP (fps)	VyP (fps)	VzP (fps)	Sweep Velocity (fps)	N
12/13/17	1-A	11:26	-0.4	2.0	-0.389	0.106	0.662	0.670	2701
12/13/17	1-A	11:30	-3.1	1.9	-0.631	0.135	0.672	0.685	2855
12/13/17	1-A	11:36	-5.7	1.8	-0.589	-0.014	0.544	0.544	2848
12/13/17	1-A	11:39	-8.2	1.7	-0.582	0.050	0.505	0.507	2833
12/13/17	1-A	11:43	-10.7	1.7	-0.535	0.035	0.470	0.471	2852
12/13/17	1-A	11:47	-13.2	1.6	-0.636	0.045	0.423	0.425	2851
12/13/17	1-A	11:50	-15.7	1.5	-0.606	0.027	0.375	0.376	2857
Averages					-0.567	0.055	0.522	0.526	
12/13/17	1-B	10:45	-0.9	2.8	-0.396	0.119	0.548	0.561	2838
12/13/17	1-B	10:49	-3.1	2.7	-0.435	0.110	0.585	0.595	2845
12/13/17	1-B	10:57	-5.7	2.6	-0.584	0.010	0.580	0.580	2858
12/13/17	1-B	11:00	-9.1	2.5	-0.552	-0.011	0.428	0.428	2854
12/13/17	1-B	11:10	-11.6	2.3	-0.555	-0.052	0.369	0.373	2848
12/13/17	1-B	11:13	-14.0	2.2	-0.480	0.005	0.355	0.355	2851
12/13/17	1-B	11:17	-16.5	2.1	-0.547	0.042	0.308	0.311	2839
12/13/17	1-B	11:19	-16.5	2.1	-0.559	0.049	0.320	0.324	2860
Averages					-0.514	0.034	0.437	0.441	
12/13/17	1-C	13:05	-0.4	0.7	-0.272	0.057	0.320	0.325	2767
12/13/17	1-C	13:08	-3.1	0.7	-0.448	0.035	0.602	0.603	2815
12/13/17	1-C	13:11	-4.8	0.7	-0.445	0.070	0.578	0.582	2853
12/13/17	1-C	13:14	-7.4	0.7	-0.544	0.051	0.612	0.614	2853
12/13/17	1-C	13:17	-9.1	0.7	-0.566	0.051	0.483	0.486	2865
12/13/17	1-C	13:21	-11.6	0.6	-0.537	0.036	0.402	0.404	2861
12/13/17	1-C	13:25	-13.2	0.6	-0.582	0.025	0.361	0.362	2859
12/13/17	1-C	13:28	-16.1	0.6	-0.596	0.022	0.326	0.327	2842
Averages					-0.499	0.043	0.461	0.463	

Table 4. Pilot study results from Dec 13, 2017 prior to intake modifications for three TWSs at Unit 2.

