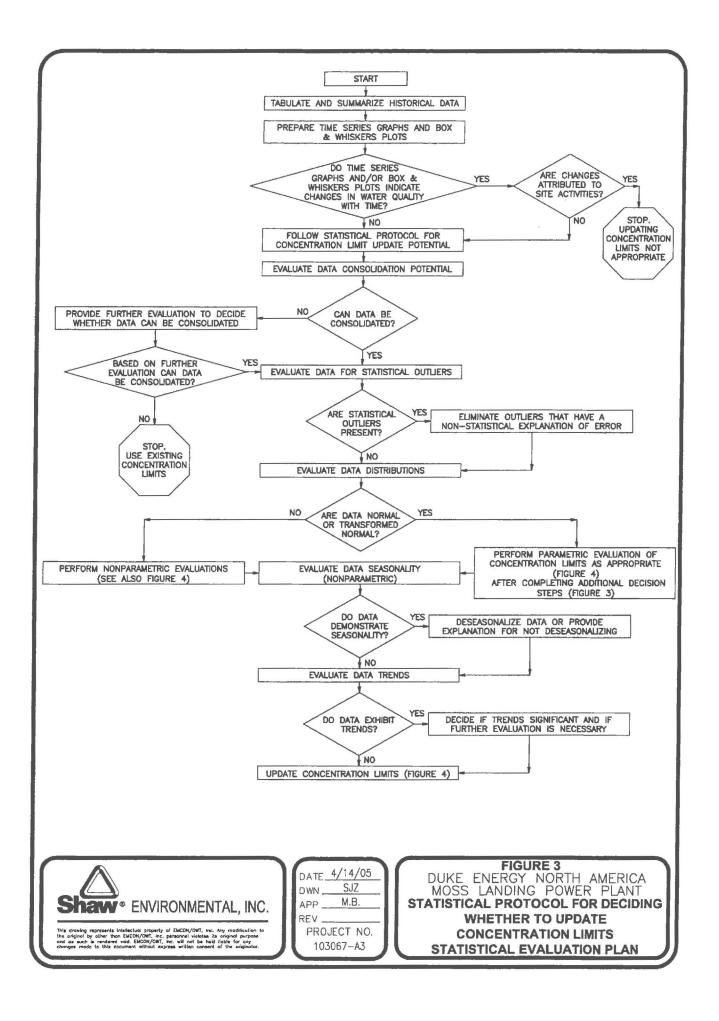
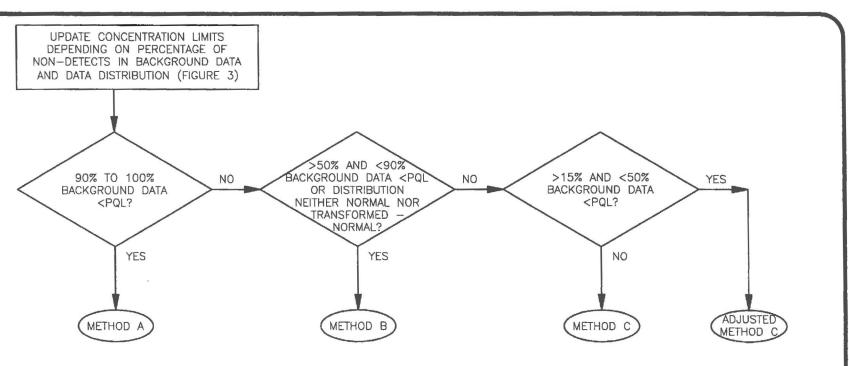
DOCKETED	
Docket Number:	99-AFC-04C
Project Title:	Duke Energy North American's Moss Landing Power Plant Modernization Project (Compliance)
TN #:	231184
Document Title:	Moss Landing Power Plant - 2018 Annual Compliance Report (Part 5)
Description:	N/A
Filer:	Mary Dyas
Organization:	California Energy Commission
Submitter Role:	Energy Commission
Submission Date:	12/12/2019 9:55:00 AM
Docketed Date:	12/12/2019

APPENDIX A STATISTICAL ANALYTICAL METHODS

APPENDIX A APTIM





PQL = PRACTICAL QUANTITATION LIMIT (THE LABORATORY DETECTION LIMIT BELOW WHICH THE RESULT IS REPORTED AS NON-DETECT)

METHOD A = CALIFORNIA NONSTATISTICAL METHOD (SECTION B.1.4 IN APPENDIX B)

METHOD B = NONPARAMETRIC TOLERANCE LIMIT (SECTION B.1.3 IN APPENDIX B)

METHOD C = PARAMETRIC TOLERANCE LIMIT (SECTIONS B.1.1 AND B.1.2 IN APPENDIX B)

ADJUSTED = COHEN'S ADJUSTMENT (SECTION B.1.2 IN APPENDIX B)
METHOD C



DATE.	4/14/05						
DWN_	SJZ						
APP _	м.в.						
REV_							
PRC	JECT NO.						
10	3067-A4						

FIGURE 4 DUKE ENERGY NORTH AMERICA

MOSS LANDING POWER PLANT FLOW CHART FOR ESTABLISHING CONCENTRATION LIMITS STATISTICAL EVALUATION PLAN

Constituent: Ammonia as N Analysis Run 12/15/2017 10:24 AM
North County Landfill Client: Aptim Data: Moss Sanitas-AllGWData-OutlierRemoval-12-15-17-flat

For observations made between 1/19/2010 and 10/11/2017, a summary of the selected data set:

Observations = 252 ND/Trace = 199 Wells = 8 Minimum Value = 0.000025 Maximum Value = 0.15 Mean Value = 0.0321 Median Value = 0.025 Standard Deviation = 0.01577 Coefficient of Variation = 0.4913 Skewness = 1.944

<u>Well</u>	#Obs.	ND/Trace	<u>Min</u>	<u>Max</u>	<u>Mean</u>	<u>Median</u>	Std.Dev.	CV	<u>Skewness</u>
W-1-R	31	26	0.01	0.078	0.03319	0.025	0.01605	0.4835	0.6822
W-2-R	31	25	0.01	0.055	0.03235	0.025	0.01277	0.3946	0.437
W-3-R	32	27	0.00011	0.15	0.0331	0.025	0.02536	0.7663	3.118
W-10	32	25	0.000028	0.05	0.02931	0.025	0.0132	0.4503	0.2056
W-12	31	25	0.01	0.05	0.033	0.025	0.01296	0.3928	0.2672
W-14-R	32	24	0.000089	0.087	0.031	0.025	0.01693	0.5459	1.092
W-11 (bg)	31	23	0.01	0.053	0.03316	0.025	0.0121	0.3649	0.4586
W-13 (bg)	32	24	0.000025	0.05	0.03178	0.025	0.01361	0.4284	-0.05658

Constituent: Barium Analysis Run 12/15/2017 10:24 AM

North County Landfill Client: Aptim Data: Moss Sanitas-AllGWData-OutlierRemoval-12-15-17-flat

For observations made between 1/19/2010 and 10/11/2017, a summary of the selected data set:

Observations = 87 ND/Trace = 0 Wells = 8 Minimum Value = 0.027 Maximum Value = 710 Mean Value = 29.04 Median Value = 0.061 Standard Deviation = 105.3 Coefficient of Variation = 3.627

Skewr	2291	=	4	4	n	Ω

Well	#Obs.	ND/Trace	Min	Max	Mean	Median	Std.Dev.	CV	Skewness
W-1-R	17	0	0.1	180	10.75	0.165	43.61	4.057	3.75
W-2-R	10	0	0.027	220	22.04	0.041	69.56	3.157	2.667
W-3-R	10	0	0.027	300	30.03	0.0315	94.86	3.159	2.667
W-10	10	0	0.047	190	19.05	0.0545	60.07	3.153	2.667
W-12	10	0	0.049	710	71.06	0.0665	224.5	3.159	2.667
W-14-R	10	0	0.042	170	17.04	0.0485	53.74	3.153	2.667
W-11 (bg)	10	0	0.059	430	43.07	0.078	136	3.157	2.667
W-13 (bg)	10	0	0.042	320	32.05	0.06	101.2	3.157	2.667

Constituent: Chromium Analysis Run 12/15/2017 10:24 AM

North County Landfill Client: Aptim Data: Moss Sanitas-AllGWData-OutlierRemoval-12-15-17-flat

For observations made between 1/19/2010 and 10/11/2017, a summary of the selected data set:

Observations = 250 ND/Trace = 27 Wells = 8 Minimum Value = 0.000075 Maximum Value = 0.015 Mean Value = 0.003317 Median Value = 0.0028 Standard Deviation = 0.002285 Coefficient of Variation = 0.6888

Skewness = 1.58

<u>Well</u>	#Obs.	ND/Trace	<u>Min</u>	<u>Max</u>	<u>Mean</u>	<u>Median</u>	Std.Dev.	CV	<u>Skewness</u>
W-1-R	31	0	0.00085	0.014	0.002939	0.0025	0.002277	0.7747	3.815
W-2-R	31	4	0.00021	0.0051	0.002145	0.0023	0.0009911	0.4621	0.4582
W-3-R	31	15	0.000075	0.0045	0.00162	0.0015	0.001126	0.6947	1.236
W-10	32	0	0.0044	0.0095	0.006369	0.00605	0.001324	0.2079	0.746
W-12	31	0	0.00053	0.0074	0.003043	0.0027	0.00187	0.6144	0.8108
W-14-R	32	0	0.0009	0.007	0.003713	0.0037	0.00138	0.3718	0.3331
W-11 (bg)	31	8	0.00017	0.015	0.003322	0.0022	0.003239	0.9752	2.126
W-13 (bg)	31	0	0.00088	0.0084	0.003279	0.0028	0.001848	0.5636	1.162

Constituent: Cobalt Analysis Run 12/15/2017 10:24 AM

North County Landfill Client: Aptim Data: Moss Sanitas-AllGWData-OutlierRemoval-12-15-17-flat

For observations made between 1/19/2010 and 10/11/2017, a summary of the selected data set:

0.00039

Observations = 80 ND/Trace = 9 Wells = 8 Minimum Value = 0.000041 Maximum Value = 690 Mean Value = 24.78 Median Value = 0.000425 Standard Deviation = 96.31 Coefficient of Variation = 3.888 Skewness = 5.082

W-13 (bg)

<u>Well</u>	#Obs.	ND/Trace	<u>Min</u>	<u>Max</u>	<u>Mean</u>	<u>Median</u>	Std.Dev.	CV	Skewness
W-1-R	10	0	0.00051	690	69	0.000905	218.2	3.162	2.667
W-2-R	10	0	0.00011	140	14	0.00022	44.27	3.162	2.667
W-3-R	10	0	0.00026	360	36	0.000325	113.8	3.162	2.667
W-10	10	3	0.000054	79	7.9	0.00009	24.98	3.162	2.667
W-12	10	0	0.0002	200	20	0.0005	63.25	3.162	2.667
W-14-R	10	4	0.000041	53	5.3	0.0002865	16.76	3.162	2.667
W-11 (bg)	10	2	0.000076	200	20	0.000175	63.25	3.162	2.667

26

0.00044

82.22

3.162

2.667

260

Constituent: Copper Analysis Run 12/15/2017 10:24 AM

North County Landfill Client: Aptim Data: Moss Sanitas-AllGWData-OutlierRemoval-12-15-17-flat

For observations made between 4/20/2010 and 10/11/2017, a summary of the selected data set:

Observations = 249
ND/Trace = 25
Wells = 8
Minimum Value = 0.00016
Maximum Value = 0.014
Mean Value = 0.001112
Median Value = 0.00092
Standard Deviation = 0.001129
Coefficient of Variation = 1.015
Skewness = 8.142

Well	#Obs.	ND/Trace	<u>Min</u>	<u>Max</u>	<u>Mean</u>	<u>Median</u>	Std.Dev.	CV	<u>Skewness</u>
W-1-R	31	2	0.00016	0.014	0.001727	0.0011	0.002411	1.396	4.465
W-2-R	31	2	0.00033	0.0023	0.0009939	0.00087	0.0004537	0.4565	1.016
W-3-R	31	0	0.0005	0.0031	0.001353	0.0012	0.0006653	0.4916	1.132
W-10	32	3	0.00016	0.0018	0.0008534	0.00077	0.0003172	0.3717	0.7314
W-12	31	2	0.00016	0.0027	0.001062	0.00094	0.0004895	0.4609	1.55
W-14-R	31	4	0.00033	0.0014	0.0008642	0.00085	0.0002598	0.3007	0.2318
W-11 (bg)	31	7	0.00016	0.01	0.001102	0.00077	0.001685	1.528	4.975
W-13 (bg)	31	5	0.0004	0.0022	0.0009465	0.00088	0.0004308	0.4552	1.081

Constituent: Hexchrom Analysis Run 12/15/2017 10:24 AM

North County Landfill Client: Aptim Data: Moss Sanitas-AllGWData-OutlierRemoval-12-15-17-flat

For observations made between 1/19/2010 and 10/11/2017, a summary of the selected data set:

Observations = 256 ND/Trace = 36 Wells = 8 Minimum Value = 0.0001 Maximum Value = 0.012 Mean Value = 0.003149 Median Value = 0.00285 Standard Deviation = 0.002049

Coefficient of Variation = 0.6506

Skewness = 1.075

<u>vveii</u>	<u>#Ubs.</u>	ND/Trace	<u>iviin</u>	<u>max</u>	<u>iviean</u>	<u>Median</u>	Sta.Dev.	<u>CV</u>	<u>Skewness</u>
W-1-R	32	0	0.0012	0.0041	0.002846	0.003	0.0006239	0.2192	-0.4597
W-2-R	32	1	0.0014	0.005	0.002362	0.0022	0.0006885	0.2914	1.853
W-3-R	32	14	0.00015	0.005	0.0009678	0.001	0.0008447	0.8728	3.474
W-10	32	1	0.005	0.009	0.006891	0.0069	0.0009613	0.1395	0.2014
W-12	32	3	0.00098	0.0052	0.002601	0.00255	0.001061	0.4078	0.4151
W-14-R	32	1	0.0028	0.005633	0.004182	0.00415	0.0008148	0.1948	-0.1002
W-11 (bg)	32	15	0.0001	0.012	0.002335	0.001	0.00275	1.178	2.135
W-13 (bg)	32	1	0.0015	0.005	0.003009	0.0031	0.0006888	0.2289	0.3638

Constituent: Molybdenum Analysis Run 12/15/2017 10:24 AM

For observations made between 7/20/2010 and 10/11/2017, a summary of the selected data set:

Observations = 72 ND/Trace = 2 Wells = 8 Minimum Value = 0.00012 Maximum Value = 0.0059 Mean Value = 0.001137 Median Value = 0.00061 Standard Deviation = 0.001331 Coefficient of Variation = 1.171

Skewness	=	2	298

<u>Well</u>	<u>#Obs.</u>	ND/Trace	<u>Min</u>	<u>Max</u>	<u>Mean</u>	<u>Median</u>	Std.Dev.	<u>CV</u>	<u>Skewness</u>
W-1-R	9	0	0.00095	0.0031	0.001716	0.0015	0.000725	0.4226	0.6974
W-2-R	9	2	0.00012	0.0005	0.0002389	0.00019	0.0001518	0.6353	1.16
W-3-R	9	0	0.00054	0.0014	0.0007856	0.00069	0.0002775	0.3533	1.22
W-10	9	0	0.00046	0.00072	0.0005344	0.00052	0.00008819	0.165	1.253
W-12	9	0	0.0018	0.0059	0.004089	0.0042	0.001509	0.369	-0.2055
W-14-R	9	0	0.00048	0.00069	0.0005856	0.00061	0.00006425	0.1097	-0.1294
W-11 (bg)	9	0	0.00035	0.0011	0.0007289	0.00079	0.0002678	0.3674	-0.3153
W-13 (bg)	9	0	0.00036	0.00046	0.00042	0.00042	0.00003082	0.07339	-0.4347

Constituent: Nickel Analysis Run 12/15/2017 10:24 AM

North County Landfill Client: Aptim Data: Moss Sanitas-AllGWData-OutlierRemoval-12-15-17-flat

For observations made between 1/19/2010 and 10/11/2017, a summary of the selected data set:

Observations = 256 ND/Trace = 0 Wells = 8 Minimum Value = 0.0019 Maximum Value = 0.032 Mean Value = 0.009934 Median Value = 0.00745 Standard Deviation = 0.007162 Coefficient of Variation = 0.7209

Skewness	_ 1	١.	121	ı
okewness	-	١.	ıoı	ı

<u>Well</u>	#Obs.	ND/Trace	<u>Min</u>	<u>Max</u>	<u>Mean</u>	<u>Median</u>	Std.Dev.	<u>CV</u>	<u>Skewness</u>
W-1-R	32	0	0.012	0.031	0.02025	0.019	0.005594	0.2762	0.5325
W-2-R	32	0	0.0041	0.01	0.007166	0.0075	0.001284	0.1791	-0.3443
W-3-R	32	0	0.0055	0.013	0.007581	0.00715	0.00178	0.2347	1.164
W-10	32	0	0.0019	0.0045	0.002491	0.0024	0.0004768	0.1914	2.648
W-12	32	0	0.0059	0.024	0.01271	0.0115	0.00482	0.3793	0.6999
W-14-R	32	0	0.0045	0.0091	0.005588	0.0051	0.001159	0.2074	1.547
W-11 (bg)	32	0	0.003	0.0075	0.004194	0.00395	0.0009537	0.2274	1.588
W-13 (bg)	32	0	0.014	0.032	0.0195	0.018	0.004853	0.2489	1.35

Constituent: Vanadium Analysis Run 12/15/2017 10:24 AM

North County Landfill Client: Aptim Data: Moss Sanitas-AllGWData-OutlierRemoval-12-15-17-flat

For observations made between 1/19/2010 and 10/11/2017, a summary of the selected data set:

Observations = 252 ND/Trace = 35 Wells = 8 Minimum Value = 0.000195 Maximum Value = 0.015 Mean Value = 0.002686 Median Value = 0.0024 Standard Deviation = 0.00157 Coefficient of Variation = 0.5845

Skewness = 2.909

<u>Well</u>	<u>#Obs.</u>	ND/Trace	<u>Min</u>	<u>Max</u>	<u>Mean</u>	<u>Median</u>	Std.Dev.	<u>CV</u>	<u>Skewness</u>
W-1-R	31	7	0.00097	0.0075	0.002035	0.0016	0.001392	0.6842	2.823
W-2-R	31	5	0.00082	0.0075	0.002245	0.002	0.001252	0.5578	2.421
W-3-R	31	3	0.0011	0.0075	0.002897	0.0025	0.001257	0.4341	1.566
W-10	32	4	0.00078	0.0075	0.002475	0.0023	0.0012	0.4848	2.198
W-12	31	8	0.000195	0.0075	0.002262	0.0018	0.001449	0.6407	2.088
W-14-R	32	2	0.00098	0.0075	0.002756	0.0025	0.00124	0.4498	1.566
W-11 (bg)	32	4	0.0012	0.015	0.003244	0.0026	0.002578	0.7947	3.254
W-13 (bg)	32	2	0.0015	0.0075	0.003537	0.00345	0.001192	0.3371	0.8571

Constituent: Zinc Analysis Run 12/15/2017 10:24 AM

North County Landfill Client: Aptim Data: Moss Sanitas-AllGWData-OutlierRemoval-12-15-17-flat

For observations made between 1/19/2010 and 10/11/2017, a summary of the selected data set:

Observations = 252 ND/Trace = 170 Wells = 8 Minimum Value = 0.0011

Maximum Value = 0.0011 Maximum Value = 0.025 Mean Value = 0.003237

Median Value = 0.0025

Standard Deviation = 0.002432

Coefficient of Variation = 0.7515

Skewness = 5.064

<u>Well</u>	<u>#Obs.</u>	ND/Trace	<u>Min</u>	<u>Max</u>	<u>Mean</u>	<u>Median</u>	Std.Dev.	<u>CV</u>	<u>Skewness</u>
W-1-R	32	20	0.0011	0.0069	0.002769	0.0025	0.001127	0.4069	2.085
W-2-R	31	26	0.0011	0.0059	0.002645	0.0025	0.0009391	0.355	2.399
W-3-R	32	11	0.0011	0.0074	0.003262	0.00285	0.001332	0.4084	1.269
W-10	31	27	0.0011	0.016	0.002939	0.0025	0.002516	0.8563	4.709
W-12	32	27	0.0011	0.0097	0.002856	0.0025	0.00151	0.5286	3.095
W-14-R	31	27	0.0011	0.005	0.002445	0.0025	0.0006826	0.2791	1.118
W-11 (bg)	32	4	0.0011	0.025	0.006253	0.0047	0.004819	0.7707	2.485
W-13 (bg)	31	28	0.0011	0.0057	0.002652	0.0025	0.0008774	0.3309	1.964

APPENDIX B FIELD SAMPLING LOG

COMPLETED 10/16, 10/17/18 Paul Weinhardt



APTIM FIELD REQUEST

NEED 8-9 FILTERS!!

PROJECT NAME: DYNEGY Moss Landing Power Plant

DATE SCHEDULED: October 16, 17, 2018

SPECIAL INSTRUCTIONS / CONSIDERATIONS:

4th Quarter 2018 Ground Water Quality Monitoring

Check in with Ernie at the office.

Use the field log notebook at the site / Field Sheets provided by site.

Purge water disposed of to ground surface.

Include all analytes on the sample bottle label.

Measure water levels in all piezometers and monitoring wells..

Measure & record post purge water levels.

pH Calib: 4.0 exp 2/2020 / 7.0 exp 11/2019 / 10.0 exp 10/2019

EC Calib (1413): Exp 3/2019

Geology Mngr: JC Isham Cell: 925-457-1130 Project No: 631234956 Cost Code: 00131101 Field/Lab Coord: Sheila Richgels Aptim Cell: 916-616-3518 Sampler: Paul Weinhardt Cell: 530-391-4037 Erik Korsmo Reporting:

Cell:

Well Locks: Site Key: 3616

503-939-3688

Site Contact: Ernie Bloecher 831-633-6786

E-Mail Ernie w/reminder to have all paperwork and the site key at the Guard Shack.

Well ID.	Casing	Depth to	Depth to	
or Source	Diameter	Bottom	Water	ANALYSES REQUESTED
	(inches)	(feet)	(feet)	NEW 2017 PERMIT IMPLEMENTED
MCWI we	lls	1/10/17	7/17/2018	
Sample order	r (based on 201	7 NEW PER	AIT)	
Notebook #1	Wells:		k W	*Metals, Diss (Ba, Cr, Co, Cu, Mo, Ni, V, Zn) Field Filter
W-11 (#1)	4.0	35.70	25.94	*Chrom VI (218.6 method, 5-day Hold) Field Filter
(W-11 is back	ground well - a	lways sample	st!)	Ammonia - Nitrogen (350.3)
W-1-R (#1)	4.0	35.20	27.39	
W-12 (#1)	4.0	38.85	31.83	
				Field Measurements:
FB(#1)	(Field Blank-c	ollect at first w	ell sampled)	Pre-purge & post-purge DTW, pH, EC, Temp,
TB (#1)	(Trip Blank)			Turbidity
				The state of the s
Notebook #2	Wells:			=
		24.05	20.07	
W-13 (#2)	4.0	34.25	22.86	
W-13 (#2) W-2-R #2)	4.0 4.0	40.50	28.32	
W-13 (#2) W-2-R #2) W-3-R (#2)	4.0 4.0 4.0	40.50 65.90	28.32 25.54	
W-13 (#2) W-2-R #2)	4.0 4.0	40.50	28.32	
W-13 (#2) W-2-R #2) W-3-R (#2) W-10 (#2)	4.0 4.0 4.0	40.50 65.90 37.10	28.32 25.54 27.34	

(Dup needs to be at a different well each Qtr)

Laboratory Instructions:

BC Labs - Kerrie Vaughan

W-15 (#2) Duplicate (collect at W-14-R)

4100 Atlas Court

Bakersfield, Calif 93308

(661) 327-4911 Office

kerrie.vaughan@bclabs.com

Moss Landing Power Plant Quarterly Groundwater Sampling Field Notebook No. 1

(Date, Fourth Quarter 2018)

INDEX	
SECTION A	ANALYTICAL LAB & INSTRUMENT CALIBRATION DATA
SECTION B	POTENTIOMETRIC WATER LEVEL INFORMATION
SECTION C	MONITORING WELL PURGING AND SAMPLING
SECTION D	ADDITIONAL NOTES AND COMMENTS
current version of the Sa	mbers of the field sampling team certify that they have read and understand the mpling and Analysis Plan (SAP) for Moss Landing Power Plant. All field les were collected in accordance with the procedures described in the SAP except fo below.
352	
- 100 100 100 100 100 100 100 100 100 100 100 100 100 100 -	
The comment of the co	
PROPERTY OF SERVICE AND A SERVICE AND ASSESSMENT AND A SERVICE AND A SER	
555 - 83Y	*
Signatures of field team in the second secon	

Sampling Dates: ANALYTICAL LABORATORY INFORMATION: Name: Address: Phone: Contact: INSTRUMENT CALIBRATION INFORMATION: pH, conductivity, and turbidity meters wi calibrated prior to sampling the first well, and periodically during the day. Periodic calibrations will be performed and logged at least once (after the third well is sample more often if needed to correct perceived instrument drift. Initial calibration: Date/Time Model SN: Buffer Result Periodic calibrations: Date/Time Model SN: Buffer Result Buffer solution: Expiration Date: Lot No.: pH 4.00 pH 7.00 pH 7.00 pH 10.00	
ANALYTICAL LABORATORY INFORMATION: Name: Address: Phone: Contact: INSTRUMENT CALIBRATION INFORMATION: pH, conductivity, and turbidity meters wi calibrated prior to sampling the first well, and periodically during the day. Periodic calibrations will be performed and logged at least once (after the third well is sample more often if needed to correct perceived instrument drift. Initial calibration: Date/Time Model SN: Buffer Result Periodic calibrations: Date/Time Model SN: Buffer Result Buffer solution: Expiration Date: Lot No.: pH 4.00 pH 7.00	
Name: Address: Phone: Contact: INSTRUMENT CALIBRATION INFORMATION: pH, conductivity, and turbidity meters wi calibrated prior to sampling the first well, and periodically during the day. Periodic calibrations will be performed and logged at least once (after the third well is sample more often if needed to correct perceived instrument drift. Initial calibration: Date/Time Model SN: Buffer Result Periodic calibrations: Date/Time Model SN: Buffer Result Buffer Result CALIBRATION INFORMATION: pH, conductivity, and turbidity meters wi calibration will be periodic alibration will be periodic alibrations. Buffer Result Buffer Result Buffer Result Lot No.: pH 4.00 pH 7.00	
Address: Phone: Contact: INSTRUMENT CALIBRATION Information: pH, conductivity, and turbidity meters wi calibrated prior to sampling the first well, and periodically during the day. Periodic calibrations will be performed and logged at least once (after the third well is sample more often if needed to correct perceived instrument drift. Initial calibration: Date/Time Model SN: Buffer Result Periodic calibrations: Date/Time Model SN: Buffer Result Buffer Result Date/Time Model SN: Buffer Result Conductivity, and turbidity meters with calibration and the periodic calibration and the periodic calibration. Buffer solution: Expiration Date: Lot No.: pH 4.00 pH 7.00	
Instrument Calibration Information: pH, conductivity, and turbidity meters with calibrated prior to sampling the first well, and periodically during the day. Periodic calibrations will be performed and logged at least once (after the third well is sample more often if needed to correct perceived instrument drift. Initial calibration: Date/Time Model SN: Buffer Result Calibrations: Periodic calibrations: Date/Time Model SN: Buffer Result Buffer Result Periodic calibrations: Date/Time Model SN: Buffer Result Periodic calibrations: Date/Time Model SN: Buffer Result	
Instrument Calibration Information: pH, conductivity, and turbidity meters with calibrated prior to sampling the first well, and periodically during the day. Periodic calibrations will be performed and logged at least once (after the third well is sample more often if needed to correct perceived instrument drift. Initial calibration: Date/Time Model SN: Buffer Result Color Hand School 1005 Periodic calibrations: Date/Time Model SN: Buffer Result Buffer Result Periodic calibrations: Date/Time Model SN: Buffer Result Expiration Date: Lot No.: pH 4.00 pH 7.00	
INSTRUMENT CALIBRATION INFORMATION: pH, conductivity, and turbidity meters wi calibrated prior to sampling the first well, and periodically during the day. Periodic calibrations will be performed and logged at least once (after the third well is sample more often if needed to correct perceived instrument drift. Initial calibration: Date/Time	
calibrated prior to sampling the first well, and periodically during the day. Periodic calibrations will be performed and logged at least once (after the third well is sample more often if needed to correct perceived instrument drift. Initial calibration: Date/Time Model SN: Buffer Result	
Date/Time Model SN: Buffer Result Out of Transcription Color of C	
Periodic calibrations: Date/Time Model SN: Buffer Result Buffer solution: Expiration Date: Lot No.: pH 4.00 pH 7.00	
Periodic calibrations: Date/Time Model SN: Buffer Result Buffer solution: Expiration Date: Lot No.: pH 4.00 pH 7.00	£40, 1102m.
Periodic calibrations: Date/Time Model SN: Buffer Result Buffer solution: Expiration Date: Lot No.: pH 4.00 pH 7.00	(CC)
Periodic calibrations: Date/Time Model SN: Buffer Result Buffer solution: Expiration Date: Lot No.: pH 4.00 pH 7.00	000
Periodic calibrations: Date/Time Model SN: Buffer Result Buffer solution: Expiration Date: Lot No.: pH 4.00 pH 7.00	0. <u>00</u> 113
Periodic calibrations: Date/Time Model SN: Buffer Result Buffer solution: Expiration Date: Lot No.: pH 4.00 pH 7.00	18 1
Date/Time Model SN: Buffer Result SECTION DAY CAUSANION Buffer solution: Expiration Date: Lot No.: pH 4.00 pH 7.00	
Buffer solution: Expiration Date: Lot No.: pH 4.00 pH 7.00	
pH 4.00 pH 7.00 7.70 V-19	
pH 4.00 pH 7.00	
pH 4.00 pH 7.00	A75042 89704
pH 4.00 pH 7.00	4
pH 4.00 pH 7.00	7
pH 7.00	
27 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	
Conductivity 1,000 mhos Conductivity 10,000 mhos Conductivity 10,000 mhos	
Initial:	Qu

Potentiometric Water Level Information Moss Landing Power Plant FOURTH QUARTER 2018

Sampling	date:	10-16-	18)
Sampling	personnel:	PAUL	JEINHARDT

Well Identity	Top of casing elevation	Depth to Bottom 1/10/17	Time Measured	Depth to Water (MP)	Water Table elevation (2) - (5)
(1)	(2)	(3)	(4)	(5)	(6)
	H	ydraulically u	p-gradient we	lls	
W-11	30.85		721	25,98	
W-13	27.72		132	72.89	
W-1-R	32.74		735	77.101	
W-12	35.56		738	31.85	
MP-12	31.88		140	27.17	
	Hydraulically	down-gradie	nt wells for In	poundments	
W-2-R	33.01		743	28.35	
W-3-R	30.12		147	25.50	
W-10	31.96	23.100	750	27.37	
W-14-R	32.90		753	18.32	
Hye	draulically furt	her down-gra	dient wells fro	m Impoundme	ents
MP-13	29.61		758	25.03	
MP-14	29.16		Esp.	24.63	
MP-5	33.20		602	28 38	
Н	ydraulically fu	rther up-grad	ient wells fron	n Impoundmer	nts
MP-3	28.44		810	23.98	
W-8-R	24.54		613	20,08	
MP-10-R	24.47		00	19.92	
MP-2-R	23.88	7 - 101 - 201 - 200	620	20:40	

Well water levels will be measured in the order of the above table from top to bottom. Due to the proximity of the site to the ocean, all wells will be measured within the shortest practical time interval to reduce influences from tidal effects.

200	2				
× A	Aeasured	000			
. 17	reasured	()!!			

Well No: W-11
Sampling date: Sampling time: to 930 Sampling personnel: Sampling personnel: Sampling personnel: Sampling personnel: Sampling personnel: Sampling personnel: Sampling time:
Well size: Well elevation: Well depth (a): Static water level (b): 4 inch feet (MLLW) feet (top of cap, survey mark) Date: 1 Static water level (b): 4 inch feet (MLLW) feet (top of cap, survey mark)
Well Purging Data Purge volume, v gallons = (a-b) x 0.65 = $\frac{3 \times v}{1314}$ Three volumes = $3 \times v$ = $\frac{3 \times v}{1314}$
Well Post Purge Data Depth to Water level feet (top of cap, survey mark)
Sampling Parameter Checklist
Ammonia. Metals - filtered 0.45 micron. Ba, Co, Cu, Cr, Mo, Ni, Va, Zn, and Cr ⁶⁺
Comments

Copy well depth and date measured from Section B, Page 1, Column 3.
If field parameters have stabilized prior to 5 volumes, enter "NA".

Well Purging Water Quality

Time	Total gallons	pH (units)	Temp. (deg. C)	Conductivity (umhos/cm)	Turbidity (NTU)	Comments
day	6.5	6.84	1739	1644	5.15	
dio	13.0	6.67	17.60	1584	2.44	
916	19.5	6.68	17.70	1568	1.40	

Purge pump flow rate: \ \ \ \ gpm.

Time	No. of cycles	pH (units)	Temp. (deg. C)	Conductivity (umhos/cm)	Turbidity (NTU)	Comments
926	The same of the sa	661	17.80	1569	1.41	
				1.00 p. 1.00 p		
	A					

Sample time: 45 Field Blank sample collected?:45	Sample name:	FIELD	Bient
Field Blank Sample conceted:	rield Blank Sample name		Div
Comments:		initial:	ru
Comments.			
de .			
		V	

Well No: W-1-R
Sampling date: 10-16-18 Sampling time: 935 to 1620 Sampling personnel: Weather condition: Suggestion
Well Data Well size: Well elevation: Well depth (a): Static water level (b): 4 inch 32.77 feet (MLLW) feet (top of cap, survey mark) Date: feet (top of cap, survey mark)
Well Purging Data Purge volume, v gallons = $(a-b) \times 0.65 = \frac{4.99}{14.98}$ Three volumes = $3 \times v = \frac{4.99}{14.98}$ Five volumes = $5 \times v = \frac{4.99}{14.98}$
Well Post Purge Data Depth to Water level feet (top of cap, survey mark)
Sampling Parameter Checklist
Ammonia. Metals - filtered 0.45 micron. Ba, Co, Cu, Cr, Mo, Ni, Va, Zn, and Cr ⁶⁺
Comments
¹ Copy well depth and date measured from Section B, Page 1, Column 3.
² If field parameters have stabilized prior to 5 volumes, enter "NA".

Well Purging Water Quality

Time	Total gallons	pH (units)	Temp. (deg. C)	Conductivity (umhos/cm)	Turbidity (NTU)	Comments
945	5.0	6.44	175°	3910	2.67	
955	DO	6.52	17.30	4058	2.62	
100	15.0	6.51	17.5°	4070	1.98	

Purge pump flow rate: • 5 gpm.

Time	No. of cycles	pH (units)	Temp. (deg. C)	Conductivity (umhos/cm)	Turbidity (NTU)	Comments
1016	4	6.50	17.40	4073	1.91	
				Y		move with the second
				2400		

Sample time:	Sample name:	N/A Initial: Pw
Comments:		
Many and the second sec		

Well No: W-12
Sampling date: 10 10 18 Sampling time: 1025 to 110 Sampling personnel: Weather condition:
Well Data Well size: Well elevation: Well depth (a): Static water level (b): 4 inch feet (MLLW) feet (top of cap, survey mark) Date: 1 Static water level (b): 4 inch feet (MLLW)
Well Purging Data Purge volume, v gallons = $(a-b) \times 0.65 = \frac{4.58}{13.14}$ Three volumes = $3 \times v = \frac{13.14}{14.14}$ Five volumes = $5 \times v = \frac{13.14}{14.14}$
Well Post Purge Data Depth to Water level 32.64 feet (top of cap, survey mark)
Sampling Parameter Checklist
Ammonia. Metals - filtered 0.45 micron. Ba, Co, Cu, Cr, Mo, Ni, Va, Zn, and Cr ⁶⁺
Comments

Copy well depth and date measured from Section B, Page 1, Column 3.
If field parameters have stabilized prior to 5 volumes, enter "NA".

Well Purging Water Quality

Time	Total gallons	pH (units)	Temp. (deg. C)	Conductivity (umhos/cm)	Turbidity (NTU)	Comments
1035	4.75	691	17.40	1756	3.05	
1005	9,50	6.89	17.60	1700	1.44	
1032	14.25	1.8.0	17.5°	1698	2.14	

Purge pump flow rate: 5 gpm.

Time	No. of cycles	pH (units)	Temp. (deg. C)	Conductivity (umhos/cm)	Turbidity (NTU)	Comments
1/07	5	683	17.40	1694	1.97	
			ý.			

Sample time:	Sample name: Duplicate sample name:	MA initial:	fω
Comments:			

Moss Landing Power Plant Quarterly Groundwater Sampling

FIELD NOTEBOOK No. 2

(Date, Fourth Quarter 2018)

INDEX	
SECTION A	ANALYTICAL LAB & INSTRUMENT CALIBRATION DATA
SECTION B	POTENTIOMETRIC WATER LEVEL INFORMATION
SECTION C	MONITORING WELL PURGING AND SAMPLING
SECTION D	Additional Notes and Comments
current version of the San	
16.	
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#	
······································	
Signatures of field team r	ı

	Sampling Event: Quarterly Sampling (circle one) Verification Sampling						
Sampling	Dates:	10-16	to _10.17				
ANALYTI	CAL LAB	ORATORY INFOR	MATION:				
	Na	me: 2	C Annupu	A-C			
	Ad	dress:	100 ATLAS'C	e .			
		one:	BANGES FIGUR				
	Co	mace:		The same of the sa	1100 - 11		
calibrated	prior to ns will b n if need	sampling the fir e performed and led to correct per	st well, and periodic	cally during to e (after the th	arbidity meters will be he day. Periodic ird well is sampled) and		
Date/Time		Model	SN:	Buffer	Result		
10.16	1125	ULTRAMERIA	6216257	7.0	7.03-7.00		
	1126			4.0	3.94-4.00		
	1127		00-107000-141-	10.0	10,05-10-00		
and the state of t	1128	4		1413	1416-1413		
The state of the s	1130	Hanna	SNEXTHER	0	0		
*	1131	l V	ÿ	15	1 Tomos		
Periodic c							
Date/Time	011	Model	SN:	Buffer	Result		
10-17	720	ULTRAMERIZ	6216257	" C	7.05 - 7.00		
	74			4.0	3,97-4,00		
	722		8	100	1616 1000		
	723	1		1413	1419-1413		
	74	Hanna	SMEONTHESE	0	0		
V	74	J. J	J.	15	Auditoria		
Buffer sol	ution:	Expi	ration Date: Lo	ot No.:			

Initial:

Conductivity 1,000 mhos Conductivity 10,000 mhos

pH 4.00 pH 7.00 pH 10.00

Potentiometric Water Level Information Moss Landing Power Plant FOURTH QUARTER 2018

Sampling	date:	
Sampling	personnel:	

Well Identity	Top of casing elevation	Depth to Bottom 1/10/17	Time Measured	Depth to Water (MP)	Water Table elevation (2) - (5)
(1)	(2)	(3)	(4)	(5)	(6)
The second secon	H	ydraulically u	p-gradient/we	lls	
W-11	30.85		. /		
W-13	27.72		aV/		
W-1-R	32.74		(D) \		
W-12	35.56	1	W W		
MP-12	31.88	,	Y		
	Hydraulically	down-gradie	nt wells for In	npoundments	
W-2-R	33.01				
W-3-R	30.12	V			
W-10	31.96	V			
W-14-R	32.90	1			
Нус	draulically furt	her down-gra	dient wells fro	m Impoundm	ents
MP-13	29.61				2
MP-14	29.16				
MP-5	33.20				
H	ydraulically fu	rther up-grad	ient wells fron	n Impoundmei	nts
MP-3	28.44				
W-8-R	24.54				
MP-10-R	24.47 /				
MP-2-R	23.88/				

Well water levels will be measured in the order of the above table from top to bottom. Due to the proximity of the site to the ocean, all wells will be measured within the shortest practical time interval to reduce influences from tidal effects.

*1/		
*Measured on		

Copy well depth and date measured from Section B, Page 1, Column 3.

If field parameters have stabilized prior to 5 volumes, enter "NA".

Well Purging Water Quality

Time	Total gallons	pH (units)	Temp. (deg. C)	Conductivity (umhos/cm)	Turbidity (NTU)	Comments
1148	7.5	6.76	18.10	1529	1.25	
1156	15.0	6.70	17.80	1240	.69	
1204	22.5	6.67	18.00	1240	1.22	

Purge pump flow rate: 1.0 gpm.

Time	No. of cycles	pH (units)	Temp. (deg. C)	Conductivity (umhos/cm)	Turbidity (NTU)	Comments
124	4	6.68	17.90	1221	1.08	
	and the second s					en e
<u> </u>						

Sample time: 12 ¹⁰ Duplicate sample collected?: NO	Sample name: Duplicate sample name initial:
Comments:	

Well No: W-2-R
Sampling date: 10-16-18 Sampling time: 12-5 to 13-6 Sampling personnel: Weather condition:
Well Data Well size: Well elevation: Well depth (a): Static water level (b): 4 inch 33.05 feet (MLLW) Feet (top of cap, survey mark) Date: 1 1 1 1 1 1 1 1 1 1 1 1 1
Well Purging Data Purge volume, v gallons = (a-b) x 0.66 = 789 Three volumes = 3 x v = 73 44 Five volumes = 5 x v = 144
Well Post Purge Data Depth to Water level feet (top of cap, survey mark)
Sampling Parameter Checklist
Ammonia. Metals - filtered 0.45 micron. Ba, Co, Cu, Cr, Mo, Ni, Va, Zn, and Cr ⁶⁺
Comments

Copy well depth and date measured from Section B, Page 1, Column 3.

If field parameters have stabilized prior to 5 volumes, enter "NA".

Well Purging Water Quality

Total gallons	pH (units)	Temp. (deg. C)	Conductivity (umhos/cm)	Turbidity (NTU)	Comments
8.0	6.69	18.5°	992.4	1.52	
160	lato	19.00	956.5	2.49	
24.0	6.63	1.01	961.4	1.23	
					a
	gallons 8.0	gallons (units) 8.0 6.69 160 6.60	gallons (units) (deg. C) 8.0 6.69 18.5° 160 6.60 19.0°	gallons (units) (deg. C) (umhos/cm) 8.0 6.69 18.5° 992.4 160 6.60 19.0° 956.5	gallons (units) (deg. C) (umhos/cm) (NTU) 8.0 6.69 18.5° 992.4 1.52 160 6.60 19.0° 956.5 2.49

Purge pump flow rate: 100 gpm.

Time	No. of cycles	pH (units)	Temp. (deg. C)	Conductivity (umhos/cm)	Turbidity (NTU)	Comments
1258	5	660	19,0	959.2	1.21	
	week and the second					
	The state of the s					

Sample time:Duplicate sample collected?: NO	Sample name:	MIA initial:_	fω
Comments:			
			N

Well No: W-3-R
Sampling date: 10-16-18 Sampling time: 13-53 Sampling personnel: Part Venture Weather condition:
Well Data Well size: Well elevation: Well depth (a): Static water level (b): 4 inch 32.00 feet (MLLW) feet (top of cap, survey mark) Date: 1 25.50 feet (top of cap, survey mark)
Well Purging Data Purge volume, v gallons = (a-b) x 0.65 = 20.61 Three volumes = 3 x v = 6.74 Five volumes = 5 x v = 41.62
Well Post Purge Data Depth to Water level feet (top of cap, survey mark)
Sampling Parameter Checklist
Ammonia. Metals - filtered 0.45 micron. Ba, Co, Cu, Cr, Mo, Ni, Va, Zn, and Cr ⁶⁺
Comments
F

Copy well depth and date measured from Section B, Page 1, Column 3.