Date	TWS	PST	Sample Depth (ft MLLW)	Tide (ft MLLW)	VxP (fps)	VyP (fps)	VzP (fps)	Sweep Velocity (fps)	N
12/13/17	2-A	11:57	-0.4	1.9	-0.136	0.020	0.396	0.397	2664
12/13/17	2-A	12:01	-3.1	1.8	-0.521	0.039	0.526	0.527	2851
12/13/17	2-A	12:04	-4.8	1.9	-0.476	0.016	0.397	0.397	2839
12/13/17	2-A	12:09	-7.4	1.8	-0.469	0.054	0.442	0.445	2854
12/13/17	2-A	12:13	-9.1	1.7	-0.515	0.054	0.370	0.374	2855
12/13/17	2-A	12:16	-11.6	1.7	-0.430	0.026	0.377	0.378	2830
12/13/17	2-A	12:21	-14.0	1.6	-0.494	0.049	0.359	0.362	2852
12/13/17	2-A	12:24	-16.5	1.5	-0.451	0.014	0.308	0.308	2848
Averages					-0.437	0.034	0.397	0.399	
12/13/17	2-B	10:36	1.1	3.5	-0.234	-0.005	0.300	0.300	2650
12/13/17	2-B	10:30	-1.7	3.6	-0.495	0.060	0.568	0.571	2835
12/13/17	2-B	10:26	-4.4	3.7	-0.359	0.073	0.601	0.605	2852
12/13/17	2-B	10:09	-7.4	3.9	-0.457	0.004	0.561	0.561	2863
12/13/17	2-B	10:13	-11.1	3.8	-0.497	0.000	0.422	0.422	2837
12/13/17	2-B	10:18	-12.8	3.8	-0.553	0.032	0.417	0.418	2833
12/13/17	2-B	10:21	-15.7	3.7	-0.538	0.019	0.343	0.344	2852
Averages					-0.448	0.026	0.459	0.460	
12/13/17	2-C	12:32	-0.4	1.2	-0.424	0.055	0.645	0.647	2780
12/13/17	2-C	12:36	-3.1	1.2	-0.627	0.064	0.674	0.677	2850
12/13/17	2-C	12:39	-4.8	1.1	-0.582	-0.017	0.556	0.556	2865
12/13/17	2-C	12:43	-7.4	1.1	-0.570	0.061	0.564	0.567	2852
12/13/17	2-C	12:46	-9.1	1.1	-0.625	0.034	0.493	0.494	2849
12/13/17	2-C	12:50	-11.6	1.1	-0.602	0.026	0.477	0.478	2852
12/13/17	2-C	12:53	-13.2	1.0	-0.638	0.055	0.430	0.434	2797
12/13/17	2-C	12:56	-15.7	1.0	-0.612	0.002	0.357	0.357	2830
Averages					-0.585	0.035	0.525	0.526	

Tables 5 and 6 – show the results of the verification testing at Unit 2 following the modifications to the intake structure. The average velocities at the Unit 2 screens ranged from a high of -0.418 fps at TWS 2-C on Mar 21, 2019 to a low of -0.258 fps at TWS 2-A on Mar 20, 2019. The maximum data point velocity was -0.466 fps on 3/21/2019 at 9:47. However, as previously discussed on page 5 this is a single point, out of 8 data points in a profile, taken across the surface of the screen over approximately a 30-minute time frame where the minimum was -0.370 fps.