If field parameters have stabilized prior to 5 volumes, enter "NA".

Well Purging Water Quality

Time	Total gallons	pH (units)	Temp. (deg. C)	Conductivity (umhos/cm)	Turbidity (NTU)	Comments
1316	23,0	6.48	10'00	1765	1.13	
1377	460	665	19,40	1841	4,04	
1339	100	662	19.70	1838	2.54	3.
	The state of the s			6		

Purge pump flow rate: 20 gpm.

Time	No. of cycles	pH (units)	Temp. (deg. C)	Conductivity (umhos/cm)	Turbidity (NTU)	Comments
Bun	5	10.61	19.70	1835	2.42	
				X		and the second second second second
saneth cartos de Administra	en - a anna de ante a como de ante a					
Value and Control of C						- Market Hill Control of the Control
A. Community of the Com						
amato Activa Andrea						

Sample time: 1345 Duplicate sample collected?: NO	Sample numbers: Duplicate sample name:_	MJA initial:_	ρω
Comments:			
24 (190-24 - 190 - 190 - 190 - 190 - 190 - 190 - 190 - 190 - 190 - 190 - 190 - 190 - 190 - 190 - 190 - 190 - 1			
Section 12		A 17 17 17 17 A 17 A 17 A 17 A 17 A 17	0.01

Well No: W-10						
Sampling date:						
Well Data Well size: Well elevation: Well depth (a): Static water level (b): 4 inch 32.00 feet (MLLW) Feet (top of cap, survey mark) Date: 1 21.31 feet (top of cap, survey mark)						
Well Purging Data Purge volume, v gallons = (a-b) x 0.65 = L.32 Three volumes = 3 x v = IB.77 Five volumes = 5 x v = MIA						
Well Post Purge Data Depth to Water level feet (top of cap, survey mark)						
Sampling Parameter Checklist						
Ammonia. Metals - filtered 0.45 micron. Ba, Co, Cu, Cr, Mo, Ni, Va, Zn, and Cr ⁶⁺						
Comments						

Copy well depth and date measured from Section B, Page 1, Column 3.

If field parameters have stabilized prior to 5 volumes, enter "NA".

Well Purging Water Ouality

Time	Total gallons	pH (units)	Temp. (deg. C)	Conductivity (umhos/cm)	Turbidity (NTU)	Comments
730	6.5	10.59	16.00	730,9	1.72	
743	13.0	6.57	16.30	710.2	1.61	P1000000 - 10000000000000000000000000000
749	19.5	669	16.40	701.8	1.53	
			10000000			100 K

Purge pump flow rate: gpm.

Time	No. of cycles	pH (units)	Temp. (deg. C)	Conductivity (umhos/cm)	Turbidity (NTU)	Comments
759	4	6.67	16.30	7061	1.43	
				and the second s		WWW. COMMISSION OF THE PARTY OF
						The state of the s
			7			

Sample time:	Sample numbers: Duplicate sample name:_	MS/M initial:	SD PW
Comments:			
			
		5 ·	

Monitoring Well Sampling

Well No: W-14-R
Sampling date: 10-17-18 Sampling time: 65 to 920 Sampling personnel: Pau Weinbergt Weather condition: Foggy
Well Data Well size: Well elevation: Well depth (a): Static water level (b): 4 inch feet (MLLW) feet (top of cap, survey mark) Date: 1 Static water level (b): 4 inch feet (MLLW)
Well Purging Data=(a-b) x 0.65= 9.00 Purge volume, v gallons=(a-b) x 0.65= 9.00 Three volumes=3 x v= 9.00 Five volumes=5 x v= 9.00
Well Post Purge Data Depth to Water level 28-3 feet (top of cap, survey mark)
Sampling Parameter Checklist
Ammonia. Metals - filtered 0.45 micron. Ba, Co, Cu, Cr, Mo, Ni, Va, Zn, and Cr ⁶⁺
Comments

Copy well depth and date measured from Section B, Page 1, Column 3.

If field parameters have stabilized prior to 5 volumes, enter "NA".

Well Purging Water Quality

Time	Total gallons	pH (units)	Temp. (deg. C)	Conductivity (umhos/cm)	Turbidity (NTU)	Comments
80	10.0	100	13.7	150.2	1.91	
635	20.0	6.52	11,90	7566	85	
ÇÇÇ	30.0	656	12.10	729.4	. 19	
		The second secon				

Purge pump flow rate: 35 gpm.

Sample Pump Evacuation and Sample Water Quality

Time	No. of cycles	pH (units)	Temp. (deg. C)	Conductivity (umhos/cm)	Turbidity (NTU)	Comments
916	12	6.51	12.3°	725-8	177	To produce to the second
	200			H		
			100 to 00 100 100 100 100 100 100 100 100 100			The state of the s

Sample name: Duplicate sample name:	W:15	
	ınıtıal:	f line
		11.0



Field Services Project No- Moss Landing PP 631234956.00039318



Pre-Job Preparation 1. Get Permit for Job		Safety Access / Location		Employee Authorizati	on to STOP Work
2. Fill out JSA	Eye Wash / Sa	fety Shower: First Aid Kits are located in Truck	I have been given authorization, without fear of reprimand or retaliation, to immediate STOP any work activity that presents a danger to me, my co-worker or the public; get involved, question and rectify any situation that is identified as not being in compliance.		
 Review JSA (EVERYONE) Sign JSA (EVERYONE) 	Wind Direction				
Evacuation F		ute:	and question any ac	ealth policies; to report any tivity that involves violation o	unsafe conditions or acts to supervision of established Safety and Health policies.
Moss Landing PP	Assembly Poin	t:			
Job Tasks: (What are you doing?)	Potential Hazards:		Recommended Active eliminate / mitigate l	
	77		100		
Ground Water Sampling.		Slips, trips, falls, machinery hazards,	insect and/or		
Vehicle Use		Animal bites.			and the same of th
		Contact dermatitis		Keep Guards in Place, Isolation Electrical to Work	
				Equipment	
		Changing weather conditions		Wear proper PPE fo	r task
	**************************************	Muddy conditions at the landfill		Keen Guards in Plac	ce, Isolation Electrical to Work on
				Equipment	se, reciation Electrical to TVOIR on
		Uneven Terrain, Be aware of other op	perating equipment		ng, use ATV safety flag for ID
		Other Vehicles Around, Be aware of B	Backing Up	Check surroundings	, defensive drivina
	7				ATTEMPT ATTEMPT OF THE PROPERTY OF THE PROPERT
	1 ~ /			Refer to Health and	Safety Manual/Binder
Crew Name Signatures	11)/				
			PM:	JC Isham	925-457-1130
	1////	Much. N			
The state of Fall	W M	MAN TO THE CONTRACT OF THE PARTY OF THE PART			
Job Close Out	/OTOD	(10			
Any incidents / Injuries / Near miss List:	S / STOP work rep	oorted? Job Audited Time: Supervisor / Auditor Signatur	·a:	Recommendat	tions:
		Supervisor / Additor Signatur	G.		
		Before starting work: Is this the SAFES	ET way to do this 10)P2	

"I will not put myself or let my co-workers perform any task that I would not allow my son or daughter in, on or around."

Consider the following and check the items which apply to the job, then review with the work crew.

Form Number:

CMS-710-05-FM-01708

Issued for Use:

22 January 2015

Page 1 of 2



Field Services Project No- Moss Landing PP 631234956.00039318



PERMITS	WELDING	HAZARDS (ENVIRONMENTAL)	ELECTRICAL	HAZARDS / BODY	EMERGENCY EQUIPMENT	PERSONAL PROTECTIVE EQUIP. (PPE)
Excavation / Trench	☐ Flash burns	☐ Electrical Shock	Locked & Tagged out	☐ Fall Potential		☐ Rubber Gloves
Cold Work	☐ Combustibles	☐ Heat Stress	☐ Try Start / Stop Switch	☐ Pinch Points	☐ Safety Shower	□ Leather Gloves
☐ Hot Work	Spark Containment	☐ Heavy Objects	GFCI Test	☐ Slip-Trip Potential	☐ Evacuation Route	☐ Special Purpose Gloves
Entry Permit / Confined Space	Shields	☐ Hot / Cold Surf. or Mat.	☐ Assured Grounding	☐ Other	Lifts / Rigging	☐ Slicker Suit
☐ Line Breaking	Grounding	☐ Inadequate Lighting	Extension Cord	HAZARDS / CHEMICALS	☐ Critical Lift	☐ Acid Suit
☐ Signed Off When	☐ Fire	☐ Line Breaking –		☐ Chemical Burn Skin	☐ Manual Lifting	☐ Rubber Boots
Complete LO/TO	Extinguisher Water Hose	☐ Check List attached	OTHER WORK IN AREA	☐ Chemical Burn Eyes	☐ Softeners	☐ Metatarsals
Other	Fire Blanket	Noise Noise	Others Working Overhead	☐ Flammable	Proper Rigging Practices	Respirator
400500	Fire Watch Leads routed	☐ Sharp Objects	☐ Type Work Others Doing:	☐ Ingestion	Chain fall, Come a long	☐ ½ face
ACCESS	overhead 7' /	☐ Other		☐ Other	Inspected - in good condition	☐ Full Face
Scaffold (properly inspected)	☐ Sewer Covers	☐ Poor Access / Egress	PPE Due to Other Work	☐ Inhalation	☐ Crane	☐ PAPR
Ladder (Tied off)	OVERHEAD WORK	TOOLS	☐ Other	☐ Skin Contamination	Forklift	☐ Fresh Air
☐ Man lift (inspected)	Barricades	Proper Tools for the Job	Confined Space F	Know the Following:	☐ Operator Certificate	
☐ Personnel Basket	☐ Hole Cover	⊠ Good Tool Condition	Possible hazards within		☐ Condition of	☐ Safety Harness
(inspected & approved	Signs		First signs of exposure How to summons help		Equipment – Inspection Checklist	☐ Approved Anchor Points
Operator Training	Handrail	☐ Qualifications	How to strinions help How to track personnel Entering and exiting the		Rigging and Lifting JSP - Required	Mono Goggles (vented / non- vented)
Worksite Stretches: Before shift / Pre-task / End	of shift	☐ Current Inspection	Maintain contact with a visual		Barricades	☐ Face Shield
Stretch to a point where you	feel a mild tension	☐ Tool Tethers	Do not attempt to rescue ur	nless you are a part of a	☐ Tags on all sides	☐ Kevlar Gloves
 and relax as you hold the str Stretches should be held f 		☐ Tool Lanyards	Trained in confined space re Remain at entry point; assu		☐ Stands Used	☐ Kevlar Sleeves
Always stretch within your country the point of pain.			you from there. Signs posted to identify con		☐ 42" high	☐ Fire Retardant Clothing
the point of pain.			L	A STATE OF THE STA	☐ Caution / Yellow	Safety glasses with ANSI app. Side Shields
					☐ Danger / Red	☐ Welding hood
					Taken down at the end of shift	☐ Burning Goggles ☐ Other

Form Number:

CMS-710-05-FM-01708

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COMPLETED 11/19/18 Paul Weinhardt



APTIM FIELD REQUEST

NEW 2017 PERMIT IMPLEMENTED

4th Quarter 2018 Ground Water VERIFICATION SAMPLING

PROJECT NAME: DYNEGY Moss Landing Power Plant

DATE SCHEDULED: November 19, 2018

SPECIAL INSTRUCTIONS / CONSIDERATIONS :

4th Quarter 2018 Ground Water VERIFICATION SAMPLING

Check in with Ernie at the office.

Use the field log notebook at the site / Field Sheets provided by site.

Purge water disposed of to ground surface.

Include all analytes on the sample bottle label.

Samples to be collected ~3 min apart.

pH Calib: 4.0 exp 7/2019 / 7.0 exp 6/2019 / 10.0 exp 6/2019

EC Calib (1413): Exp 5/2019

Site Contact: Ernie Bloecher 831-633-6786

Casing

Diameter

(inches)

E-Mail Ernie w/reminder to have all paperwork and the site key at the Guard Shack. Depth to

Bottom

(feet)

Geology Mngr: JC Isham 925-457-1130 Cell: Project No: 631234956 Cost Code: 00331101 Field/Lab Coord: Sheila Richgels Aptim Cell: 916-616-3518 Sampler: Paul Weinhardt Cell: 530-391-4037

ANALYSES REQUESTED

Erik Korsmo Reporting: 503-939-3688 Cell:

> Well Locks: Site Key: 3616

VERIFICATION samples based on 4th Qtr 2018 Lab Results.

W-13 Verif A & B

Well ID

or Source

4.0

34.25

22.69

Depth to

Water

(feet)

Mo - field filtered.

FB (Field Blank) TB (Trip Blank)

Field Measurements:

Pre-purge & post-purge DTW, pH, EC, Temp,

Turbidity

Laboratory Instructions:

BC Labs - Kerrie Vaughan

4100 Atlas Court

Bakersfield, Calif 93308

(661) 327-4911 Office

kerrie.vaughan@bclabs.com

CHAIN OF CUSTODY / LABORATORY ANALYSIS REQUEST FORM

APTIM Environmental & Infrastructure Purchase Order: Direct Bill to Dynegy 180 Promenade Circle, Suite 320, Sacramento, Ca 95834 Lab: BC Laboratory, Bakersfield Project Name: Dynegy / Moss Landing Power Plant Analysis Requested Project Number: 631234956 / 4th Quarter 2018 VERIFICATION Samples Notebook #2 Report to Site Manager: Ernie Bloecher /831-633-6786 Containers Company: Dynegy / Moss Landing Power Plant Address: Highway 1 and Dolan Road, Moss Landing, Ca CC Report: sheila.richgels@aptim.com (field filtered) Molybdenum cassandra.tremblay@aptim.com/ of erik.korsmo@aptim.com Vumber Sampler's Signature: REMARKS Sample 2018 LAB Sample 250ml Plst Container Types I.D. Date Time I.D. Matrix HNO3 Preservations W-13 Ver A 1725 Water 1 1 1728 W-13 Ver B 2 Water 1 1 11-19 MIA TB Water 1 11-19 FB Water 1 DISTRIBUTION HK BY RELINQUISHED BY RECEIVED BY RELINQUISHED BY RECEIVED BY TURNAROUND REPORT REQUIREMENTS REQUIREMENTS I. Routine Report Signature Signature Benson Signature A X II. Report (includes DUP, MS 24 hr 48 hr 5 day X Standard (~10-15 working days) MSD, as required, may be Printed Name
BENSON Printed Name Printed Name Printed Name Provide Verbal Preliminary Results charged as samples) Paul Weinhardt Provide FAX Preliminary Results III. Data Validation Report Firm Firm (includes All Raw Data) DC LABS Requested Report Date: BC LABS APTIM **RWQCB** Date/Time 4)-70 10 Date/Time 4/20/18 1105 Date/Time 4/20/18 1115 Date/Time (MDLs/PQLs/TRACE#) RELINQUISHED BY RECEIVED BY Special Instructions/Comments: BC Labs PM Kerri Vaughan Signature Signature 4100 Atlas Court Bakersfield, Calif 93308 Printed Name Printed Name (661) 852-4200 Office kerrie.vaughan@bclabs.com Firm Firm Date/Time Date/Time

Moss Landing Power Plant Quarterly Groundwater Sampling Field Notebook - Verification Sampling _________(Date, Fourth Quarter 2018)

INDEX	
SECTION A	ANALYTICAL LAB & INSTRUMENT CALIBRATION DATA
SECTION B	POTENTIOMETRIC WATER LEVEL INFORMATION
SECTION C	MONITORING WELL PURGING AND SAMPLING
SECTION D	ADDITIONAL NOTES AND COMMENTS
current version of the	, members of the field sampling team certify that they have read and understand the e Sampling and Analysis Plan (SAP) for Moss Landing Power Plant. All field amples were collected in accordance with the procedures described in the SAP except for bed below.
	9 ×
2.	
4	
ignatures of field te	am members:

Sampling Event: Verification Sampling 11-19-18 to 11-19-18 Sampling Dates: ANALYTICAL LABORATORY INFORMATION: Name: Address: BAKERSFIED CA Phone: Contact: INSTRUMENT CALIBRATION INFORMATION: pH, conductivity, and turbidity meters will be calibrated prior to sampling the first well, and periodically during the day. Periodic calibrations will be performed and logged at least once (after the third well is sampled) and more often if needed to correct perceived instrument drift. Initial calibration: SN: Date/Time Model Buffer Result 6216257 11-19-10 1131 7.0 7-12 7.00 ULTRAMERE 3,89 4.00 4.0 10.28 10,00 10.0 1393 -1413 1413 HAMMA BN-E0074656 0 0 15.0 Periodic calibrations: Date/Time Buffer Model SN: Result

Expiration Date:

2-20

10-19

3-19

11-19

Lot No .:

UPIA

VQI

W172

CC16986

Initial:

Buffer solution:

Conductivity 1,000 mhos
Conductivity 10,000 mhos

pH 4.00

pH 7.00

pH 10.00

Monitoring Well Verification Sampling

Well No: W-13				
Sampling date: 11-19	1-18	Samr	oling tin	ne: 1150 to 1240
Sampling personnel:	PAVL	da eist	APOT	10 12
Weather condition:	11100	(LOUPL	
Wedner condition.			Lope	
Well Data				
Well size:	4 inch			
Well elevation:		t (MLLW)	
				rk) Date: \-\6-18 1
Static water level (b):				vey mark)
Well Purging Data				
Well Purging Data Purge volume, v gallons Three volumes	= (a-1	b) x 0.65	=	7.51
Three volumes	= 3 x	V	=	22.53
Five volumes	= 5 x	V	=	MIA 2
Well Post Purge Data				
Depth to Water level 22	96 fee	et (top of o	cap, sur	vey mark)
Ammonia. Metals - filtered 0.45 micron.				
Comments				
				1.
	1			

Copy well depth and date measured from Section B, Page 1, Column 3.
If field parameters have stabilized prior to 5 volumes, enter "NA".

Well Purging Water Quality

Time	Total gallons	pH (units)	Temp. (deg. C)	Conductivity (umhos/cm)	Turbidity (NTU)	Comments
1203	75	6.38	17.60	1201	2.73	
1210	15.0	6,52	17.70	1193	2.69	
12"	22,50	6.43	17,70	1181	2.61	
-		*				

Purge pump flow rate: 10 gpm.

Sample Pump Evacuation and Sample Water Quality

No. of cycles	pH (units)	Temp. (deg. C)	Conductivity (umhos/cm)	Turbidity (NTU)	Comments
4	6.42	17.70	BTII	2.56	
					4-1
		cycles (units)	cycles (units) (deg. C)	cycles (units) (deg. C) (umhos/cm)	cycles (units) (deg. C) (umhos/cm) (NTU)

Sample time: 1212 Duplicate sample collected?: NO	Sample name:	Fred Brank Aw
Comments:		



Field Services Project No- Moss Landing PP 631234956.00039318

Pre-Job Preparation	Saf	ety Access / Location	E	Employee Authorization to STOP Work		
Get Permit for Job Fill out JSA	Eye Wash / Safety S	Eye Wash / Safety Shower: First Aid Kits are located in Truck Wind Direction:		I have been given authorization, without fear of reprimand or retaliation, to immediately		
Review JSA (EVERYONE) Sign JSA (EVERYONE)	Wind Direction:				ger to me, my co-worker or the public; get hat is identified as not being in compliance	
4. Olgiroon (2121112112)	Evacuation Route:			any unsafe conditions or acts to supervision		
			and question any act	ivity that involves violat	ion of established Safety and Health policies.	
Moss Landing PP	Assembly Point:			1		
Job Tasks: (What are you doing?)		Potential Hazards:		Recommended / eliminate / mitiga	Action or Procedure to ate Hazards	
Ground Water Sampling.		Slips, trips, falls, machinery hazards	s, insect and/or			
Vehicle Use		Animal bites.		Keep Guards in Place, Isolation Electrical to Work of		
		ontact dermattis		Equipment	race, isolation Electrical to Work of	
	0	Changing weather conditions		Wear proper PP	E for task	
	N	Muddy conditions at the landfill		Keep Guards in Place, Isolation Electrical to Work		
		Uneven Terrain, Be aware of other operating equipment		Equipment Take your time driving, use ATV safety flag for ID		
	L					
	C	Other Vehicles Around, Be aware o	f Backing Up	Check surroundi	ngs, defensive driving	
				Refer to Health a	and Safety Manual/Binder	
Crew Name Signatures	1					
Anth.	Che /		PM:	JC Isham	925-457-1130	
Job Close Out	anny \					
Any incidents / Injuries / Near mis	s / STOP work reporte	d? Job Audited		Recomme	ndations:	
List:	or or or work reporte	Time: Supervisor / Auditor Signal	ure:	Kedomine	idations.	

Before starting work: Is this the SAFEST way to do this JOB?
"I will not put myself or let my co-workers perform any task that I would not allow my son or daughter in, on or around."

Consider the following and check the items which apply to the job, then review with the work crew.