Table 5. Verification study results from Mar. 20, 2019 following intake modifications for three TWSs at Unit 2.

Date	TWS	PST	Sample Depth (ft MLLW)	Tide (ft MLLW)	VxP (fps)	VyP (fps)	VzP (fps)	Sweep Velocity (fps)	N
3/20/19	2-A	11:30	-0.4	4.3	-0.063	-0.003	0.301	0.301	2719
3/20/19	2-A	11:38	-3.1	4.2	-0.325	-0.008	0.292	0.292	2752
3/20/19	2-A	11:43	-5.3	4.0	-0.288	-0.014	0.270	0.270	2752
3/20/19	2-A	11:47	-7.4	4.0	-0.269	-0.024	0.323	0.324	2751
3/20/19	2-A	11:52	-9.5	3.8	-0.315	-0.007	0.301	0.301	2752
3/20/19	2-A	11:56	-11.6	3.8	-0.231	0.005	0.334	0.334	2752
3/20/19	2-A	11:59	-13.2	3.7	-0.312	0.005	0.309	0.309	2752
3/20/19	2-A	12:05	-16.1	3.6	-0.257	-0.013	0.227	0.227	2752
Averages					-0.258	-0.007	0.295	0.295	
3/20/19	2-B	12:46	-0.4	2.6	-0.110	0.011	0.382	0.382	2699
3/20/19	2-B	12:43	-3.1	2.6	-0.353	-0.009	0.337	0.337	2752
3/20/19	2-B	12:37	-5.3	2.8	-0.340	-0.026	0.302	0.303	2752
3/20/19	2-B	12:33	-7.4	2.9	-0.354	-0.042	0.375	0.377	2752
3/20/19	2-B	12:30	-9.6	2.9	-0.384	-0.027	0.329	0.330	2752
3/20/19	2-B	12:25	-11.6	3.1	-0.277	0.014	0.331	0.331	2752
3/20/19	2-B	12:21	-14.0	3.2	-0.354	0.024	0.328	0.329	2752
3/20/19	2-B	12:18	-16.1	3.2	-0.323	-0.002	0.258	0.258	2752
Averages					-0.312	-0.007	0.330	0.331	
3/20/19	2-C	13:20	-0.4	1.7	-0.192	-0.040	0.413	0.415	2695
3/20/19	2-C	13:15	-3.1	1.8	-0.449	-0.026	0.341	0.342	2752
3/20/19	2-C	13:12	-4.8	1.9	-0.420	-0.011	0.302	0.302	2752
3/20/19	2-C	13:10	-7.4	2.0	-0.430	0.013	0.381	0.381	2750
3/20/19	2-C	13:06	-9.1	2.1	-0.448	0.009	0.346	0.346	2752
3/20/19	2-C	13:03	-11.6	2.1	-0.433	0.010	0.336	0.336	2752
3/20/19	2-C	12:59	-13.4	2.2	-0.465	-0.029	0.345	0.346	2752
3/20/19	2-C	12:56	-15.3	2.3	-0.433	-0.031	0.331	0.332	2752
Averages					-0.409	-0.013	0.349	0.350	