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Field Services Project No- Moss Landing PP 631234956.00039318

PERMITS	WELDING	HAZARDS (ENVIRONMENTAL)	ELECTRICAL	HAZARDS / BODY	EMERGENCY EQUIPMENT	PERSONAL PROTECTIVE EQUIP. (PPE)
☐ Excavation / Trench	☐ Flash burns	☐ Electrical Shock	☐ Locked & Tagged out	☐ Fall Potential		☐ Rubber Gloves
("One Call" made) Cold Work	Combustibles	☐ Heat Stress	☐ Try Start / Stop Switch	☐ Pinch Points	☐ Safety Shower	☐ Leather Gloves
☐ Hot Work	☐ Spark Containment	☐ Heavy Objects	☐ GFCI Test	Slip-Trip Potential	☐ Evacuation Route	☐ Special Purpose Gloves
☐ Entry Permit / Confined	Shields	Hot / Cold Surf. or Mat.	☐ Assured Grounding	☐ Other	Lifts / Rigging	☐ Slicker Suit
Space Line Breaking	Grounding	☐ Inadequate Lighting	Extension Cord	HAZARDS / CHEMICALS	☐ Critical Lift	☐ Acid Suit
Signed Off When	Fire	☐ Line Breaking —		☐ Chemical Burn Skin	☐ Manual Lifting	☐ Rubber Boots
Complete	Extinguisher Water Hose	☐ Check List attached	OTHER WORK IN AREA	☐ Chemical Burn Eyes	Softeners	☐ Metatarsals
□ LO/TO □ Other	☐ Water Hose ☐ Fire Blanket	Noise Noise	Others Working Overhead	☐ Flammable	Proper Rigging Practices	Respirator
79.20.20.0	Fire Watch	☐ Sharp Objects	☐ Type Work Others Doing:	☐ Ingestion	Chain fall, Come a long	☐ ½ face
ACCESS	overhead 7' / not in walk way	☐ Other	0	☐ Other	Inspected - in good condition	☐ Full Face
Scaffold (properly inspected)	Sewer Covers	☐ Poor Access / Egress	PPE Due to Other Work	☐ Inhalation	☐ Crane	PAPR
Ladder (Tied off)	OVERHEAD WORK	TOOLS	☐ Other	☐ Skin Contamination	☐ Forklift	☐ Fresh Air
☐ Man lift (inspected)	Barricades	Proper Tools for the Job	Confined Space R	now the Following:	☐ Operator Certificate	
☐ Personnel Basket	☐ Hole Cover	Good Tool Condition	 Possible hazards within 	the confined space	☐ Condition of	☐ Safety Harness
(inspected & approved	Signs		 First signs of exposure How to summons help 		Equipment – Inspection Checklist	☐ Approved Anchor Points
Operator Training	Handrail	☐ Qualifications	How to track personnel Entering and exiting the	confined space	Rigging and Lifting JSP - Required	Mono Goggles (vented / non- vented)
Worksite Stretches:	-f -hift	☐ Current Inspection	Maintain contact with all visual		Barricades	☐ Face Shield
 Before shift / Pre-task / End Stretch to a point where you 	feel a mild tension	☐ Tool Tethers	Do not attempt to rescue un Trained in confined space re		☐ Tags on all sides	☐ Kevlar Gloves
and relax as you hold the st Stretches should be held	retch.	☐ Tool Lanyards	Remain at entry point; assu-		☐ Stands Used	☐ Kevlar Sleeves
Always stretch within your continuous stretch with your continuous stretch within your continuous stretch within your c	comfort limits, never to		you from there. Signs posted to identify con	fined space?	☐ 42" high	☐ Fire Retardant Clothing
the point of pain.					☐ Caution / Yellow	Safety glasses with ANSI app. Side Shields
					☐ Danger / Red	☐ Welding hood
					☐ Taken down at the end of shift	☐ Burning Goggles ☐ Other

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APPENDIX C LABORATORY ANALYTICAL TEST REPORTS FOR MONITORING WELL SAMPLES

It should be noted that the PQLs required by the Moss Landing Power Plant MCWI Permit are defined differently than the PQLs reported in the laboratory results within this Appendix. The MCWI Permit defines PQLs are the minimum level of accuracy per specific analysis expected from the laboratory. The MDLs and PQLs as reported by the laboratory in this Appendix were determined according to "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods, SW 846 3rd Edition, 1996" and as amended by "Update III". These MDLs and/or PQLs are to be at least as accurate as the MCWI Permit-defined PQLs.

	Analyte	Method Number	Reference	PQL (mg/l)
1.	Ammonia	4500NH ₃ H	С	0.1
2.	Chromium, hexavalent	218.6*	c/b	0.0002
3.	Barium	200.8/6020	a/b	0.001
4.	Chromium (total)	200.8/6020	a/b	0.003
5.	Cobalt	200.8/6020	a/b	0.001
6.	Copper	200.8/6020	a/b	0.002
7.	Molybdenum	200.8/6020	a/b	0.001
8.	Nickel	200.8/6020	a/b	0.002
9.	Vanadium	200.8/6020	a/b	0.003
10.	Zinc	200.8/6020	a/b	0.002
10.	Zilic	200.0/0020	a/0	

a. U.S. Environmental Protection Agency, Methods for Chemical Analysis of Water and Wastes, 1999

b Test Methods for Evaluating Solid Waste, Physical/Chemical Methods, SW-846, third edition, Update III, U.S. EPA, 1996.

c. Standard Methods for the Examination of Water and Wastewater, 20th Edition

^{*} Preserved in the field with one of the buffers described in EPA Method 218.7



Date of Report: 11/01/2018

Ernie Bloecher

Dynegy/Moss Landing Power Plant Highway 1 and Dolan Road/ P.O. Box 690 Moss Landing, CA 95039-0690

Client Project: 631234956

BCL Project: Dynegy/Moss Landing Power Plant

BCL Work Order: 1832893 Invoice ID: B321000

Enclosed are the results of analyses for samples received by the laboratory on 10/18/2018. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Contact Person: Kerrie Vaughan

Client Services

Stuart Buttram
Technical Director

Certifications: CA ELAP #1186; NV #CA00014; OR ELAP #4032-001; AK UST101



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Report ID: 1000812211



Chain of Custody and Cooler Receipt Form for 1832893 Page 1 of 2 Lab: BC Laboratory, Bakersfield BC Labs PM Kerri Vaughan L Routine Report

X II. Report (includes DUP, MS MSD, as required, may be (661) 327-4911 Office kerrie.vaughan@belabs.com Container Type REMARKS (includes All Raw Data) Bakersfield, Calif 93308 (661) 852-4281 Direct III. Data Validation Report REPORT REQUIREMENTS (MDLs/PQLs/TRACE#) charged as samples) Purchase Order: Direct Bill to Dynegy 8 4100 Atlas Court RWQCB CHAIN OF CUSTODY / LABORATORY ANALYSIS REQUEST FORM Provide Verbal Preferingry Results Standard (-10-15 working days) Provide PAX Proliminary Results REQUIREMENTS Requested Report Date: Analysis Requested 18.3289 RECEIVED BY "Metals, Diss (Ba, Cr, Co, Cu, Mo, Ni, V, Zn) Field Filter (EPA 350.3) 16oz Plst H2504 пэдотій-віпоттА minted Na 180 Promenade Circle, Suite 320, Sacramento, Ca 95834 (Field Filtered) (5-day Hold) SOnd Plst Borate Diss Chrom VI (218.6) 1320 See list below. HNOS Diss Metals (Field Filtered) BLLAB APTIM Environmental & Infrastructure Date/Time 10/17 18 Special Instructions/Co RELINQUISHED BY Printed Name Number of Containers Company: Dynegy / Moss Landing Power Plant Address: Highway 1 and Dolan Road, Moss Landing, Ca 95039 Water Matrix Water Water Water Water Ē Report to Site Manager: Ernle Bloecher / 831-633-6786 Dute/Time 10(17/18 12:37 Project Name: Dynegy / Moss Landing Power Plant Project Number: 631234956/4th Quarter 2018 B RECEIVED BY (ale The sales **Notebook #1 Ground Water Samples** 103 710 Time 013 ECEIVED BY 30 DEP HELD Printed Name CC Rpt: sheila.richgels@aptim.com Date/Time 0.10 Ē 2018 Date APTIM Date/Time 1/0 -/7 12:37 erik.korsmo@aptim.com Sampler's Signature: SHED BY Sample I.D. W-I-R W-11 W-12 Æ EB aul Weinhard inted Name

gnature

4100 Atlas Court Bakersfield, CA 93308 (661) 327-4911 FAX (661) 327-1918 www.bclabs.com Report ID: 1000812211 Page 3 of 22



Chain of Custody and Cooler Receipt Form for 1832893 Page 2 of 2

BC LABORATORIES INC.	422	C	OOLER I	RECEIPT	FORM			Pag	e	Of
Submission #: 18-3289	3				-7:	T			-	1
SHIPPING INFORM				-	HDDING	CONTAI	urn	7	EDEE 11	NIIID.
Fed Ex □ UPS □ Ontrac □		Delivery	5	Ice Che	IPPING st // (Spe	None 🗆	Box 🗆		FREE LIC	
Refrigerant: Ice Blue Ice □	Nama	0 0		0				- IR	1	
Custody Seals Size Chest III	None Containe	he la	None	Comm						
All samples received? Yes No□ A	li samples	containers	intact? Y	es XC No	0	Descript	tion(s) mate	h COC?	Yes to No	
COC Received Emis	slvity:(27 0	ontainer:	Anders.	Thermon	neter ID:	74	Date/Tir	10	1810
✓ZYES □ NO T-		,	ontainer.	1 , 1		10101 1121 2		1	78	7 636
TES LINU Tes	nperature:	(A) ().()	²c /	(C) ()	<u>- O</u>	°C	"Analyst	Info()	0.58
			NAME OF TAXABLE PARTY.		SAMPLE	NUMBERS			7	
SAMPLE CONTAINERS	. 1	2	3	4	5	е	7	8	7 9	10
QT PE UNPRES			manufacture to the same	V		-			- HOUSE	
40z/80z/160z PE UNPRES										
20x Cr ⁴⁶	A	X	×	A	A					
OT INORGANIC CHEMICAL METALS				,						1
INORGANIC CHEMICAL METALS 402 / 802 (1602)	B	6	B	B	13					
PT CYANIDE										
PT NITROGEN FORMS	C	C:		C						
PT TOTAL SULFIDE										
20z. NITRATE / NITRITE							ļ			
PT TOTAL ORGANIC CARBON							<u> </u>			
PT CHEMICAL OXYGEN DEMAND									-	
PIA PHENOLICS										
40ml VOA VIAL TRAVEL BLANK										-
40ml VOA VIAL	-					<u></u>				
QT EPA 1664								-	-	-
PTODOR	-						-	-	-	+
RADIOLOGICAL								 	+	+
BACTERIOLOGICAL						-			-	1 1
40 ml VOA VIAL- 504						-				
QT EPA 508/608/8080								 	 	-
OT EPA 515.1/8150								-	+	-
OT EPA 525				<u> </u>					 ` 	
OT EPA 525 TRAVEL BLANK							-		-	-
40ml EPA 547	 			 			 		+	
40ml EPA 531.1				 		 	 		+	
80x RPA 548									+	
OT EPA 549	 				1		 		-	
QT EPA 8015M		-					-		+	-
QT EPA 8270						-	-		+	-
80z/160z/32oz AMBER	 			-		 	 	-		
80z/160z/32oz JAR				 			-			
SOIL SLEEVE				-				-	 	
PCB VIAL		-						 		-
PLASTIC BAG		-					-		-	
TEDLAR BAG							+			
FERROUS IRON		-			Jar		 	700	-	
RNCORE		100	ole di Managana		18 16	1	1	A\$ 35	8	11.0
SMART KIT	19 10 10 10	A 12	8-43	1 2 2	100		gange at	18.8	2 G. A.	
SUMMA CANISTER		12000	100			1		18.8	100	3 7 2 2 3 3 3

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Dynegy/Moss Landing Power Plant

Highway 1 and Dolan Road/ P.O. Box 690

Moss Landing, CA 95039-0690

Reported: 11/01/2018 13:26

Project: Dynegy/Moss Landing Power Plant

Project Number: 631234956 Project Manager: Ernie Bloecher

Laboratory / Client Sample Cross Reference

Laboratory	Client Sample Informati	on		
1832893-01	COC Number: Project Number: Sampling Location: Sampling Point: Sampled By:	 W-1-R Paul Weinhardt	Receive Date: Sampling Date: Sample Depth: Lab Matrix: Sample Type: Metal Analysis: 1-f	10/18/2018 10:38 10/16/2018 10:12 Water Water Field Filtered and
1832893-02	COC Number: Project Number: Sampling Location: Sampling Point: Sampled By:	 W-11 Paul Weinhardt	Receive Date: Sampling Date: Sample Depth: Lab Matrix: Sample Type: Metal Analysis: 1-f	10/18/2018 10:38 10/16/2018 09:23 Water Water Field Filtered and
1832893-03	COC Number: Project Number: Sampling Location: Sampling Point: Sampled By:	 W-12 Paul Weinhardt	Receive Date: Sampling Date: Sample Depth: Lab Matrix: Sample Type: Metal Analysis: 1-f	10/18/2018 10:38 10/16/2018 11:03 Water Water Field Filtered and
1832893-04	COC Number: Project Number: Sampling Location: Sampling Point: Sampled By:	 TB 	Receive Date: Sampling Date: Sample Depth: Lab Matrix: Sample Type: Metal Analysis: 1-f	10/18/2018 10:38 10/16/2018 00:00 Water Water Field Filtered and
1832893-05	COC Number: Project Number: Sampling Location: Sampling Point: Sampled By:	 FB Paul Weinhardt	Receive Date: Sampling Date: Sample Depth: Lab Matrix: Sample Type: Metal Analysis: 1-F	10/18/2018 10:38 10/16/2018 08:51 Water Water Field Filtered and

Page 5 of 22 Report ID: 1000812211



Dynegy/Moss Landing Power Plant Reported: 11/01/2018 13:26

Highway 1 and Dolan Road/ P.O. Box 690 Project: Dynegy/Moss Landing Power Plant Moss Landing, CA 95039-0690 Project Number: 631234956

Project Number: 631234956
Project Manager: Ernie Bloecher

Water Analysis (General Chemistry)

BCL Sample ID:	1832893-01	Client Sampl	e Name:	W-1-R, 10)/16/2018	10:12:00AM, Pa	12:00AM, Paul Weinhardt		
Constituent		Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run#
Ammonia as N		0.060	mg/L	0.10	0.018	EPA-350.1	ND	J	1

			Run		QC			
Run #	Method	Prep Date	Date/Time	Analyst	Instrument	Dilution	Batch ID	
1	EPA-350.1	10/31/18 13:14	11/01/18 10:10	JMH	SC-1	1	B028864	

Report ID: 1000812211 4100 Atlas Court Bakersfield, CA 93308 (661) 327-4911 FAX (661) 327-1918 www.bclabs.com Page 6 of 22



Moss Landing, CA 95039-0690

Reported: 11/01/2018 13:26

Project: Dynegy/Moss Landing Power Plant

Project Number: 631234956 Project Manager: Ernie Bloecher

Metals Analysis

BCL Sample ID:	1832893-01	Client Sampl	e Name:	W-1-R, 10	W-1-R, 10/16/2018 10:12:00AM, Paul Weinhardt						
Constituent		Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #		
Hexavalent Chromium		3.9	ug/L	0.20	0.031	EPA-218.6	ND		1		
Dissolved Barium		0.14	mg/L	0.0010	0.000066	EPA-200.8	ND		2		
Dissolved Chromium		0.0050	mg/L	0.0030	0.00015	EPA-200.8	ND		2		
Dissolved Cobalt		0.00049	mg/L	0.0010	0.000011	EPA-200.8	0.000021	J	2		
Dissolved Copper		0.0012	mg/L	0.0020	0.00032	EPA-200.8	ND	J	2		
Dissolved Molybdenum	n	0.0012	mg/L	0.0010	0.000033	EPA-200.8	0.000092		2		
Dissolved Nickel		0.018	mg/L	0.0020	0.00015	EPA-200.8	ND		2		
Dissolved Vanadium		0.0024	mg/L	0.0030	0.00039	EPA-200.8	ND	J	2		
Dissolved Zinc		0.0037	mg/L	0.0050	0.0022	EPA-200.8	0.0022	J	2		

			Run				QC
Run#	Method	Prep Date	Date/Time	Analyst	Instrument	Dilution	Batch ID
1	EPA-218.6	10/19/18 01:00	10/19/18 04:13	SAV	IC-4	1	B027831
2	EPA-200.8	10/22/18 09:00	10/23/18 12:45	ARD	PE-EL3	1	B027939

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Moss Landing, CA 95039-0690

Reported: 11/01/2018 13:26

Project: Dynegy/Moss Landing Power Plant

Project Number: 631234956
Project Manager: Ernie Bloecher

Water Analysis (General Chemistry)

BCL Sample ID:	1832893-02	Client Sample	e Name:	W-11, 10/	16/2018	9:23:00AM, Paul Weinhardt			
Constituent		Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Ammonia as N		0.020	mg/L	0.10	0.018	EPA-350.1	0.023	J	1

			Run					
Run #	Method	Prep Date	Date/Time	Analyst	Instrument	Dilution	Batch ID	
1	EPA-350.1	10/31/18 15:26	11/01/18 11:24	JMH	SC-1	1	B028869	

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Moss Landing, CA 95039-0690

Reported: 11/01/2018 13:26

Project: Dynegy/Moss Landing Power Plant

Project Number: 631234956 Project Manager: Ernie Bloecher

Metals Analysis

BCL Sample ID:	1832893-02	Client Sampl	e Name:	W-11, 10	W-11, 10/16/2018 9:23:00AM, Paul Weinhardt							
Constituent		Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #			
Hexavalent Chromium		3.2	ug/L	0.20	0.031	EPA-218.6	ND		1			
Dissolved Barium		0.082	mg/L	0.0010	0.000066	EPA-200.8	ND		2			
Dissolved Chromium		0.0060	mg/L	0.0030	0.00015	EPA-200.8	ND		2			
Dissolved Cobalt		0.000033	mg/L	0.0010	0.000011	EPA-200.8	0.000021	J	2			
Dissolved Copper		0.00066	mg/L	0.0020	0.00032	EPA-200.8	ND	J	2			
Dissolved Molybdenur	n	0.00071	mg/L	0.0010	0.000033	EPA-200.8	0.000092	J	2			
Dissolved Nickel		0.0036	mg/L	0.0020	0.00015	EPA-200.8	ND		2			
Dissolved Vanadium		0.0039	mg/L	0.0030	0.00039	EPA-200.8	ND		2			
Dissolved Zinc		0.0024	mg/L	0.0050	0.0022	EPA-200.8	0.0022	J	2			

			Run		QC		
Run#	Method	Prep Date	Date/Time	Analyst	Instrument	Dilution	Batch ID
1	EPA-218.6	10/19/18 01:00	10/19/18 04:23	SAV	IC-4	1	B027831
2	EPA-200.8	10/22/18 09:00	10/23/18 13:11	ARD	PE-EL3	1	B027939

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Dynegy/Moss Landing Power Plant

Highway 1 and Dolan Road/ P.O. Box 690

Reported: 11/01/2018 13:26

Project: Dynegy/Moss Land

Moss Landing, CA 95039-0690 Project Number: 631234956

Project: Dynegy/Moss Landing Power Plant
Project Number: 631234956
Project Manager: Ernie Bloecher

Water Analysis (General Chemistry)

BCL Sample ID:	1832893-03	Client Sampl	e Name:	W-12, 10/	16/2018 1	1:03:00AM, Pau	ul Weinhardt		
Constituent		Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run#
Ammonia as N		0.034	mg/L	0.10	0.018	EPA-350.1	0.023	J	1

			Run					
Run#	Method	Prep Date	Date/Time	Analyst	Instrument	Dilution	Batch ID	
1	EPA-350.1	10/31/18 15:26	11/01/18 11:30	JMH	SC-1	1	B028869	

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Moss Landing, CA 95039-0690

Reported: 11/01/2018 13:26

Project: Dynegy/Moss Landing Power Plant

Project Number: 631234956 Project Manager: Ernie Bloecher

Metals Analysis

BCL Sample ID:	1832893-03	Client Sampl	e Name:	W-12, 10	/16/2018 11	:03:00AM, Pai	ul Weinhardt		
Constituent		Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Hexavalent Chromium		4.1	ug/L	0.20	0.031	EPA-218.6	ND		1
Dissolved Barium		0.061	mg/L	0.0010	0.000066	EPA-200.8	ND		2
Dissolved Chromium		0.0068	mg/L	0.0030	0.00015	EPA-200.8	ND		2
Dissolved Cobalt		0.00034	mg/L	0.0010	0.000011	EPA-200.8	0.000021	J	2
Dissolved Copper		0.0010	mg/L	0.0020	0.00032	EPA-200.8	ND	J	2
Dissolved Molybdenum	1	0.0035	mg/L	0.0010	0.000033	EPA-200.8	0.000092		2
Dissolved Nickel		0.015	mg/L	0.0020	0.00015	EPA-200.8	ND		2
Dissolved Vanadium		0.0026	mg/L	0.0030	0.00039	EPA-200.8	ND	J	2
Dissolved Zinc		ND	mg/L	0.0050	0.0022	EPA-200.8	0.0022		2

			Run		QC		
Run #	Method	Prep Date	Date/Time	Analyst	Instrument	Dilution	Batch ID
1	EPA-218.6	10/19/18 01:00	10/19/18 04:33	SAV	IC-4	1	B027831
2	EPA-200.8	10/22/18 09:00	10/23/18 13:15	ARD	PE-EL3	1	B027939

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Reported: 11/01/2018 13:26

Project: Dynegy/Moss Landing Power Plant

Project Number: 631234956
Project Manager: Ernie Bloecher

Water Analysis (General Chemistry)

BCL Sample ID:	1832893-04	Client Sampl	e Name:	TB, 10/16	/2018 12:0	0:00AM			
Constituent		Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Ammonia as N		ND	mg/L	0.10	0.018	EPA-350.1	0.023		1

			Run					
Run#	Method	Prep Date	Date/Time	Analyst	Instrument	Dilution	Batch ID	
1	EPA-350.1	10/31/18 15:26	11/01/18 11:30	JMH	SC-1	1	B028869	

Report ID: 1000812211 4100 Atlas Court Bakersfield, CA 93308 (661) 327-4911 FAX (661) 327-1918 www.bclabs.com Page 12 of 22