Table 6. Verification study results from Mar. 21, 2019 following intake modifications for three TWSs at Unit 2.

Date	TWS	PST	Sample Depth (ft MLLW)	Tide (ft MLLW)	VxP (fps)	VyP (fps)	VzP (fps)	Sweep Velocity (fps)	N
3/21/19	2-A	9:28	-1.3	5.0	-0.231	0.056	0.191	0.199	2671
3/21/19	2-A	9:25	-3.6	5.0	-0.240	0.011	0.106	0.107	2752
3/21/19	2-A	9:22	-5.7	5.0	-0.294	0.030	0.277	0.279	2752
3/21/19	2-A	9:19	-7.8	5.0	-0.237	0.024	0.174	0.176	2752
3/21/19	2-A	9:16	-9.9	4.9	-0.287	-0.008	0.194	0.194	2751
3/21/19	2-A	9:13	-12.0	4.9	-0.279	0.021	0.287	0.288	2752
3/21/19	2-A	9:09	-14.0	4.8	-0.302	0.014	0.346	0.346	2746
3/21/19	2-A	9:06	-16.4	4.8	-0.326	0.015	0.302	0.302	2746
Averages					-0.275	0.020	0.235	0.236	
3/21/19	2-B	8:55	-0.4	4.6	-0.172	-0.012	0.454	0.454	2699
3/21/19	2-B	8:52	-3.1	4.6	-0.402	-0.035	0.377	0.379	2752
3/21/19	2-B	8:49	-4.4	4.5	-0.298	0.001	0.403	0.403	2752
3/21/19	2-B	8:46	-6.5	4.5	-0.380	0.016	0.413	0.413	2752
3/21/19	2-B	8:43	-9.1	4.5	-0.358	0.008	0.367	0.367	2752
3/21/19	2-B	8:40	-11.8	4.4	-0.383	0.040	0.407	0.409	2752
3/21/19	2-B	8:37	-14.0	4.4	-0.438	0.060	0.469	0.473	2752
3/21/19	2-B	8:34	-16.1	4.3	-0.421	0.034	0.354	0.356	2750
Averages					-0.357	0.014	0.406	0.407	
3/21/19	2-C	10:08	-0.9	5.3	-0.370	-0.022	0.428	0.429	2677
3/21/19	2-C	10:05	-3.1	5.3	-0.427	-0.022	0.373	0.374	2752
3/21/19	2-C	10:02	-5.3	5.3	-0.414	-0.022	0.386	0.387	2752
3/21/19	2-C	9:59	-7.4	5.3	-0.375	-0.044	0.451	0.453	2752
3/21/19	2-C	9:56	-9.5	5.3	-0.418	0.014	0.420	0.420	2751
3/21/19	2-C	9:53	-12.0	5.2	-0.431	0.021	0.394	0.395	2752
3/21/19	2-C	9:50	-14.0	5.2	-0.443	0.007	0.387	0.387	2752
3/21/19	2-C	9:47	-16.1	5.2	-0.466	0.018	0.359	0.359	2751
Averages					-0.418	-0.006	0.400	0.400	