Reported: 11/01/2018 13:26

Project: Dynegy/Moss Landing Power Plant

Project Number: 631234956 Project Manager: Ernie Bloecher

Metals Analysis

BCL Sample ID:	1832893-04	Client Sample	e Name:	TB, 10/16	6/2018 12:0	0:00AM			
Constituent Hexavalent Chromium		Result	Units ug/L	PQL 0.20	MDL 0.031	Method EPA-218.6	MB Bias	Lab Quals	Run #
Dissolved Barium		ND	mg/L	0.0010	0.000066	EPA-218.8 EPA-200.8	ND ND	J	2
Dissolved Chromium		ND	mg/L	0.0030	0.00015	EPA-200.8	ND		2
Dissolved Cobalt		ND	mg/L	0.0010	0.000011	EPA-200.8	0.000021		2
Dissolved Copper		0.00049	mg/L	0.0020	0.00032	EPA-200.8	ND	J	2
Dissolved Molybdenum		0.000053	mg/L	0.0010	0.000033	EPA-200.8	0.000092	J	2
Dissolved Nickel		ND	mg/L	0.0020	0.00015	EPA-200.8	ND		2
Dissolved Vanadium		ND	mg/L	0.0030	0.00039	EPA-200.8	ND		2
Dissolved Zinc		ND	mg/L	0.0050	0.0022	EPA-200.8	0.0022		2

			Run		QC		
Run #	Method	Prep Date	Date/Time	Analyst	Instrument	Dilution	Batch ID
1	EPA-218.6	10/19/18 01:00	10/19/18 04:42	SAV	IC-4	1	B027831
2	EPA-200.8	10/22/18 09:00	10/23/18 13:18	ARD	PE-EL3	1	B027939

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Reported: 11/01/2018 13:26

Project: Dynegy/Moss Landing Power Plant

Project Number: 631234956 Project Manager: Ernie Bloecher

Water Analysis (General Chemistry)

BCL Sample ID:	1832893-05	Client Sampl	e Name:	FB, 10/16	/2018 8:5	1:00AM, Paul V	/einhardt		
Constituent Result Units				PQL	MDL	Method	MB Bias	Lab Quals	Run #
Ammonia as N		0.022	mg/L	0.10	0.018	EPA-350.1	0.023	J	1

			Run					
Run#	Method	Prep Date	Date/Time	Analyst	Instrument	Dilution	Batch ID	
1	EPA-350.1	10/31/18 15:26	11/01/18 11:31	JMH	SC-1	1	B028869	

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Moss Landing, CA 95039-0690

Reported: 11/01/2018 13:26

Project: Dynegy/Moss Landing Power Plant

Project Number: 631234956 Project Manager: Ernie Bloecher

Metals Analysis

BCL Sample ID:	1832893-05	Client Sampl	e Name:	FB, 10/16	6/2018 8:51	I:00AM, Paul V	Veinhardt		
Constituent		Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Hexavalent Chromium		0.19	ug/L	0.20	0.031	EPA-218.6	ND	J	1
Dissolved Barium		0.00015	mg/L	0.0010	0.000066	EPA-200.8	ND	J	2
Dissolved Chromium		ND	mg/L	0.0030	0.00015	EPA-200.8	ND		2
Dissolved Cobalt		ND	mg/L	0.0010	0.000011	EPA-200.8	0.000021		2
Dissolved Copper		ND	mg/L	0.0020	0.00032	EPA-200.8	ND		2
Dissolved Molybdenum		ND	mg/L	0.0010	0.000033	EPA-200.8	0.000092		2
Dissolved Nickel		ND	mg/L	0.0020	0.00015	EPA-200.8	ND		2
Dissolved Vanadium		ND	mg/L	0.0030	0.00039	EPA-200.8	ND		2
Dissolved Zinc		ND	mg/L	0.0050	0.0022	EPA-200.8	0.0022		2

			Run				QC
Run#	Method	Prep Date	Date/Time	Analyst	Instrument	Dilution	Batch ID
1	EPA-218.6	10/19/18 01:00	10/19/18 04:52	SAV	IC-4	1	B027831
2	EPA-200.8	10/22/18 09:00	10/23/18 13:22	ARD	PE-EL3	1	B027939

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Dynegy/Moss Landing Power Plant Reported: 11/01/2018 13:26

Highway 1 and Dolan Road/ P.O. Box 690 Project: Dynegy/Moss Landing Power Plant Moss Landing, CA 95039-0690 Project Number: 631234956

Project Number: 631234956
Project Manager: Ernie Bloecher

Water Analysis (General Chemistry)

Quality Control Report - Method Blank Analysis

Constituent	QC Sample ID	MB Result	Units	PQL	MDL	Lab Quals
QC Batch ID: B028864						
Ammonia as N	B028864-BLK1	ND	mg/L	0.10	0.018	
QC Batch ID: B028869						
Ammonia as N	B028869-BLK1	0.022600	mg/L	0.10	0.018	J

Report ID: 1000812211 4100 Atlas Court Bakersfield, CA 93308 (661) 327-4911 FAX (661) 327-1918 www.bclabs.com Page 16 of 22



Moss Landing, CA 95039-0690 Project Number: 631234956

Reported: 11/01/2018 13:26

Project: Dynegy/Moss Landing Power Plant

Project Number: 631234956
Project Manager: Ernie Bloecher

Water Analysis (General Chemistry)

Quality Control Report - Laboratory Control Sample

								Control L		
Constituent	QC Sample ID	Туре	Result	Spike Level	Units	Percent Recovery	RPD	Percent Recovery	RPD	Lab Quals
QC Batch ID: B028864										
Ammonia as N	B028864-BS1	LCS	1.0085	1.0000	mg/L	101		90 - 110		
QC Batch ID: B028869										
Ammonia as N	B028869-BS1	LCS	1.0240	1.0000	mg/L	102		90 - 110		

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Dynegy/Moss Landing Power Plant

Highway 1 and Dolan Road/ P.O. Box 690

Moss Landing, CA 95039-0690

Reported: 11/01/2018 13:26

Project: Dynegy/Moss Landing Power Plant

Project Number: 631234956
Project Manager: Ernie Bloecher

Water Analysis (General Chemistry)

Quality Control Report - Precision & Accuracy

									Control Limits			
		Source	Source		Spike			Percent		Percent	Lab	
Constituent	Type	Sample ID	Result	Result	Added	Units	RPD	Recovery	RPD	Recovery	Quals	
QC Batch ID: B028864	Use	d client samp	ole: N									
Ammonia as N	DUP	1833287-03	0.34800	0.37180		mg/L	6.6		10			
	MS	1833287-03	0.34800	1.4681	1.1111	mg/L		101		90 - 110		
	MSD	1833287-03	0.34800	1.4351	1.1111	mg/L	2.3	97.8	10	90 - 110		
QC Batch ID: B028869	Use	d client samp	ole: Y - Des	cription: W-	11, 10/16/20	18 09:23						
Ammonia as N	DUP	1832893-02	0.020400	ND		mg/L			10			
	MS	1832893-02	0.020400	1.1189	1.1111	mg/L		98.9		90 - 110		
	MSD	1832893-02	0.020400	1.1230	1.1111	mg/L	0.4	99.2	10	90 - 110		

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Reported: 11/01/2018 13:26

Project: Dynegy/Moss Landing Power Plant

Project Number: 631234956
Project Manager: Ernie Bloecher

Metals Analysis

Quality Control Report - Method Blank Analysis

Constituent	QC Sample ID	MB Result	Units	PQL	MDL	Lab Quals
QC Batch ID: B027831						
Hexavalent Chromium	B027831-BLK1	ND	ug/L	0.20	0.031	
QC Batch ID: B027939						
Dissolved Barium	B027939-BLK1	ND	mg/L	0.0010	0.000066	
Dissolved Chromium	B027939-BLK1	ND	mg/L	0.0030	0.00015	
Dissolved Cobalt	B027939-BLK1	0.000021000	mg/L	0.0010	0.000011	J
Dissolved Copper	B027939-BLK1	ND	mg/L	0.0020	0.00032	
Dissolved Molybdenum	B027939-BLK1	0.000092000	mg/L	0.0010	0.000033	J
Dissolved Nickel	B027939-BLK1	ND	mg/L	0.0020	0.00015	
Dissolved Vanadium	B027939-BLK1	ND	mg/L	0.0030	0.00039	
Dissolved Zinc	B027939-BLK1	0.0022370	mg/L	0.0050	0.0022	J

Report ID: 1000812211 4100 Atlas Court Bakersfield, CA 93308 (661) 327-4911 FAX (661) 327-1918 www.bclabs.com Page 19 of 22



Dynegy/Moss Landing Power Plant

Reported: 11/01/2018 13:26

Highway 1 and Dolan Road/ P.O. Box 690

Project: Dynegy/Moss Landing Power Plant

Moss Landing, CA 95039-0690 Project Number: 631234956
Project Manager: Ernie Bloecher

Metals Analysis

Quality Control Report - Laboratory Control Sample

							Control Limits				
				Spike		Percent		Percent		Lab	
Constituent	QC Sample ID	Type	Result	Level	Units	Recovery	RPD	Recovery	RPD	Quals	
QC Batch ID: B027831											
Hexavalent Chromium	B027831-BS1	LCS	21.072	20.000	ug/L	105		90 - 110			
QC Batch ID: B027939											
Dissolved Barium	B027939-BS1	LCS	0.041239	0.040000	mg/L	103		85 - 115			
Dissolved Chromium	B027939-BS1	LCS	0.040308	0.040000	mg/L	101		85 - 115			
Dissolved Cobalt	B027939-BS1	LCS	0.040781	0.040000	mg/L	102		85 - 115			
Dissolved Copper	B027939-BS1	LCS	0.10346	0.10000	mg/L	103		85 - 115			
Dissolved Molybdenum	B027939-BS1	LCS	0.039112	0.040000	mg/L	97.8		85 - 115			
Dissolved Nickel	B027939-BS1	LCS	0.10170	0.10000	mg/L	102		85 - 115			
Dissolved Vanadium	B027939-BS1	LCS	0.039640	0.040000	mg/L	99.1		85 - 115			
Dissolved Zinc	B027939-BS1	LCS	0.10315	0.10000	mg/L	103		85 - 115			

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Moss Landing, CA 95039-0690

Reported: 11/01/2018 13:26

Project: Dynegy/Moss Landing Power Plant

Project Number: 631234956 Project Manager: Ernie Bloecher

Metals Analysis

Quality Control Report - Precision & Accuracy

									Cont	rol Limits	
		Source	Source		Spike			Percent		Percent	Lab
Constituent	Type	Sample ID	Result	Result	Added	Units	RPD	Recovery	RPD	Recovery	Quals
	Llas	d aliant aam	nlo: N								
QC Batch ID: B027831		d client sam	•								
Hexavalent Chromium	DUP	1832985-01	22.126	22.261		-	0.6		10		
	MS	1832985-01	22.126	43.940		•					
	MSD	1832985-01	22.126	43.631	20.202	ug/L	0.7	106	10	90 - 110	
QC Batch ID: B027939	Use	d client sam	ple: Y - Des	cription: W-	1-R, 10/16/2	018 10:12					
Dissolved Barium	DUP	1832893-01	0.14441	0.14640		mg/L	1.4		20		
	MS	1832893-01	0.14441	0.18054	0.040816	mg/L		88.5		70 - 130	
	MSD	1832893-01	0.14441	0.18101	Name	70 - 130					
Dissolved Chromium	DUP	1832893-01	0.0049600	0.0045840		mg/L	7.9		20		
	MS	1832893-01	0.0049600	0.042536	0.040816	mg/L		92.1		70 - 130	
	MSD		0.040816	mg/L	0.5	92.6	20	70 - 130			
Dissolved Cobalt	DUP	1832893-01	0.00049100	0.00048300		mg/L	1.6		20		J
	MS	1832893-01	0.00049100	0.037274	0.040816	mg/L		90.1		70 - 130	
	MSD	1832893-01	0.00049100	0.037715	0.040816	mg/L	1.2	91.2	20	70 - 130	
Dissolved Copper	DUP	1832893-01	0.0012330	0.0012290		mg/L	0.3		20		J
•	MS	1832893-01	0.0012330	0.098570	0.10204	mg/L		95.4		70 - 130	
	MSD	1832893-01	0.0012330	0.099165	0.10204	mg/L	0.6	96.0	4 70 - 130		
Dissolved Molybdenum	DUP	1832893-01	0.0012090	0.0012270		mg/L	1.5		20	Percent Recovery 90 - 110 90 - 110 70 - 130	
	MS	1832893-01	0.0012090	0.045667	0.040816	mg/L		109			
	MSD	1832893-01	0.0012090	0.045274	0.040816	mg/L	0.9	108	20		
Dissolved Nickel	DUP	1832893-01	0.018331	0.018490		mg/L	0.9		20		
	MS	1832893-01	0.018331	0.10656	0.10204	mg/L		86.5		70 - 130	
	MS 1832893-01 0.018331 MSD 1832893-01 0.018331	0.10871	0.10204	mg/L	2.0	88.6	20	70 - 130			
Dissolved Vanadium	DUP	1832893-01	0.0024180	0.0023110		mg/L	4.5		20		J
	MS	1832893-01	0.0024180	0.041431	0.040816	•		95.6		70 - 130	
	MSD	1832893-01	0.0024180	0.041641	0.040816	mg/L	0.5	96.1	20	70 - 130	
Dissolved Zinc	DUP	1832893-01	0.0036580	0.0035090		mg/L	4.2		20		J
-	MS	1832893-01	0.0036580	0.10546	0.10204	mg/L		99.8	-	70 - 130	-
	MSD	1832893-01	0.0036580	0.10652	0.10204	mg/L	1.0	101	20	70 - 130	

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Dynegy/Moss Landing Power Plant

Highway 1 and Dolan Road/ P.O. Box 690

Moss Landing, CA 95039-0690

Reported: 11/01/2018 13:26

Project: Dynegy/Moss Landing Power Plant

Project Number: 631234956
Project Manager: Ernie Bloecher

Notes And Definitions

J Estimated Value (CLP Flag)

MDL Method Detection Limit

ND Analyte Not Detected

PQL Practical Quantitation Limit

Report ID: 1000812211 4100 Atlas Court Bakersfield, CA 93308 (661) 327-4911 FAX (661) 327-1918 www.bclabs.com Page 22 of 22



Date of Report: 11/01/2018

Ernie Bloecher

Dynegy/Moss Landing Power Plant Highway 1 and Dolan Road/ P.O. Box 690 Moss Landing, CA 95039-0690

Client Project: 631234956

BCL Project: Dynegy/Moss Landing Power Plant

BCL Work Order: 1832894 Invoice ID: B320997

Enclosed are the results of analyses for samples received by the laboratory on 10/18/2018. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Contact Person: Kerrie Vaughan

Client Services

Stuart Buttram
Technical Director

Certifications: CA ELAP #1186; NV #CA00014; OR ELAP #4032-001; AK UST101



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Notes	
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Chain of Custody and Cooler Receipt Form for 1832894 Page 1 of 2 BC Labs PM Kerri Vaughan I. Routine Report

X. II. Report (includes DUP, MS Lab: BC Laboratory, Bakersfield MS/MSD metals (661) 327-4911 Office kerrie, yaughan@bolabs.com MSD, as required, may be Container Types 4100 Atlas Court Bakersfield, Calif 93308 (661) 852-4281 Direct (includes All Raw Data) III. Data Validation Report REMARKS REPORT REQUIREMENTS (MDLs/PQLs/TRACE#) reservations charged as samples) Purchase Order. Direct Bill to Dynegy RWQCB 8 IBUTIO R.OUT 9 MBAS 9 Provide Verbal Preliminary Results Standard (~10-15 working days) CHAIN OF CUSTODY / LABORATORY ANALYSIS REQUEST FORM Provide FAX Preferinary Results HOLD ALISTA S REQUIREMENTS BOD Requested Report Date A 27 Analysis Requested 差異 × 8.32894 <u>|}-|\\ |-\| |</u> RECEIVED BY 3 *Metals, Diss (Ba, Cr, Co, Cu, Mo, Ni, V, Zn) Field Filter
• For W-19, extra HNO3 bottle collected for MS/MSD. (EPA 350.3) 160x Plst H2S04 nagoniM-sinommA 180 Promenade Circle, Suite 320, Sacramento, Ca 95834 Somi Pist (Field Fittered) (5-day Hold) Borate 3:00 Diss Chrom VI (218.6) "See list below, HNO3 Diss Metals (Field Filtered) Special Instructions/C STATES APTIM Environmental & Infrastructure RELINQUISHED BY im PRCADS Number of Containers Address: Highway I and Dolan Road, Moss Landing, Ca 95039 Matrix Water Water Water Water Water Water Report to Site Manager: Ernie Bloecher / 831-633-6786 Project Name: Dynegy / Moss Landing Power Plant Project Number: 631234956 / 4th Quarter 2018 STEMEN COLF 1 3C 40 9 Company: Dynegy / Moss Landing Power Plant 836 Project Number: 631234956 / 4th Quarter RECEIVED BY 100 2 (345) 5 The same CC Report: sheila.richgels@aptim.com Printed Name Date/Time Ē ٥ S Ö ٥ ٥ こら Date Time | C. 17,48 | 12:51
RELINQUISHED BY APTIM erik.korsmo@aptim.com Sampler's Signature: St. Circle IC: Cl. W-14-R CLINOUSHED Sample L.D. W-2-R W-3-R W-10* W-13 W-15 aul Weinhardt inted Name gnature MILL

Report ID: 1000812178 4100 Atlas Court Bakersfield, CA 93308 (661) 327-4911 FAX (661) 327-1918 www.bclabs.com Page 3 of 25



Chain of Custody and Cooler Receipt Form for 1832894 Page 2 of 2

Submission #:	BC LABORATORIES INC.		C	OOLER	RECEIPT	FORM			Pag	e <u>(</u>	Of (
Fed Ex	Submission #: (6-3289)	1									,		
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Custody Seals Seal					1				il.	\prec			
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Report ID: 1000812178



Dynegy/Moss Landing Power Plant

Highway 1 and Dolan Road/ P.O. Box 690

Moss Landing, CA 95039-0690

11/01/2018 12:50 Reported:

Project: Dynegy/Moss Landing Power Plant

Project Number: 631234956 Project Manager: Ernie Bloecher

Laboratory / Client Sample Cross Reference

Laboratory	Client Sample Information	on					
1832894-01	COC Number:		Receive Date:	10/18/2018 10:38			
	Project Number:		Sampling Date:	10/16/2018 12:54			
	Sampling Location:		Sample Depth:				
	Sampling Point:	W-2-R	Lab Matrix:	Water			
	Sampled By:	Paul Weinhardt	Sample Type:	Water			
	,		Metal Analysis: 1-I	Field Filtered and			
			Acidified				
1832894-02	COC Number:		Receive Date:	10/18/2018 10:38			
	Project Number:		Sampling Date:	10/16/2018 13:45			
	Sampling Location:		Sample Depth:				
	Sampling Point:	W-3-R	Lab Matrix:	Water			
	Sampled By:	Paul Weinhardt	Sample Type:	Water			
	. ,		Metal Analysis: 1-I	Field Filtered and			
			Acidified				
1832894-03	COC Number:		Receive Date:	10/18/2018 10:38			
	Project Number:		Sampling Date:	10/17/2018 07:57			
	Sampling Location:		Sample Depth:				
	Sampling Point:	W-10	Lab Matrix:	Water			
	Sampled By:	Paul Weinhardt	Sample Type:	Water			
	p		Metal Analysis: 1-I	Field Filtered and			
			Acidified				
1832894-04	COC Number:		Receive Date:	10/18/2018 10:38			
	Project Number:		Sampling Date:	10/16/2018 12:10			
	Sampling Location:		Sample Depth:				
	Sampling Point:	W-13	Lab Matrix:	Water			
	Sampled By:	Paul Weinhardt	Sample Type:	Water			
	. ,		Metal Analysis: 1-I	Field Filtered and			
			Acidified				
1832894-05	COC Number:		Receive Date:	10/18/2018 10:38			
	Project Number:		Sampling Date:	10/17/2018 08:56			
	Sampling Location:		Sample Depth:				
	Sampling Point:	W-14-R	Lab Matrix:	Water			
	Sampled By:	Paul Weinhardt	Sample Type: Water				
			Metal Analysis: 1-Field Filtered and				
			Acidified				

Page 5 of 25 Report ID: 1000812178



Dynegy/Moss Landing Power Plant

Highway 1 and Dolan Road/ P.O. Box 690

Moss Landing, CA 95039-0690

Reported: 11/01/2018 12:50

Project: Dynegy/Moss Landing Power Plant

Project Number: 631234956 Project Manager: Ernie Bloecher

Laboratory / Client Sample Cross Reference

Laboratory **Client Sample Information**

1832894-06 **COC Number:**

> **Project Number: Sampling Location:** Sampling Point: W-15

Sampled By: Paul Weinhardt

10/18/2018 10:38 Receive Date:

Sampling Date: 10/17/2018 09:10

Sample Depth: Lab Matrix: Water Sample Type: Water

Metal Analysis: 1-Field Filtered and

Acidified

Page 6 of 25 Report ID: 1000812178



Dynegy/Moss Landing Power Plant Highway 1 and Dolan Road/ P.O. Box 690

Moss Landing, CA 95039-0690

Reported: 11/01/2018 12:50

Project: Dynegy/Moss Landing Power Plant

Project Number: 631234956 Project Manager: Ernie Bloecher

Water Analysis (General Chemistry)

BCL Sample ID:	1832894-01	Client Sample	e Name:	W-2-R, 10	/16/2018	12:54:00PM, Pa			
Constituent		Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Ammonia as N		0.018	mg/L	0.10	0.018	EPA-350.1	0.023	J	1

			Run		QC			
Run#	Method	Prep Date	Date/Time	Analyst	Instrument	Dilution	Batch ID	
1	EPA-350.1	10/31/18 15:26	11/01/18 11:32	JMH	SC-1	1	B028869	