Tables 7 thru 9 – show the results of the verification testing at Unit 1 following the modifications to the intake structure. The average velocities at the Unit 1 screens ranged from a high of -0.441 fps at TWS 1-A on Apr 20, 2020 to a low of -0.315 fps at TWS 1-C on Apr 1, 2020. The maximum data point velocity was -0.536 fps on 4/1/202 at 10:21. However, as previously discussed on page 5 this is a single point, out of 8 data points in a profile, taken across the surface of the screen over approximately a 30-minute time frame where the minimum was -0.021 fps.

Table 7. Verification study results from 2020 following intake modifications for Screen 1A at Unit 1.

Date	TWS	PST	Sample Depth (ft MLLW)	Tide (ft MLLW)	VxP (fps)	VyP (fps)	VzP (fps)	Sweep Velocity (fps)	N
3/30/20	1-A	9:29	-0.89	0.53	-0.265	0.058	0.285	0.291	2730
3/30/20	1-A	9:21	-2.24	0.51	-0.259	0.028	0.161	0.164	2744
3/30/20	1-A	9:17	-5.26	0.50	-0.491	0.028	0.136	0.139	2736
3/30/20	1-A	9:15	-7.38	0.50	-0.463	0.014	0.236	0.237	2741
3/30/20	1-A	9:10	-9.64	0.50	-0.519	0.008	0.247	0.247	2718
3/30/20	1-A	9:06	-11.55	0.49	-0.471	0.024	0.316	0.317	2750
3/30/20	1-A	9:03	-13.21	0.49	-0.529	0.033	0.304	0.306	2724
3/30/20	1-A	9:00	-15.28	0.49	-0.523	0.028	0.350	0.351	2733
Averages					-0.440	0.028	0.255	0.256	
3/30/20	1-A	10:10	-0.89	0.69	-0.259	0.062	0.191	0.201	2740
3/30/20	1-A	10:05	-2.24	0.66	-0.274	0.041	0.187	0.192	2724
3/30/20	1-A	10:03	-5.26	0.65	-0.476	-0.014	0.199	0.199	2715
3/30/20	1-A	10:00	-7.38	0.64	-0.465	-0.030	0.266	0.268	2745
3/30/20	1-A	9:57	-9.64	0.62	-0.487	0.024	0.266	0.267	2745
3/30/20	1-A	9:54	-11.55	0.61	-0.437	0.041	0.332	0.335	2745
3/30/20	1-A	9:51	-13.21	0.60	-0.489	0.056	0.312	0.317	2731
3/30/20	1-A	9:37	-15.28	0.55	-0.496	0.011	0.320	0.320	2726
Averages					-0.423	0.024	0.259	0.262	
3/30/20	1-A	12:52	-0.89	2.00	-0.174	0.007	0.367	0.367	2635
3/30/20	1-A	12:48	-2.24	1.96	-0.499	0.018	0.486	0.487	2747
3/30/20	1-A	12:44	-5.26	1.93	-0.460	0.032	0.298	0.300	2742
3/30/20	1-A	12:40	-7.38	1.89	-0.415	0.007	0.357	0.357	2794
3/30/20	1-A	12:38	-9.64	1.88	-0.479	0.007	0.334	0.334	2742
3/30/20	1-A	12:35	-11.55	1.85	-0.431	0.016	0.380	0.380	2752
3/30/20	1-A	12:30	-13.21	1.80	-0.521	0.003	0.377	0.377	2718
3/30/20	1-A	12:28	-15.28	1.79	-0.511	-0.011	0.412	0.412	2715
Averages					-0.436	0.010	0.376	0.377	

Table 7 (continued). Verification study results from 2020 following intake modifications for Screen 1A at Unit 1.

Date	TWS	PST	Sample Depth (ft MLLW)	Tide (ft MLLW)	VxP (fps)	VyP (fps)	VzP (fps)	Sweep Velocity (fps)	N
4/1/20	1-A	9:05	-2.24	0.89	-0.451	0.013	0.333	0.333	2766
4/1/20	1-A	9:03	-5.26	0.91	-0.455	-0.019	0.180	0.181	2738
4/1/20	1-A	9:00	-7.38	0.95	-0.407	0.020	0.285	0.285	2742
4/1/20	1-A	8:57	-9.64	0.98	-0.473	0.035	0.316	0.318	2748
4/1/20	1-A	8:54	-11.55	1.02	-0.425	0.011	0.367	0.367	2761
4/1/20	1-A	8:51	-13.21	1.06	-0.467	0.016	0.349	0.350	2721
4/1/20	1-A	8:46	-14.86	1.12	-0.407	0.049	0.341	0.345	2734
Averages					-0.441	0.018	0.310	0.311	
4/1/20	1-A	10:39	-2.24	0.14	-0.021	-0.009	0.003	0.009	2770
4/1/20	1-A	10:34	-5.26	0.16	-0.424	0.027	0.205	0.207	2734
4/1/20	1-A	10:30	-7.38	0.18	-0.415	-0.009	0.230	0.230	2727
4/1/20	1-A	10:27	-9.64	0.19	-0.508	-0.018	0.250	0.250	2752
4/1/20	1-A	10:24	-11.55	0.21	-0.442	0.012	0.282	0.283	2747
4/1/20	1-A	10:21	-13.21	0.22	-0.536	0.059	0.286	0.292	2730
4/1/20	1-A	10:19	-14.86	0.24	-0.485	0.047	0.325	0.328	2749
Averages					-0.405	0.016	0.226	0.229	

Table 8. Verification study results from 2020 following intake modifications for Screen 1B at Unit 1.

Date	TWS	PST	Sample Depth (ft MLLW)	Tide (ft MLLW)	VxP (fps)	VyP (fps)	VzP (fps)	Sweep Velocity (fps)	N
3/30/20	1-B	10:59	-1.34	1.01	-0.274	0.003	0.144	0.144	2756
3/30/20	1-B	10:55	-3.12	0.98	-0.391	0.064	0.200	0.210	2739
3/30/20	1-B	10:52	-4.84	0.96	-0.393	0.006	0.146	0.146	206
3/30/20	1-B	10:47	-7.38	0.92	-0.402	0.004	0.251	0.251	2754
3/30/20	1-B	10:44	-9.89	0.90	-0.451	-0.052	0.243	0.249	2728
3/30/20	1-B	10:33	-11.55	0.82	-0.425	0.008	0.339	0.339	2759
3/30/20	1-B	10:30	-13.62	0.80	-0.486	-0.018	0.310	0.310	2744
3/30/20	1-B	10:25	-14.86	0.77	-0.459	-0.032	0.312	0.313	2731
Averages					-0.410	-0.002	0.243	0.245	
3/30/20	1-B	11:25	-1.34	1.22	-0.357	0.004	0.204	0.204	2751
3/30/20	1-B	11:22	-3.12	1.20	-0.432	0.031	0.198	0.200	2742
3/30/20	1-B	11:19	-4.84	1.17	-0.485	0.007	0.203	0.203	2733
3/30/20	1-B	11:16	-7.38	1.15	-0.393	-0.008	0.220	0.220	2750
3/30/20	1-B	11:13	-9.89	1.12	-0.441	-0.028	0.243	0.245	2743
3/30/20	1-B	11:10	-11.55	1.10	-0.404	0.008	0.265	0.265	2744
3/30/20	1-B	11:07	-13.62	1.07	-0.480	0.017	0.284	0.285	2739
3/30/20	1-B	11:03	-14.86	1.04	-0.453	-0.029	0.311	0.312	2744
Averages					-0.431	0.000	0.241	0.242	
3/30/20	1-B	12:20	-1.34	1.71	-0.194	0.012	0.054	0.055	2791
3/30/20	1-B	12:16	-3.12	1.68	-0.428	0.016	0.224	0.225	2739
3/30/20	1-B	12:12	-4.84	1.64	-0.438	0.024	0.203	0.205	2732
3/30/20	1-B	12:09	-7.38	1.61	-0.395	-0.014	0.266	0.267	2722
3/30/20	1-B	12:05	-9.89	1.58	-0.472	-0.006	0.256	0.256	2730
3/30/20	1-B	12:02	-11.55	1.55	-0.442	0.016	0.298	0.298	2736
3/30/20	1-B	12:00	-13.62	1.53	-0.511	-0.058	0.298	0.304	2751
3/30/20	1-B	11:56	-14.86	1.50	-0.492	-0.044	0.354	0.357	2755
Averages					-0.421	-0.007	0.244	0.246	
4/1/20	1-B	9:38	-3.12	0.55	-0.123	-0.004	0.100	0.100	2766
4/1/20	1-B	9:34	-4.84	0.58	-0.300	0.012	0.170	0.170	2734
4/1/20	1-B	9:31	-7.38	0.61	-0.436	-0.015	0.196	0.196	2739
4/1/20	1-B	9:28	-9.89	0.64	-0.466	-0.041	0.201	0.205	2754
4/1/20	1-B	9:24	-11.55	0.68	-0.439	-0.017	0.255	0.256	2742
4/1/20	1-B	9:20	-13.62	0.72	-0.464	0.004	0.293	0.293	2602
4/1/20	1-B	9:12	-14.86	0.81	-0.451	0.007	0.309	0.309	2750
Averages					-0.383	-0.008	0.218	0.219	