Page 7 of 25 Report ID: 1000812178



Dynegy/Moss Landing Power Plant Highway 1 and Dolan Road/ P.O. Box 690

Moss Landing, CA 95039-0690

Reported: 11/01/2018 12:50

Project: Dynegy/Moss Landing Power Plant

Project Number: 631234956 Project Manager: Ernie Bloecher

Metals Analysis

BCL Sample ID:	1832894-01	Client Sampl	e Name:	W-2-R, 10	0/16/2018 1	2:54:00PM, Pa	aul Weinhardt		
Constituent		Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Hexavalent Chromium		1.5	ug/L	0.20	0.031	EPA-218.6	ND		1
Dissolved Barium		0.036	mg/L	0.0010	0.000066	EPA-200.8	ND		2
Dissolved Chromium		0.0023	mg/L	0.0030	0.00015	EPA-200.8	ND	J	2
Dissolved Cobalt		0.000053	mg/L	0.0010	0.000011	EPA-200.8	0.000020	J	2
Dissolved Copper		0.00074	mg/L	0.0020	0.00032	EPA-200.8	ND	J	2
Dissolved Molybdenum	1	0.00018	mg/L	0.0010	0.000033	EPA-200.8	0.000090	J	2
Dissolved Nickel		0.0049	mg/L	0.0020	0.00015	EPA-200.8	ND		2
Dissolved Vanadium		0.0025	mg/L	0.0030	0.00039	EPA-200.8	ND	J	2
Dissolved Zinc		ND	mg/L	0.0050	0.0022	EPA-200.8	ND		2

			Run				
Run #	Method	Prep Date	Date/Time	Analyst	Instrument	Dilution	Batch ID
1	EPA-218.6	10/19/18 01:00	10/19/18 05:21	SAV	IC-4	1	B027832
2	EPA-200.8	10/22/18 09:00	10/23/18 14:11	ARD	PE-EL3	1	B027975

Page 8 of 25 Report ID: 1000812178



Reported: 11/01/2018 12:50

Project: Dynegy/Moss Landing Power Plant

Project Number: 631234956
Project Manager: Ernie Bloecher

Water Analysis (General Chemistry)

BCL Sample ID:	1832894-02	Client Sampl	e Name:	W-3-R, 10)/16/2018	1:45:00PM, Paul Weinhardt			
Constituent		Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run#
Ammonia as N		ND	mg/L	0.10	0.018	EPA-350.1	0.023		1

			Run		QC			
Run #	Method	Prep Date	Date/Time	Analyst	Instrument	Dilution	Batch ID	
1	EPA-350.1	10/31/18 15:26	11/01/18 11:33	JMH	SC-1	1	B028869	

Report ID: 1000812178 4100 Atlas Court Bakersfield, CA 93308 (661) 327-4911 FAX (661) 327-1918 www.bclabs.com Page 9 of 25



Reported: 11/01/2018 12:50

Project: Dynegy/Moss Landing Power Plant

Project Number: 631234956 Project Manager: Ernie Bloecher

Metals Analysis

BCL Sample ID:	1832894-02	Client Sampl	e Name:	W-3-R, 10	0/16/2018	1:45:00PM, Pa	ul Weinhardt		
Constituent		Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Hexavalent Chromium		0.39	ug/L	0.20	0.031	EPA-218.6	ND		1
Dissolved Barium		0.030	mg/L	0.0010	0.000066	EPA-200.8	ND		2
Dissolved Chromium		0.0021	mg/L	0.0030	0.00015	EPA-200.8	ND	J	2
Dissolved Cobalt		0.00032	mg/L	0.0010	0.000011	EPA-200.8	0.000020	J	2
Dissolved Copper		0.0011	mg/L	0.0020	0.00032	EPA-200.8	ND	J	2
Dissolved Molybdenum	1	0.00081	mg/L	0.0010	0.000033	EPA-200.8	0.000090	J	2
Dissolved Nickel		0.013	mg/L	0.0020	0.00015	EPA-200.8	ND		2
Dissolved Vanadium		0.0041	mg/L	0.0030	0.00039	EPA-200.8	ND		2
Dissolved Zinc		0.0024	mg/L	0.0050	0.0022	EPA-200.8	ND	J	2

			Run		QC			
Run #	Method	Prep Date	Date/Time	Analyst	Instrument	Dilution	Batch ID	
1	EPA-218.6	10/19/18 01:00	10/19/18 11:13	SAV	IC-4	1	B027832	
2	EPA-200.8	10/22/18 09:00	10/23/18 14:14	ARD	PE-EL3	1	B027975	

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Reported: 11/01/2018 12:50

Project: Dynegy/Moss Landing Power Plant

Project Number: 631234956 Project Manager: Ernie Bloecher

Water Analysis (General Chemistry)

BCL Sample ID:	1832894-03	Client Sampl	e Name:	W-10, 10/	17/2018	7:57:00AM, Pau	l Weinhardt		
Constituent		Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Ammonia as N		ND	mg/L	0.10	0.018	EPA-350.1	0.023		1

	Run						QC				
Run #	Method	Prep Date	Date/Time	Analyst	Instrument	Dilution	Batch ID				
1	EPA-350.1	10/31/18 15:26	11/01/18 11:33	JMH	SC-1	1	B028869				

Page 11 of 25 Report ID: 1000812178



Reported: 11/01/2018 12:50

Project: Dynegy/Moss Landing Power Plant

Project Number: 631234956 Project Manager: Ernie Bloecher

Metals Analysis

BCL Sample ID:	1832894-03	Client Sample	e Name:	W-10, 10/	/17/2018 7	:57:00AM, Pau	ıl Weinhardt		
Constituent		Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run#
Hexavalent Chromium		5.2	ug/L	0.20	0.031	EPA-218.6	ND		1
Dissolved Barium		0.058	mg/L	0.0010	0.000066	EPA-200.8	ND		2
Dissolved Chromium		0.0059	mg/L	0.0030	0.00015	EPA-200.8	ND		2
Dissolved Cobalt		0.000049	mg/L	0.0010	0.000011	EPA-200.8	0.000020	J	2
Dissolved Copper		0.00079	mg/L	0.0020	0.00032	EPA-200.8	ND	J	2
Dissolved Molybdenum	1	0.00054	mg/L	0.0010	0.000033	EPA-200.8	0.000090	J	2
Dissolved Nickel		0.0023	mg/L	0.0020	0.00015	EPA-200.8	ND		2
Dissolved Vanadium		0.0031	mg/L	0.0030	0.00039	EPA-200.8	ND		2
Dissolved Zinc		ND	mg/L	0.0050	0.0022	EPA-200.8	ND		2

			Run		QC		
Run#	Method	Prep Date	Date/Time	Analyst	Instrument	Dilution	Batch ID
1	EPA-218.6	10/19/18 01:00	10/19/18 11:23	SAV	IC-4	1	B027832
2	EPA-200.8	10/22/18 09:00	10/23/18 13:43	ARD	PE-EL3	1	B027975

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Reported: 11/01/2018 12:50

Project: Dynegy/Moss Landing Power Plant

Project Number: 631234956
Project Manager: Ernie Bloecher

Water Analysis (General Chemistry)

BCL Sample ID:	1832894-04	Client Sample Name: W-13, 10/16/2018 12:10:00PM, Paul Weinhardt					ul Weinhardt		
Constituent		Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Ammonia as N		ND	mg/L	0.10	0.018	EPA-350.1	0.023		1

	Run						QC				
Run #	Method	Prep Date	Date/Time	Analyst	Instrument	Dilution	Batch ID				
1	EPA-350.1	10/31/18 15:26	11/01/18 11:35	JMH	SC-1	1	B028869				

Report ID: 1000812178 4100 Atlas Court Bakersfield, CA 93308 (661) 327-4911 FAX (661) 327-1918 www.bclabs.com Page 13 of 25



Dynegy/Moss Landing Power Plant Highway 1 and Dolan Road/ P.O. Box 690

Moss Landing, CA 95039-0690

Reported: 11/01/2018 12:50

Project: Dynegy/Moss Landing Power Plant

Project Number: 631234956 Project Manager: Ernie Bloecher

Metals Analysis

BCL Sample ID:	1832894-04	Client Sampl	e Name:	W-13, 10	W-13, 10/16/2018 12:10:00PM, Paul Weinhardt						
Constituent		Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #		
Hexavalent Chromium		3.0	ug/L	0.20	0.031	EPA-218.6	ND		1		
Dissolved Barium		0.041	mg/L	0.0010	0.000066	EPA-200.8	ND		2		
Dissolved Chromium		0.0035	mg/L	0.0030	0.00015	EPA-200.8	ND		2		
Dissolved Cobalt		0.00026	mg/L	0.0010	0.000011	EPA-200.8	0.000020	J	2		
Dissolved Copper		0.00079	mg/L	0.0020	0.00032	EPA-200.8	ND	J	2		
Dissolved Molybdenun	n	0.00064	mg/L	0.0010	0.000033	EPA-200.8	0.000090	J	2		
Dissolved Nickel		0.012	mg/L	0.0020	0.00015	EPA-200.8	ND		2		
Dissolved Vanadium		0.0043	mg/L	0.0030	0.00039	EPA-200.8	ND		2		
Dissolved Zinc		ND	mg/L	0.0050	0.0022	EPA-200.8	ND		2		

			Run				
Run#	Method	Prep Date	Date/Time	Analyst	Instrument	Dilution	Batch ID
1	EPA-218.6	10/19/18 01:00	10/19/18 11:33	SAV	IC-4	1	B027832
2	EPA-200.8	10/22/18 09:00	10/23/18 14:17	ARD	PE-EL3	1	B027975

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Reported: 11/01/2018 12:50

Project: Dynegy/Moss Landing Power Plant

Project Number: 631234956 Project Manager: Ernie Bloecher

Water Analysis (General Chemistry)

BCL Sample ID:	1832894-05	Client Sampl	e Name:	W-14-R, 1	0/17/2018	8:56:00AM, F	Paul Weinhardt		
Constituent		Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Ammonia as N		ND	mg/L	0.10	0.018	EPA-350.1	0.023		1

	Run						QC				
Run #	Method	Prep Date	Date/Time	Analyst	Instrument	Dilution	Batch ID				
1	EPA-350.1	10/31/18 15:26	11/01/18 11:35	JMH	SC-1	1	B028869				

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Dynegy/Moss Landing Power Plant Highway 1 and Dolan Road/ P.O. Box 690

Moss Landing, CA 95039-0690

Reported: 11/01/2018 12:50

Project: Dynegy/Moss Landing Power Plant

Project Number: 631234956 Project Manager: Ernie Bloecher

Metals Analysis

BCL Sample ID:	1832894-05	Client Sample	e Name:	W-14-R,	10/17/2018	8:56:00AM, P	aul Weinhardt		
Constituent		Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run#
Hexavalent Chromium		5.3	ug/L	0.20	0.031	EPA-218.6	ND		1
Dissolved Barium		0.059	mg/L	0.0010	0.000066	EPA-200.8	ND		2
Dissolved Chromium		0.0053	mg/L	0.0030	0.00015	EPA-200.8	ND		2
Dissolved Cobalt		0.000016	mg/L	0.0010	0.000011	EPA-200.8	0.000020	J	2
Dissolved Copper		0.00063	mg/L	0.0020	0.00032	EPA-200.8	ND	J	2
Dissolved Molybdenum	1	0.00062	mg/L	0.0010	0.000033	EPA-200.8	0.000090	J	2
Dissolved Nickel		0.0069	mg/L	0.0020	0.00015	EPA-200.8	ND		2
Dissolved Vanadium		0.0034	mg/L	0.0030	0.00039	EPA-200.8	ND		2
Dissolved Zinc		ND	mg/L	0.0050	0.0022	EPA-200.8	ND		2

			Run		QC		
Run #	Method	Prep Date	Date/Time	Analyst	Instrument	Dilution	Batch ID
1	EPA-218.6	10/19/18 01:00	10/19/18 11:42	SAV	IC-4	1	B027832
2	EPA-200.8	10/22/18 09:00	10/23/18 14:21	ARD	PE-EL3	1	B027975

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Dynegy/Moss Landing Power Plant Highway 1 and Dolan Road/ P.O. Box 690

Moss Landing, CA 95039-0690

Reported: 11/01/2018 12:50

Project: Dynegy/Moss Landing Power Plant

Project Number: 631234956 Project Manager: Ernie Bloecher

Water Analysis (General Chemistry)

BCL Sample ID:	1832894-06	Client Sample	W-15, 10/	17/2018	9:10:00AM, Paul	Weinhardt			
Constituent		Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Ammonia as N		0.025	mg/L	0.10	0.018	EPA-350.1	0.023	J	1

			Run				QC	
Run #	Method	Prep Date	Date/Time	Analyst	Instrument	Dilution	Batch ID	
1	EPA-350.1	10/31/18 15:26	11/01/18 11:37	JMH	SC-1	1	B028869	•

Page 17 of 25 Report ID: 1000812178



Reported: 11/01/2018 12:50

Project: Dynegy/Moss Landing Power Plant

Project Number: 631234956 Project Manager: Ernie Bloecher

Metals Analysis

BCL Sample ID:	1832894-06	Client Sample	e Name:	W-15, 10	/17/2018 9	:10:00AM, Pau	l Weinhardt		
Constituent		Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Hexavalent Chromium		5.1	ug/L	0.20	0.031	EPA-218.6	ND		1
Dissolved Barium		0.058	mg/L	0.0010	0.000066	EPA-200.8	ND		2
Dissolved Chromium		0.0054	mg/L	0.0030	0.00015	EPA-200.8	ND		2
Dissolved Cobalt		0.000015	mg/L	0.0010	0.000011	EPA-200.8	0.000020	J	2
Dissolved Copper		0.00063	mg/L	0.0020	0.00032	EPA-200.8	ND	J	2
Dissolved Molybdenum	1	0.00061	mg/L	0.0010	0.000033	EPA-200.8	0.000090	J	2
Dissolved Nickel		0.0068	mg/L	0.0020	0.00015	EPA-200.8	ND		2
Dissolved Vanadium		0.0033	mg/L	0.0030	0.00039	EPA-200.8	ND		2
Dissolved Zinc		ND	mg/L	0.0050	0.0022	EPA-200.8	ND		2

			Run				QC
Run #	Method	Prep Date	Date/Time	Analyst	Instrument	Dilution	Batch ID
1	EPA-218.6	10/19/18 01:00	10/19/18 11:52	SAV	IC-4	1	B027832
2	EPA-200.8	10/22/18 09:00	10/23/18 14:24	ARD	PE-EL3	1	B027975

Report ID: 1000812178

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Reported: 11/01/2018 12:50

Project: Dynegy/Moss Landing Power Plant

Project Number: 631234956
Project Manager: Ernie Bloecher

Water Analysis (General Chemistry)

Quality Control Report - Method Blank Analysis

Constituent	QC Sample ID	MB Result	Units	PQL	MDL	Lab Quals
QC Batch ID: B028869						
Ammonia as N	B028869-BLK1	0.022600	mg/L	0.10	0.018	J

Report ID: 1000812178 4100 Atlas Court Bakersfield, CA 93308 (661) 327-4911 FAX (661) 327-1918 www.bclabs.com Page 19 of 25



Reported: 11/01/2018 12:50

Project: Dynegy/Moss Landing Power Plant

Project Number: 631234956
Project Manager: Ernie Bloecher

Water Analysis (General Chemistry)

Quality Control Report - Laboratory Control Sample

Constituent	QC Sample ID	Type	Result	Spike Level	Units	Percent Recovery	RPD	Control I Percent Recovery	Lab Quals	
QC Batch ID: B028869										
Ammonia as N	B028869-BS1	LCS	1.0240	1.0000	mg/L	102		90 - 110		

Report ID: 1000812178 4100 Atlas Court Bakersfield, CA 93308 (661) 327-4911 FAX (661) 327-1918 www.bclabs.com Page 20 of 25



Dynegy/Moss Landing Power Plant

Highway 1 and Dolan Road/ P.O. Box 690

Moss Landing, CA 95039-0690

Reported: 11/01/2018 12:50

Project: Dynegy/Moss Landing Power Plant

Project Number: 631234956
Project Manager: Ernie Bloecher

Water Analysis (General Chemistry)

Quality Control Report - Precision & Accuracy

									Cont	rol Limits	
		Source	Source		Spike			Percent		Percent	Lab
Constituent	Type	Sample ID	Result	Result	Added	Units	RPD	Recovery	RPD	Recovery	Quals
QC Batch ID: B028869	Use	d client samp	ole: Y - Des	cription: W-	11, 10/16/20	18 09:23					
Ammonia as N	DUP	1832893-02	0.020400	ND		mg/L			10		
	MS	1832893-02	0.020400	1.1189	1.1111	mg/L		98.9		90 - 110	
	MSD	1832893-02	0.020400	1.1230	1.1111	mg/L	0.4	99.2	10	90 - 110	

Report ID: 1000812178 4100 Atlas Court Bakersfield, CA 93308 (661) 327-4911 FAX (661) 327-1918 www.bclabs.com Page 21 of 25



Reported: 11/01/2018 12:50

Project: Dynegy/Moss Landing Power Plant

Project Number: 631234956 Project Manager: Ernie Bloecher

Metals Analysis

Quality Control Report - Method Blank Analysis

Constituent	QC Sample ID	MB Result	Units	PQL	MDL	Lab Quals
QC Batch ID: B027832						
Hexavalent Chromium	B027832-BLK1	ND	ug/L	0.20	0.031	
QC Batch ID: B027975						
Dissolved Barium	B027975-BLK1	ND	mg/L	0.0010	0.000066	
Dissolved Chromium	B027975-BLK1	ND	mg/L	0.0030	0.00015	
Dissolved Cobalt	B027975-BLK1	0.000020000	mg/L	0.0010	0.000011	J
Dissolved Copper	B027975-BLK1	ND	mg/L	0.0020	0.00032	
Dissolved Molybdenum	B027975-BLK1	0.000090000	mg/L	0.0010	0.000033	J
Dissolved Nickel	B027975-BLK1	ND	mg/L	0.0020	0.00015	
Dissolved Vanadium	B027975-BLK1	ND	mg/L	0.0030	0.00039	
Dissolved Zinc	B027975-BLK1	ND	mg/L	0.0050	0.0022	

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Reported: 11/01/2018 12:50

Project: Dynegy/Moss Landing Power Plant

Project Number: 631234956 Project Manager: Ernie Bloecher

Metals Analysis

Quality Control Report - Laboratory Control Sample

	_		-		•		•				
				Spike		Percent		Control I	<u>imits</u>	Lab	
Constituent	QC Sample ID	Type	Result	Level	Units	Recovery	RPD	Recovery	RPD	Quals	
QC Batch ID: B027832											
Hexavalent Chromium	B027832-BS1	LCS	20.891	20.000	ug/L	104		90 - 110			
QC Batch ID: B027975											
Dissolved Barium	B027975-BS1	LCS	0.038850	0.040000	mg/L	97.1		85 - 115			
Dissolved Chromium	B027975-BS1	LCS	0.039704	0.040000	mg/L	99.3		85 - 115			
Dissolved Cobalt	B027975-BS1	LCS	0.040285	0.040000	mg/L	101		85 - 115			
Dissolved Copper	B027975-BS1	LCS	0.10449	0.10000	mg/L	104		85 - 115			
Dissolved Molybdenum	B027975-BS1	LCS	0.038854	0.040000	mg/L	97.1		85 - 115			
Dissolved Nickel	B027975-BS1	LCS	0.10187	0.10000	mg/L	102		85 - 115			
Dissolved Vanadium	B027975-BS1	LCS	0.039320	0.040000	mg/L	98.3		85 - 115			
Dissolved Zinc	B027975-BS1	LCS	0.096721	0.10000	mg/L	96.7		85 - 115			

Report ID: 1000812178 4100 Atlas Court Bakersfield, CA 93308 (661) 327-4911 FAX (661) 327-1918 www.bclabs.com Page 23 of 25



Dynegy/Moss Landing Power Plant Reported: 11/01/2018 12:50

Project: Dynegy/Moss Landing Power Plant Highway 1 and Dolan Road/ P.O. Box 690 Moss Landing, CA 95039-0690

Project Number: 631234956 Project Manager: Ernie Bloecher

Metals Analysis

Quality Control Report - Precision & Accuracy

									Cont	rol Limits	
		Source	Source		Spike			Percent		Percent	Lab
Constituent	Туре	Sample ID	Result	Result	Added	Units	RPD	Recovery	RPD	Recovery	Quals
00 D-4-1- ID- D007000	Llee	nd client cam	nle: V - Dec	cription: W-2	D D 10/16/2	018 12:54					
QC Batch ID: B027832 Hexavalent Chromium			1.5110	1.5000	2-14, 10/10/2				10		
Hexavalent Chromium	DUP	1832894-01			00.000	ug/L	0.7	07.5	10	00 440	
	MS	1832894-01	1.5110	21.200	20.202	ug/L		97.5	40	90 - 110	
	MSD	1832894-01	1.5110	22.148	20.202	ug/L	4.4	102	10	90 - 110	
QC Batch ID: B027975	Use	d client sam	ple: Y - Des	cription: W-	10, 10/17/20	18 07:57					
Dissolved Barium	DUP	1832894-03	0.058314	0.058135		mg/L	0.3		20		
	MS	1832894-03	0.058314	0.096024	0.040816	mg/L		92.4		70 - 130	
	MSD	1832894-03	0.058314	0.097941	0.040816	mg/L	2.0	97.1	20	70 - 130	
Dissolved Chromium	DUP	1832894-03	0.0059310	0.0057350		mg/L	3.4		20		
	MS	1832894-03	0.0059310	0.043971	0.040816	mg/L		93.2		70 - 130	
	MSD	1832894-03	0.0059310	0.043783	0.040816	mg/L	0.4	92.7	20	70 - 130	
Dissolved Cobalt	DUP	1832894-03	0.000049000	0.000047000		mg/L	4.2		20		J
	MS	1832894-03	0.000049000	0.038162	0.040816	mg/L		93.4		70 - 130	
	MSD	1832894-03	0.000049000	0.037866	0.040816	mg/L	8.0	92.7	20	70 - 130	
Dissolved Copper	DUP	1832894-03	0.00079100	0.00080000		mg/L	1.1		20		J
	MS	1832894-03	0.00079100	0.10855	0.10204	mg/L		106		70 - 130	
	MSD	1832894-03	0.00079100	0.10321	0.10204	mg/L	5.0	100	20	70 - 130	
Dissolved Molybdenum	DUP	1832894-03	0.00053900	0.00054700		mg/L	1.5		20		J
	MS	1832894-03	0.00053900	0.042382	0.040816	mg/L		103		70 - 130	
	MSD	1832894-03	0.00053900	0.042815	0.040816	mg/L	1.0	104	20	70 - 130	
Dissolved Nickel	DUP	1832894-03	0.0023430	0.0022620		mg/L	3.5		20		
	MS	1832894-03	0.0023430	0.097420	0.10204	mg/L		93.2		70 - 130	
	MSD	1832894-03	0.0023430	0.096902	0.10204	mg/L	0.5	92.7	20	70 - 130	
Dissolved Vanadium	DUP	1832894-03	0.0030560	0.0030250		mg/L	1.0		20		
	MS	1832894-03	0.0030560	0.042203	0.040816	mg/L		95.9		70 - 130	
	MSD	1832894-03	0.0030560	0.041357	0.040816	mg/L	2.0	93.8	20	70 - 130	
Dissolved Zinc	DUP	1832894-03	ND	ND		mg/L			20		
	MS	1832894-03	ND	0.11128	0.10204	mg/L		109		70 - 130	
	MSD	1832894-03	ND	0.10687	0.10204	mg/L	4.0	105	20	70 - 130	