Table 8 (continued). Verification study results from 2020 following intake modifications for Screen 1B at Unit 1.

Date	TWS	PST	Sample Depth (ft MLLW)	Tide (ft MLLW)	VxP (fps)	VyP (fps)	VzP (fps)	Sweep Velocity (fps)	N
4/1/20	1-B	11:09	-3.12	0.06	-0.029	-0.017	0.008	0.019	2778
4/1/20	1-B	11:06	-4.84	0.07	-0.303	0.010	0.167	0.167	2733
4/1/20	1-B	11:03	-7.38	0.07	-0.454	-0.057	0.222	0.229	2736
4/1/20	1-B	11:00	-9.47	0.08	-0.496	-0.077	0.237	0.249	2716
4/1/20	1-B	10:57	-11.55	0.08	-0.441	-0.012	0.290	0.291	2733
4/1/20	1-B	10:54	-13.62	0.09	-0.513	0.004	0.320	0.320	2723
4/1/20	1-B	10:51	-14.45	0.10	-0.488	0.002	0.329	0.329	2732
Averages					-0.389	-0.021	0.225	0.229	

Table 9. Verification study results from 2020 following intake modifications for Screen 1C at Unit 1.

Date	TWS	PST	Sample Depth (ft MLLW)	Tide (ft MLLW)	VxP (fps)	VyP (fps)	VzP (fps)	Sweep Velocity (fps)	N
2/24/20	1-C	15:22	-1.34	0.93	-0.325	-0.008	0.252	0.252	2743
2/24/20	1-C	15:15	-3.12	1.04	-0.367	-0.007	0.259	0.259	2755
2/24/20	1-C	15:12	-4.84	1.09	-0.359	-0.040	0.247	0.250	2741
2/24/20	1-C	15:10	-7.38	1.12	-0.347	-0.052	0.319	0.323	2769
2/24/20	1-C	15:06	-9.47	1.19	-0.413	-0.018	0.295	0.296	2682
2/24/20	1-C	15:03	-11.55	1.24	-0.375	-0.005	0.305	0.305	2753
2/24/20	1-C	15:00	-12.79	1.29	-0.417	-0.025	0.267	0.268	2745
2/24/20	1-C	14:57	-14.86	1.35	-0.406	-0.055	0.360	0.364	2761
Averages					-0.376	-0.026	0.288	0.290	
2/25/20	1-C	10:35	-0.42	4.67	-0.204	-0.015	0.399	0.399	2731
2/25/20	1-C	10:31	-2.68	4.65	-0.283	-0.059	0.459	0.463	2724
2/25/20	1-C	10:28	-5.26	4.64	-0.366	-0.026	0.394	0.395	2778
2/25/20	1-C	10:25	-7.80	4.62	-0.363	-0.015	0.340	0.340	2758
2/25/20	1-C	10:22	-10.30	4.61	-0.436	-0.052	0.329	0.333	2740
2/25/20	1-C	10:17	-11.96	4.58	-0.367	-0.030	0.284	0.286	2743
2/25/20	1-C	10:14	-14.45	4.56	-0.405	-0.041	0.296	0.299	2729
2/25/20	1-C	10:09	-16.52	4.53	-0.413	-0.048	0.263	0.267	2721
Averages					-0.355	-0.036	0.346	0.348	
4/1/20	1-C	10:10	-3.12	0.29	0.005	-0.005	-0.012	0.013	2793
4/1/20	1-C	10:07	-4.84	0.31	-0.112	0.004	0.049	0.050	2743
4/1/20	1-C	10:04	-7.38	0.33	-0.301	-0.003	0.223	0.223	2766
4/1/20	1-C	10:02	-9.47	0.35	-0.465	-0.058	0.235	0.242	2654
4/1/20	1-C	9:57	-11.55	0.38	-0.427	-0.053	0.291	0.295	2741
4/1/20	1-C	9:53	-12.79	0.42	-0.475	-0.056	0.295	0.300	2734
4/1/20	1-C	9:49	-14.86	0.45	-0.449	-0.029	0.323	0.324	2752
Averages					-0.318	-0.028	0.200	0.207	
4/1/20	1-C	11:39	-3.12	0.07	-0.067	0.021	0.030	0.037	2780
4/1/20	1-C	11:36	-4.84	0.07	-0.131	0.034	0.054	0.064	2718
4/1/20	1-C	11:30	-7.38	0.06	-0.266	-0.072	0.158	0.173	2752
4/1/20	1-C	11:27	-9.47	0.06	-0.456	-0.029	0.235	0.237	2719
4/1/20	1-C	11:24	-11.55	0.06	-0.403	-0.042	0.220	0.224	2736
4/1/20	1-C	11:20	-12.79	0.06	-0.434	-0.036	0.212	0.215	2743
4/1/20	1-C	11:18	-14.45	0.06	-0.451	-0.021	0.302	0.303	2745
Averages					-0.315	-0.021	0.173	0.179	

Attachment C – Compliance Tool Annual Report

MLPP will be using the compliance tool to monitor compliance with the requirement to achieve 83.7% or greater reduction in impingement mortality and entrainment. Below is an example of an annual summary report. MLPP continues to optimize flow monitoring and operational control measures to maintain compliance as required by the Settlement Agreement.

Paragraph 2.1.6.e of the Settlement Agreement – “Beginning December 31, 2016 through the final compliance date of the December 31, 2020, Dynegy Moss landing, LLC will achieve 83.7% or greater reduction in impingement mortality and entrainment from design flow using flow control and operational measures.”

**Moss Landing Power Plant Units 1 and 2
Total Annual Entrainment and Reductions**

Year	Total Actual Entrainment	Design Flow Entrainment	Average % Reduction IAW Settlement Agreement
2015	195,127,653	373,450,129	92.26
2016	179,387,183	375,093,182	92.66
2017	140,023,989	373,450,129	92.76
2018	212,569,000	373,450,129	84.87
2019	298,319,746	373,450,129	79.81
2020	159,527,729	200,332,872	80.71**
			Average = 87.18

** NOTE: The data for year 2020 is for a partial year from 1/1/2020 through 6/30/2020.