4100 Atlas Court Bakersfield, CA 93308 (661) 327-4911 FAX (661) 327-1918 www.bclabs.com Page 24 of 25 Report ID: 1000812178



Dynegy/Moss Landing Power Plant

Highway 1 and Dolan Road/ P.O. Box 690

Moss Landing, CA 95039-0690

Reported: 11/01/2018 12:50

Project: Dynegy/Moss Landing Power Plant

Project Number: 631234956
Project Manager: Ernie Bloecher

Notes And Definitions

J Estimated Value (CLP Flag)

MDL Method Detection Limit

ND Analyte Not Detected

PQL Practical Quantitation Limit

Report ID: 1000812178 4100 Atlas Court Bakersfield, CA 93308 (661) 327-4911 FAX (661) 327-1918 www.bclabs.com



Date of Report: 11/28/2018

Ernie Bloecher

Dynegy/Moss Landing Power Plant Highway 1 and Dolan Road/ P.O. Box 690 Moss Landing, CA 95039-0690

Client Project: 631234956 Verification Samples Notebook#2

Dynegy/Moss Landing Power Plant **BCL Project:**

1836611 BCL Work Order: B323492 Invoice ID:

Enclosed are the results of analyses for samples received by the laboratory on 11/21/2018. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Contact Person: Kerrie Vaughan

Client Services

Stuart Buttram **Technical Director**

Certifications: CA ELAP #1186; NV #CA00014; OR ELAP #4032-001; AK UST101

Report ID: 1000823408



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Report ID: 1000823408



Chain of Custody and Cooler Receipt Form for 1836611

Project Name: Dynegy / Moss Landing Power Plant	Aos Landing Power Plant	Circle, Suite 3.	. Sa	cramento,	Ca 95834	0	i I	Analysis Requested	sted	Lab:	Lab: BC Laboratory, Bakersfield	ratory, Ba	kersfield
Anged, Number: 031294950, 4m Quarter 2018 REPORT (ATTON Samples Notebook 42 Report to Site Manager: Ernie Bloecher /831-633-6786 Company: Dynegy / Moss Landing Power Plant Address: Highway I and Dolan Road, Moss Landing, Ca	250/ 4th Quarter 2018 2s Notebook #2 rnie Bloecher /831-633 s Landing Power Plant Dolan Road, Moss La	-6786 nding, Ca	sanieta										
CC Report: sheila.richgels@aptim.com cassandra.tremblay@aptim.com erik.korsmo@aptim.com Sampler's Signature:	im.com	THE WAY	umber of Cor	folybdenum field filtered)						10000000000000000000000000000000000000			
Sample 2	\vdash	Sample	-	12	+							KEM	Kemarks Container Tener
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Date/Time	Date/Time	Τ											

Report ID: 1000823408 Page 3 of 13



Chain of Custody and Cooler Receipt Form for 1836611 Page 2 of 2

Submission #: 18-366	11		COOLER	NEOEII I	TONIN			Pag		Of/_
SHIPPING INFO				S	HIPPING	CONTAI	NFR		FREE LIG	OIIID
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Refrigerant: Ice Blue Ice	□ Non	e 🗆	Other 🗆	Comm	nents:			7		
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All samples received? Yes Ø No □	All samples						tion(s) mate	th COC?	Yes D No	0
COC Received	missivity: _	97	Container:	Dhal	Thermor	neter ID: _	274	Date/Tir	ne 11.2	1.18
©YES □ NO	Temperature		$\wedge \wedge$	1.	(6.0		Analyst	300	09:10
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SAMPLE CONTAINERS	11	2	3	4	- 6	6	7	8	9	10
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40z / 80z / 160z PE UNPRES										
2oz Cr**										
QT INORGANIC CHEMICAL METALS			-							
INORGANIC CHEMICAL METALS 402 / 802 (16)	D (4	A	A	A						
PT CYANIDE		-			'					
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PT TOTAL ORGANIC CARBON					ļ				-	
PT CHEMICAL OXYGEN DEMAND					ļ				-	
PIA PHENOLICS		-	-		-					
40ml VOA VIAL TRAVEL BLANK						ļ				
40ml VOA VIAL									-	-
QT EPA 1664		-	-		ļ		-	-		+
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RADIOLOGICAL	-	+	_			-	-	-	-	-
BACTERIOLOGICAL		+	-				-		-	-
60 ml VOA VIAL- 504		+	 	1						+
QT EPA 508/608/8080	+	+	 	<u> </u>					-	+
QT EPA 515.1/8150	-	-	1				-	 	ļ	
QT EPA 525			 						-	+
QT EPA 525 TRAVEL BLANK		+								
10ml EPA 547		+	-							
40ml EPA 531.1		-								-
Soz EPA 548	-								-	
OT EPA 549		+							-	
OT EPA 8015M		-								
OT EPA 8270			-						-	-
Soz/16ox/32ox AMBER	-		-							-
Soz / 16oz / 32oz JAR	-	-	-		-	-				-
SOIL SLEEVE	+	-			-	-	-	-		-
CB VIAL	+	-	-	-		-	-			-
PLASTIC BAG	_	-	-		 					-
TEDLAR BAG		-								-
ERROUS IRON	-	-								-
NCORE		-	-							-
MART KIT	-	-								-
UMMA CANISTER		1			I	I	1	1	1	1

Report ID: 1000823408



Dynegy/Moss Landing Power Plant

Highway 1 and Dolan Road/ P.O. Box 690

Moss Landing, CA 95039-0690

11/28/2018 13:03 Reported:

Project: Dynegy/Moss Landing Power Plant

Project Number: 631234956 Verification Samples Notebook#2

Project Manager: Ernie Bloecher

Laboratory / Client Sample Cross Reference

Laboratory	Client Sample Informati	Dn		
1836611-01	COC Number:		Receive Date:	11/21/2018 09:10
	Project Number:		Sampling Date:	11/19/2018 12:25
	Sampling Location:		Sample Depth:	
	Sampling Point:	W-13 Ver A	Lab Matrix:	Water
	Sampled By:	Paul Weinhardt	Sample Type:	Water
			Metal Analysis: 1-F	ield Filtered and
			Acidified	
1836611-02	COC Number:		Receive Date:	11/21/2018 09:10
	Project Number:		Sampling Date:	11/19/2018 12:28
	Sampling Location:		Sample Depth:	
	Sampling Point:	W-13 Ver B	Lab Matrix:	Water
	Sampled By:	Paul Weinhardt	Sample Type:	Water
			Metal Analysis: 1-F	ield Filtered and
			Acidified	
1836611-03	COC Number:		Receive Date:	11/21/2018 09:10
	Project Number:		Sampling Date:	11/19/2018 00:00
	Sampling Location:		Sample Depth:	
	Sampling Point:	ТВ	Lab Matrix:	Water
	Sampled By:	Paul Weinhardt	Sample Type:	Trip Blank
			Metal Analysis: 1-F	ield Filtered and
			Acidified	
1836611-04	COC Number:		Receive Date:	11/21/2018 09:10
	Project Number:		Sampling Date:	11/19/2018 12:36
	Sampling Location:		Sample Depth:	
	Sampling Point:	FB	Lab Matrix:	Water
	Sampled By:	Paul Weinhardt	Sample Type:	Water
	 		Metal Analysis: 1-F	ield Filtered and
			Acidified	

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Reported: 11/28/2018 13:03

Project: Dynegy/Moss Landing Power Plant

Project Number: 631234956 Verification Samples Notebook#2

Project Manager: Ernie Bloecher

Metals Analysis

BCL Sample ID:	1836611-01	Client Sampl	e Name:	W-13 Ver	A, 11/19/20	18 12:25:00F	dt		
Constituent		Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run#
Dissolved Molybdenu	m	0.00060	mg/L	0.0010	0.000033	EPA-200.8	0.000051	J	1

			Run				QC	
Run#	Method	Prep Date	Date/Time	Analyst	Instrument	Dilution	Batch ID	
1	EPA-200.8	11/27/18 06:00	11/27/18 19:40	ARD	PE-EL4	1	B030812	

Page 6 of 13 Report ID: 1000823408



Reported: 11/28/2018 13:03

Project: Dynegy/Moss Landing Power Plant

Project Number: 631234956 Verification Samples Notebook#2

Project Manager: Ernie Bloecher

Metals Analysis

BCL Sample ID:	1836611-02	Client Sample	e Name:	W-13 Ver	B, 11/19/20	18 12:28:00F	dt		
Constituent		Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run#
Dissolved Molybdenur	n	0.00056	mg/L	0.0010	0.000033	EPA-200.8	0.000051	J	1

			Run					
Run #	Method	Prep Date	Date/Time	Analyst	Instrument	Dilution	Batch ID	
1	EPA-200.8	11/27/18 06:00	11/27/18 19:43	ARD	PE-EL4	1	B030812	

Page 7 of 13 Report ID: 1000823408



Dynegy/Moss Landing Power Plant Highway 1 and Dolan Road/ P.O. Box 690

Moss Landing, CA 95039-0690

Reported: 11/28/2018 13:03

Project: Dynegy/Moss Landing Power Plant

Project Number: 631234956 Verification Samples Notebook#2

Project Manager: Ernie Bloecher

Metals Analysis

BCL Sample ID:	1836611-03	Client Sample	ent Sample Name: TB, 11/19/2018 12:00:00AM, Paul Weinhardt						
Constituent		Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Dissolved Molybdenum		ND	mg/L	0.0010	0.000033	EPA-200.8	0.000051	_	1

			Run				QC	
Run#	Method	Prep Date	Date/Time	Analyst	Instrument	Dilution	Batch ID	
1	EPA-200.8	11/27/18 06:00	11/27/18 19:46	ARD	PE-EL4	1	B030812	

Page 8 of 13 Report ID: 1000823408



Reported: 11/28/2018 13:03

Project: Dynegy/Moss Landing Power Plant

Project Number: 631234956 Verification Samples Notebook#2

Project Manager: Ernie Bloecher

Metals Analysis

BCL Sample ID:	1836611-04	Client Sample	FB, 11/19/2018 12:36:00PM, Paul Weinhardt						
Constituent		Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Dissolved Molybdenum		ND	mg/L	0.0010	0.000033	EPA-200.8	0.000051		1

			Run				QC	
Run#	Method	Prep Date	Date/Time	Analyst	Instrument	Dilution	Batch ID	
1	EPA-200.8	11/27/18 06:00	11/27/18 19:50	ARD	PE-EL4	1	B030812	

Page 9 of 13 Report ID: 1000823408



Dynegy/Moss Landing Power Plant Highway 1 and Dolan Road/ P.O. Box 690

Moss Landing, CA 95039-0690

Reported: 11/28/2018 13:03

Project: Dynegy/Moss Landing Power Plant

Project Number: 631234956 Verification Samples Notebook#2

Project Manager: Ernie Bloecher

Metals Analysis

Quality Control Report - Method Blank Analysis

Constituent	QC Sample ID	MB Result	Units	s PQL		Lab Quals
QC Batch ID: B030812						
Dissolved Molybdenum	B030812-BLK1	0.000051000	mg/L	0.0010	0.000033	J

Report ID: 1000823408 4100 Atlas Court Bakersfield, CA 93308 (661) 327-4911 FAX (661) 327-1918 www.bclabs.com Page 10 of 13



Dynegy/Moss Landing Power Plant

Highway 1 and Dolan Road/ P.O. Box 690

Moss Landing, CA 95039-0690

Reported: 11/28/2018 13:03

Project: Dynegy/Moss Landing Power Plant

Project Number: 631234956 Verification Samples Notebook#2

Project Manager: Ernie Bloecher

Metals Analysis

Quality Control Report - Laboratory Control Sample

Constituent	QC Sample ID	Type	Result	Spike Level	Units	Percent Recovery	RPD	Control I Percent Recovery	Lab Quals
QC Batch ID: B030812									
Dissolved Molybdenum	B030812-BS1	LCS	0.040793	0.040000	mg/L	102		85 - 115	

Report ID: 1000823408 4100 Atlas Court Bakersfield, CA 93308 (661) 327-4911 FAX (661) 327-1918 www.bclabs.com Page 11 of 13



Dynegy/Moss Landing Power Plant

Highway 1 and Dolan Road/ P.O. Box 690

Moss Landing, CA 95039-0690

Reported: 11/28/2018 13:03

Project: Dynegy/Moss Landing Power Plant

Project Number: 631234956 Verification Samples Notebook#2

Project Manager: Ernie Bloecher

Metals Analysis

Quality Control Report - Precision & Accuracy

							Control Limits				
		Source	Source		Spike			Percent		Percent	Lab
Constituent	Type	Sample ID	Result	Result	Added	Units	RPD	Recovery	RPD	Recovery	Quals
QC Batch ID: B030812	Use	d client sam	ple: N								
Dissolved Molybdenum	DUP	1836619-01	0.00040300	0.00040200		mg/L	0.2		20		J
	MS	1836619-01	0.00040300	0.042390	0.040816	mg/L		103		70 - 130	
	MSD	1836619-01	0.00040300	0.043660	0.040816	mg/L	3.0	106	20	70 - 130	

Report ID: 1000823408 4100 Atlas Court Bakersfield, CA 93308 (661) 327-4911 FAX (661) 327-1918 www.bclabs.com Page 12 of 13



Dynegy/Moss Landing Power Plant

Highway 1 and Dolan Road/ P.O. Box 690

Project: Dynegy/Moss Landing Power Plant Moss Landing, CA 95039-0690 Project Number: 631234956 Verification Samples Notebook#2

Project Manager: Ernie Bloecher

11/28/2018 13:03

Reported:

Notes And Definitions

MDL

Estimated Value (CLP Flag)

Method Detection Limit ND Analyte Not Detected

PQL Practical Quantitation Limit

4100 Atlas Court Bakersfield, CA 93308 (661) 327-4911 FAX (661) 327-1918 www.bclabs.com Page 13 of 13 Report ID: 1000823408

APPENDIX D CHAIN-OF-CUSTODY RECORD

APTIM

APTIM

CHAIN OF CUSTODY / LABORATORY ANALYSIS REQUEST FORM

APTIM Environmental & Infrastructure

18.32893

Purchase Order: Direct Bill to Dynegy

180 Promenade Circle, Suite 320, Sacramento, Ca 95834 Lab: BC Laboratory, Bakersfield Project Name: Dynegy / Moss Landing Power Plant Analysis Requested Project Number: 631234956/4th Quarter 2018 **Notebook #1 Ground Water Samples** Diss Metals (Field Filtered) Field Filtered) (5-day Hold) Report to Site Manager: Ernie Bloecher / 831-633-6786 Diss Chrom VI (218.6) Company: Dynegy / Moss Landing Power Plant Address: Highway 1 and Dolan Road, Moss Landing, Ca 95039 Ammonia-Nitrogen CC Rpt: sheila.richgels@aptim.com *See list below. cassandra.tremblav@aptim.com erik.korsmo@aptim.com Number of Sampler's Signature: EPA REMARKS Sample 2018 LAB Sample Container Types 250ml Plst 50ml Plst 16oz Plst I.D. I.D. Date Time Matrix HNO3 H2SO4 Preservations Borate and 1012 10% W-1-R 3 Water 1 1 SNORT HOLDING 923 TIME -2 W-11 3 1 Water 1 1 SS 3 1103 3 W-12 Water 1 1 1 MEAS COT 4 3 TB 1 Water 1 1 A31 Water FB 3 1 1 1 DISTRIB ITION CHKRY RELINQUISHED BY REPORT REQUIREMENTS RELINOUISHED BY RECEIVED BY TURNAROUND RECEIVED BY REQUIREMENTS I. Routine Report X II. Report (includes DUP, MS Signature 48 hr X Standard (~10-15 working days) MSD, as required, may be Printed Name Printed Name Printed Name charged as samples) Printed Name Provide Verbal Preliminary Results STEPHED LOLE III. Data Validation Report Paul Weinhardt Provide FAX Preliminary Results Firm Firm (includes All Raw Data) Firm Firm Requested Report Date: BC USS RWOCB APTIM Date/Time 10(17/18 12:37 Date/Time 10/17/18 (MDLs/PQLs/TRACE#) Date/Time 10-17 12:37 Date/Time Special Instructions/Comments: RELINQUISHED BY RECEIVED BY BC Labs PM Kerri Vaughan *Metals, Diss (Ba, Cr, Co, Cu, Mo, Ni, V, Zn) Field Filter 4100 Atlas Court Signature Signature Bakersfield, Calif 93308 (661) 852-4281 Direct Printed Name Printed Name (661) 327-4911 Office kerrie.vaughan@bclabs.com Firm Firm Date/Time Date/Time

CHAIN OF CUSTODY / LABORATORY ANALYSIS REQUEST FORM

APTIM Environmental & Infrastructure

Date/Time

Date/Time

18.32894

Purchase Order: Direct Bill to Dynegy

Lab: BC Laboratory, Bakersfield 180 Promenade Circle, Suite 320, Sacramento, Ca 95834 Project Name: Dynegy / Moss Landing Power Plant Project Number: 631234956 / 4th Quarter 2018 Analysis Requested Diss Metals (Field Filtered) (Field Filtered) (5-day Hold) **Notebook #2 Ground Water Samples** Report to Site Manager: Ernie Bloecher / 831-633-6786 Number of Containers Diss Chrom VI (218.6) Company: Dynegy / Moss Landing Power Plant Ammonia-Nitrogen Address: Highway 1 and Dolan Road, Moss Landing, Ca 95039 *See list below. CC Report: sheila.richgels@aptim.com cassandra.tremblay@aptim.com (EPA 350.3) erik.korsmo@aptim.com Sampler's Signature: REMARKS Container Types 2018 LAB Sample 250ml Plst 50ml Plst 16oz Plst Sample Preservations H2SO4 I.D. Date Time I.D. Matrix HNO3 Borate 3 1 1 W-2-R Water 1 TIME SMORT HOLDING 3 1 1 1 Water W-3-R Cr+6/ SS NO OP MS/MSD metals NO 57 Water 4 2 1 1 W-10* **MBAS** COT 3 1 1 1 BOD W-13 Water Dd P56 1 Water 3 1 W-14-R DISTRIBUTION 10,17 1 Water 3 1 CHILBY W-15 100 SUB-OUT REPORT REQUIREMENTS TURNAROUND RELINQUISHED BY RECEIVED BY RECEIVED BY RELINQUISHED BY I. Routine Report REQUIREMENTS X II. Report (includes DUP, MS Signatur 48 hr 5 day MSD, as required, may be X Standard (~10-15 working days) charged as samples) Printed Name Provide Verbal Preliminary Results Printed Name Printed Name Printed Name III. Data Validation Report STEPHEN (DE Provide FAX Preliminary Results Paul Weinhardt (includes All Raw Data) Requested Report Date: Firm Firm RWOCB APTIM (MDLs/PQLs/TRACE#) Date/Time Date/Time 10/12/18 13:20 Date/Time 10/11/18 12:31 Date/Time 16.17.18 12:37 Special Instructions/Comments: RELINQUISHED BY RECEIVED BY BC Labs PM Kerri Vaughan 4100 Atlas Court Metals, Diss (Ba, Cr, Co, Cu, Mo, Ni, V, Zn) Field Filter Signature Signature Bakersfield, Calif 93308 For W-10, extra HNO3 bottle collected for MS/MSD. (661) 852-4281 Direct Printed Name Printed Name (661) 327-4911 Office kerrie.vaughan@bclabs.com Firm

APPENDIX E QUARTERLY SURFACE IMPOUNDMENT ACTIVITIES FOR 2018

APPENDIX E APTIM

Surface Impoundment Activities During The First Quarter 2018

STATUS AT BEGINNING OF THE QUARTER

POND	GALLONS	CONTENTS
MCWP #1	EMPTY	Rainwater
MCWP #2	EMPTY	Rainwater
MCWP #3	EMPTY	Rainwater

INFLUENTS

None: except for rainwater.

RESULTS OF INFLUENT SAMPLING

NONE.

POND TO POND TRANSFERS

NONE.

PREPARATION FOR DISCHARGES

None: except for sampling the accumulated rainwater (Sampled on 2/8/18).

DISCHARGES

None: except for 74,214 gallons of accumulated rainwater discharged during the quarter. On 2/20/18 27,800 gallons was discharged from MCWP #1 and 27,800 gallons was discharged from MCWP #2. On 3/1/18 18,614 gallons was discharged from MCWP #3.

FILTER PRESS OPERATIONS

NONE.

STATUS AT END OF THE QUARTER

POND	GALLONS	CONTENTS
MCWP #1	27,800	Rainwater
MCWP #2	27,800	Rainwater
MCWP #3	5.584	Rainwater

NOTE: The difference between the starting and the ending volumes minus the discharges and adding the influents is due to 3,801 gallons of evaporation and 139,199 gallons of rainwater.

Surface Impoundment Activities During The Second Quarter 2018

STATUS AT BEGINNING OF THE QUARTER

POND	GALLONS	CONTENTS
MCWP #1	27,800	Rainwater
MCWP #2	27,800	Rainwater
MCWP #3	5,584	Rainwater

INFLUENTS

None: except for rainwater.

RESULTS OF INFLUENT SAMPLING

NONE.

POND TO POND TRANSFERS

NONE.

PREPARATION FOR DISCHARGES

None: except for sampling the accumulated rainwater (Sampled on 4/7/18).

DISCHARGES

None: except for 66,768 gallons of accumulated rainwater discharged during the quarter. On 4/25/18 56,158 gallons was rainwater was discharged (27,800 gallons was discharged from MCWP #1, 27,800 gallons was discharged from MCWP #2, and 558 gallons was discharged from MCWP #3). On 4/27/18 10,610 gallons was discharged from MCWP #3.

FILTER PRESS OPERATIONS

NONE.

STATUS AT END OF THE QUARTER

POND	GALLONS	CONTENTS
MCWP #1	EMPTY	
MCWP #2	EMPTY	
MCWP #3	EMPTY	

NOTE: The difference between the starting and the ending volumes minus the discharges and adding the influents is due to 5,584 gallons of rainwater and 0 (zero) gallons of evaporation.

Surface Impoundment Activities During The Third Quarter 2018

Metal Cleaning Waste Impoundments 1, 2 & 3 and the Filter Press Closure process started on 7/24/2018. The activities listed below briefly describes some of the events conducted during the closure process.

STATUS AT BEGINNING OF THE QUARTER

POND	GALLONS	CONTENTS
MCWP #1	EMPTY	Rainwater
MCWP #2	EMPTY	Rainwater
MCWP #3	EMPTY	Rainwater

INFLUENTS

Waste from the Metal Cleaning Waste Pond Closure Project includes the following:

Line Flushing Water (during the week of 7/26)

- MCWP #1 received about 9,100 gallons of wastewater from flushing out lines
- MCWP #2 received about 9,100 gallons of wastewater from flushing out lines
- MCWP #3 received about 18,614 gallons of wastewater from flushing out lines

Secondary Liner Leachability Testing Water on 8/29 (Primary Liner was removed).

- MCWP #1 received 6,000 gallons of distilled water for the Secondary Liner Leachability Test
- MCWP #2 received 6,000 gallons of distilled water for the Secondary Liner Leachability Test
- MCWP #3 received 2,000 gallons of distilled water for the Secondary Liner Leachability Test

RESULTS OF INFLUENT SAMPLING

The pH range for the Line Flushing Water was 6.11 to 9.00. The pH of the distilled water for the Secondary Liner Leachability Test was 7.35.

POND TO POND TRANSFERS

NONE.

PREPARATION FOR DISCHARGES

NONE.

DISCHARGES

NONE: 37,420 gallons of filtered wastewater (described below) discharged on 8/8. The discharge pH was 7.68.

FILTER PRESS OPERATIONS

NONE: On 8/1 the wastewater that was in the ponds from flushing out lines was processed through a large portable duplex filter system into two Frac Tanks to remove any solids from the wastewater. The process removed about 25 gallons of solids (not including the polypropylene filter bags) and used about 631 gallons of firewater.

STATUS AT END OF THE QUARTER

POND	GALLONS	CONTENTS
MCWP #1	6,000	Secondary Liner Leachability Test Water *
MCWP #2	6,000	Secondary Liner Leachability Test Water *
MCWP #3	2,000	Secondary Liner Leachability Test Water *

^{*} The remaining Leachability Test Water will either evaporate or be pumped to ground with future rainwater.

Surface Impoundment Activities During The Fourth Quarter 2018

Metal Cleaning Waste Impoundments 1, 2 & 3 and the Filter Press went through the Closure process during the third quarter 2018 and will never receive wastewater again, only rainwater. Wastewater activities at the impoundments have ceased.

STATUS AT BEGINNING OF THE QUARTER

POND	GALLONS	CONTENTS
MCWP #1	6,000	Secondary Liner Leachability Test Water *
MCWP #2	6,000	Secondary Liner Leachability Test Water *
MCWP #3	2,000	Secondary Liner Leachability Test Water *

<u>INFLUENTS</u>

RAINWATER ONLY

RESULTS OF INFLUENT SAMPLING

Non Hazardous

POND TO POND TRANSFERS

NONE.

PREPARATION FOR DISCHARGES

NONE.

DISCHARGES

RAINWATER and Leachability Water

FILTER PRESS OPERATIONS

NONE:

STATUS AT END OF THE QUARTER

POND	GALLONS	CONTENTS
MCWP #1	7 feet on wall	Rain Water & Secondary Liner Leachability Test Water *
MCWP #2	7 feet on wall	Rain Water & Secondary Liner Leachability Test Water *
MCWP #3	4 feet on wall	Rain Water & Secondary Liner Leachability Test Water *

^{*.} The remaining Leachability testing water was partially evaporated and partially pumped out with rainwater.

APPENDIX F 2018 LEACHATE AND INFILTRATED GROUNDWATER RECORD

Moss Landing Power Plant First Quarter 2018

Leachate and Infiltrated Groundwater Collected From the LDCRS¹ and the GDCRS² Between the Surface Impoundment Liners No Leachate removed from any of the Surface Impoundments

		undment No. 1 lemoved from the		
DATE:	1/22/2018	Gallons:	55	
DATE:	1/25/2018	Gallons:	18	
DATE:	2/9/2018	Gallons:	20	
DATE:	3/25/2018	Gallons:	40	•
		Total gallons	133	
AVERAGE		(per day for qtr.)	1.48	-

Metal Cleaning Waste Impoundment No. 2 Tertiary Liner Infiltrated Groundwater Removed from the GDCRS²

No Infiltrated Groundwater detected or removed

Metal Cleaning Waste Impoundment No. 3 Tertiary Liner Infiltrated Groundwater Removed from the GDCRS²

DATE:	2/9/2018	Gallons:	3
		Total gallons	3
AVERAGE		(per day for qtr.)	0.03

¹Leachate Detection, Collection and Removal Systems

Note: Infiltrated Groundwater removed from in the tertiary liner GDCRS for MCWI Nos. 1 & 3 occurs through cracks in the concrete base normally during the rainy season when groundwater rises.

²Groundwater Detection, Collection and Removal Systems

Moss Landing Power Plant Second Quarter 2018

Leachate and Infiltrated Groundwater Collected From the LDCRS¹ and the GDCRS² Between the Surface Impoundment Liners No Leachate removed from any of the Surface Impoundments

			oundment No. 1 Removed from t		
-	DATE: DATE: DATE: DATE: DATE: DATE: DATE: DATE:	4/2/2018 4/3/2018 4/4/2018 4/5/2018 5/4/2018 5/14/2018 5/16/2018	Gallons: Gallons: Gallons: Gallons: Gallons: Gallons: Gallons:	110 40 130 60 40 210 220	-
	DATE: DATE: DATE: DATE:	6/1/2018 6/2/2018 6/4/2018 6/11/2018	Gallons: Gallons: Gallons: Gallons:	10 10 12 28	
=	AVERAGE		Total gallons (per day for qtr.)	9.67	

Metal Cleaning Waste Impoundment No. 2 Tertiary Liner Infiltrated Groundwater Removed from the GDCRS²

No Infiltrated Groundwater detected or removed

	Metal Cleaning Waste Impoundment No. 3 Tertiary Liner Infiltrated Groundwater Removed from the GDCRS ²			
-	DATE:	6/11/2018	Gallons:	2
			Total gallons	2
	AVERAGE		(per day for qtr.)	0.02

¹Leachate Detection, Collection and Removal Systems

Note: Infiltrated Groundwater removed from in the tertiary liner GDCRS for MCWI Nos. 1 & 3 occurs through cracks in the concrete base normally during the rainy season when groundwater rises.

²Groundwater Detection, Collection and Removal Systems

Moss Landing Power Plant Third Quarter 2018

Leachate and Infiltrated Groundwater Collected From the LDCRS¹ and the GDCRS² Between the Surface Impoundment Liners No Leachate removed from any of the Surface Impoundments

NOTE: Metal Cleaning Waste Impoundments 1, 2 & 3 Primary Liners and their LDCRSs have been removed as part of the Closure activities. The secondary liners and their LDSRSs are now the Primary Liner system. The GDCRS are now the second liner and will remain in service to deal with Perched water. Closure activities on the Metal Cleaning Waste Impoundments and Filter Press began on 7/24. No waste will be discharged to the impoundments, only rainwater will enter and be discharged.

Metal Cleaning Waste Impoundment No. 2 Tertiary Liner Infiltrated Groundwater Removed from the GDCRS²

No Infiltrated Groundwater detected or removed

Metal Cleaning Waste Impoundment No. 3 Tertiary Liner Infiltrated Groundwater Removed from the GDCRS²

DATE: 10/2/2018 <u>Gallons: 5</u>

Total gallons 5

AVERAGE (per day for qtr.) 0.06

Note: Infiltrated Groundwater removed from in the tertiary liner GDCRS for MCWI Nos. 1, 2 & 3 occurs through cracks in the concrete base normally during the rainy season when groundwater rises.

¹Leachate Detection, Collection and Removal Systems

²Groundwater Detection, Collection and Removal Systems

Moss Landing Power Plant Fourth Quarter 2018

Leachate and Infiltrated Groundwater Collected From the LDCRS¹ and the GDCRS² Between the Surface Impoundment Liners

NOTE: Metal Cleaning Waste Impoundments 1, 2 & 3 Primary Liners and their LDCRSs have been removed as part of the Closure activities. The secondary liners and their LDSRSs are now the Primary Liner system. The GDCRS are now the second liner and will remain in service to deal with Perched water. Closure activities on the Metal Cleaning Waste Impoundments and Filter Press began on 7/24. No waste will be discharged to the impoundments, only rainwater will enter and be discharged.

Metal Cleaning Waste Impoundment No. 1 Tertiary Liner Infiltrated Groundwater Removed from the GDCRS²

No Infiltrated Groundwater detected or removed

Metal Cleaning Waste Impoundment No. 2 Tertiary Liner Infiltrated Groundwater Removed from the GDCRS²

No Infiltrated Groundwater detected or removed

Metal Cleaning Waste Impoundment No. 3 Tertiary Liner Infiltrated Groundwater Removed from the GDCRS²

No Infiltrated Groundwater detected or removed

Note: Infiltrated Groundwater removed from in the tertiary liner GDCRS for MCWI Nos. 1, 2 & 3 occurs through cracks in the concrete base normally during the rainy season when groundwater rises.

¹Leachate Detection, Collection and Removal Systems

²Groundwater Detection, Collection and Removal Systems

APPENDIX G ANNUAL AND SURFACE IMPOUNDMENTS CLOSURE LINER INSPECTION REPORTS

APTIM

DYNEGY MOSS LANDING, L.L.C Moss Landing Power Plant PO BOX 690 MOSS LANDING CA 95039 831-633-6700

CERTIFIED MAIL # 7017 1450 0000 8343 8377 RETURN RECEIPT

October 30, 2018

Mr. Gary Hammond
Department of Toxic Substances Control,
Permitting Division
8800 Cal Center Drive
Sacramento, CA 95826-3200

Mr. John M. Robertson, Executive Officer Central Coast Regional Water Quality Control Board 895 Aerovista Place, Suite 101 San Luis Obispo, CA 93401

Attention: Ms. Kelsey Gerhart:

Re: 2018 Annual and Closure Surface Impoundments Liner Inspection for Dynegy Moss Landing, LLC

Dear Messrs. Hammond and Robertson:

The 2018 Annual and Closure Liner Inspection Reports for Dynegy Moss Landing, LLCs Hazardous Waste Surface Impoundment Nos. 1, 2 and 3 are attached. These reports are submitted in accordance with:

- The California Environmental Protection Agency, Department of Toxic Substances Control, Hazardous Waste Facility Permit for Moss Landing Power Plant, EPA ID No. CAT 080011653, dated September 14, 2017.
- The California Central Coast Regional Water Quality Control Board, Waste Discharge Requirements Order No. R3-2014-0029 for Moss Landing Power Plant, Hazardous Waste Surface Impoundments, July 31, 2014.

Dynegy Moss Landing, LLC has finished all the physical work following the Closure Plan. The primary liners were removed from all three Surface Impoundments so this liner inspection report is for the secondary liner, which now is the primary liner. This will be the final Liner Inspection Report pending the Closure letter from DTSC and the CCRWQCB rescinding the WDR.

Messrs. Hammond and Robertson October 30, 2018 Page 2

Electronic and hard copies are being mailed and e-mailed to the Department of Toxic Substances Control. An electronic copy is being e-mailed to the California Central Coast Regional Water Quality Control Board.

I certify under the penalty of law that this document and all attachments are prepared under my directions or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who managed 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. The results contained herein should not be construed to imply accuracy beyond the errors associated with equipment, instrumentation, or method capability, nor should the results be construed to represent an endorsement of the required testing methodology. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

If you have any questions or require additional information, please contact Ernie Bloecher, of my staff, at (831) 633-6786.

Sincerely,

REX A. LEWIS
Managing Director

Ky A Lew

Moss Landing and Oakland Power Plants

EBloecher: Attachment October 21, 2018 180808-01

Dynegy Moss Landing, LLC Highway 1 and Dolan Road PO Box 690 Moss Landing, CA 95039-0690

Attention:

Mr. Ernie Bloecher

RE: 2018 INSPECTION REPORT FOR SURFACE IMPOUNDMENTS AND ENGINEERING INSPECTIONS CERTIFICATIONS, MOSS LANDING POWER PLANT

Dear Mr. Bloecher:

This letter summarizes TBI Engineering (TBI) primary liner removal inspections of the following Class I surface impoundments at the Dynegy Moss Landing, LLC facility:

- Metal Cleaning Waste Pond No. 1 (MCWP No. 1),
- Metal Cleaning Waste Pond No. 2 (MCWP No. 2); and
- Metal Cleaning Waste Pond No. 3 (MCWP No. 3).

This letter also includes TBI's October 2018 engineering inspection certifications of the primary liner of the Class I surface impoundments (Appendix A).

1.0 BACKGROUND

The three surface impoundments at Dynegy Moss Landing, LLC were constructed in 1988 and were operating under Regional Water Quality Control Board Order No. R3-2014-0029 dated July 31, 2014 and a Department of Toxic Substances Control (DTSC) Hazardous Waste Facility Permit, EPA ID Number CAT080011653, dated September 14, 2017. According to EMCON's "Certificate Report, Waste Containment Pond Units 1-4," dated October 1988, the ponds are tripled-lined Class I surface impoundments, with an 80-mil-thick, high density polyethylene (HDPE) primary (upper) liner.

The 2017 annual inspection was performed by Tim Bauters, PhD, P.E. of TBI Engineering on December 12, 2017, and described in an inspection report dated December 22, 2017 (prepared by TBI Engineering).

In early 2018 an upper management decision was made to no longer have Power Units #6 &7, operational, as a direct consequence the "need" to have the Metal Cleaning Waste Ponds No. 1, No.2, and No. 3 functional was no longer required and closure of the Class I surface impoundment was planned. As part of closure of the Class I surface impoundments, it was conservatively contemplated to remove the primary liner from the triple-lined surface impoundment. That was the final decision and International Lining Technology out of Reno, Nevada was the liner installer selected to carefully remove, or **de-construct** the upper liner and underlying geonet with the knowledge that then exposed secondary liner will become the exposed liner which will accumulate the surface waters onto the lined surface which will be gradually pumped out via sump pumps.

2.0 INSPECTION ACTIVITIES

Tim Bauters, PhD, P.E. of TBI inspected and oversaw the de-construction of the primary liner in MCWP No.'s 1, 2, & 3 by International Lining Technology on August 20 to 22, 2018 (Appendix B has relevant photos from the de-construction activity and secondary liner inspection). A Moss Landing Power Plant

representative was also present during the de-construction and inspection activities. The ponds were emptied and cleaned before the inspection, which entailed the following:

- Viewing the liner removal from the sides by a competent liner installer company
- Visually inspecting the secondary geomembrane by closely examining it from inside the pond once the liner is removed;
- Performing a focused inspection of each of the exposed seams to check for potential separation or peeling; and
- Inspecting the perimeter batten strip connection and riser pipe penetrations.

A very small amount of clear water was present in the bottom of the ponds that did not affect the inspection of the liner.

3.0 FINDINGS, RECOMMENDED REPAIRS AND INTEGRITY VERIFICATION

The newly exposed secondary geomembrane liners in MCWP No's. 1, 2 and 3 were observed to be in excellent condition. The perimeter batten strips remained in good condition, with no signs of liner material distress, it was decided in the field to leave a small strip of primary liner present to maintain the same thickness in the "liner/geonet sandwich" as of not have to re-tighting and likely re-install all the batten strips. The secondary liner in the impoundments exhibited minor to no surficial scratching, and appeared with the exception of a few areas "brand new".

TBI observed each seam for damage and/or peeling (separation) from the panel on the secondary liner. TBI did not identify areas of interest in MCWP No. 1, 2, & 3. TBI did not identify any cracks, or areas of excessive folding or bridging. Additional observations include the following:

- MCWP No. 1 The secondary liner was found to be in excellent condition. No suspect areas were identified besides the tightening of a few bolts to secure the perimeter batten strip.
- MCWP No. 2 The secondary liner was found to be in excellent condition. No suspect areas were identified.
- MCWP No. 3 The secondary liner was found to be in excellent condition. No suspect areas were identified.

4.0 SUMMARY

Based on the results of TBI's de-construction observations and the follow-up visual inspection on MCWP No. 1, 2, & 3 the secondary liner appears to have excellent integrity. The October 2018 certification letters for MCWP No. 1, MCWP No. 2 and MCWP No. 3 (signed and stamped) are all attached to this exhibit.

The opinions and judgment expressed are based on the conditions existing at the time of inspection. TBI cannot guarantee, warranty or certify that any lining system is free from defects or totally impermeable.

Should you have any questions regarding these observations, please contact me at 650-515-0393.

TBI ENGINEERING

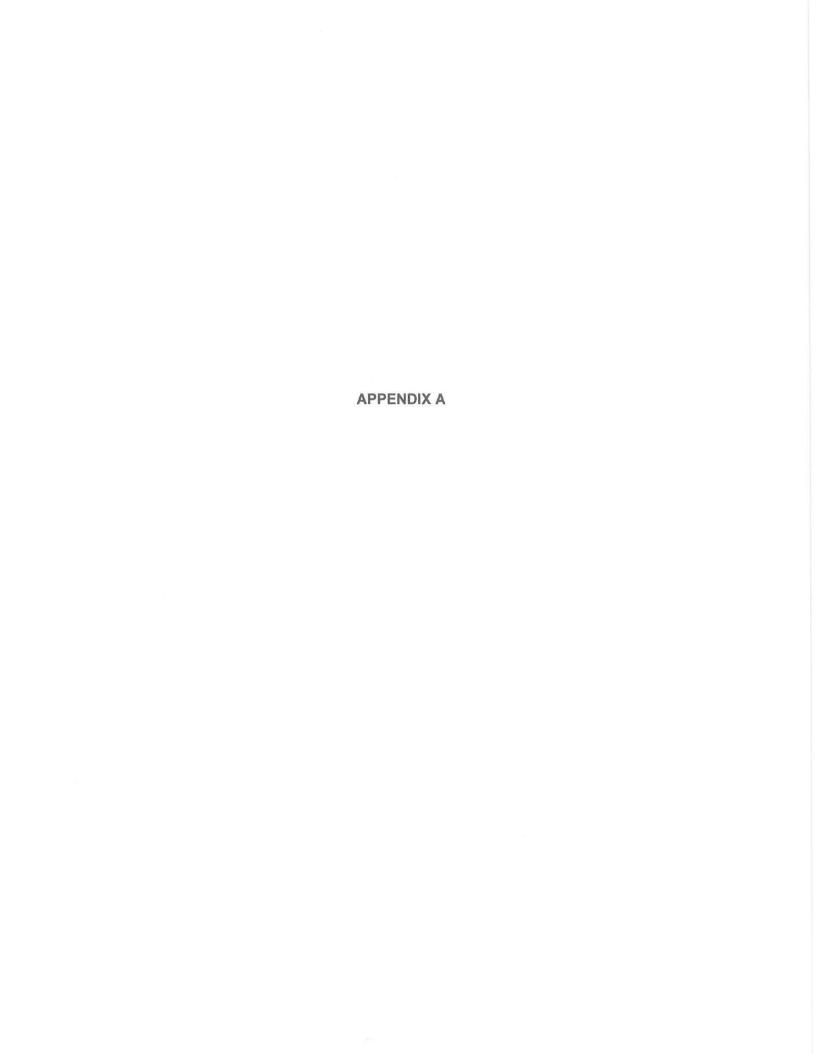
CIVIL ENVIRONMENTAL ENGINEERS

Tim Bauters, PhD, PE President

Signed a Storyer on 6x6ler 12, 2018.

Appendix A Moss Landing Power Plant Annual Engineering Inspection of Primary Liner Certifications for MCWP No. 1, MCWP No. 2., MCWP No. 3

Appendix B Relevant Photos from the Deconstruction Activity and Liner Inspection



MOSS LANDING POWER PLANT SURFACE IMPOUNDMENTS METAL CLEANING WASTE POND NO. 1 OCTOBER 2018 ENGINEERING INSPECTION OF SECONDARY LINER

References:

DTSC - Hazardous Waste Facility Permit, EPA ID Number CAT080011653,

dated September 14, 2017

CCRWQCB Order No. R3-2014-0029 dated July 31, 2014

The secondary (now the top lining system) 80-mil-thick high density polyethylene (HDPE) liner of the double lining system for Metal Cleaning Waste Pond No. 1 (MCWP No. 1) was inspected on August 22, 2018. The pond was emptied of its contents and cleaned before the inspection. The inspection found:

- No holes, tears or cracks in the liner or seams.
- No excessive folds or bridging in the liner.
- Splash sheets in place at influent pipes.
- No movement of liner at the top of the ponds at the batten attachment strip.

I certify that I visually inspected the secondary lining system (now the top lining system) for the MCWP No. 1 on August 22, 2018.

No. 74188
Exp. G.30.20 g

Tim Bauters, PhD, P.E. R.C.E. No. C 74188

Date

Signed a Storged on

MOSS LANDING POWER PLANT SURFACE IMPOUNDMENTS METAL CLEANING WASTE POND NO. 2 OCTOBER 2018 ENGINEERING INSPECTION OF SECONDARY LINER

References:

DTSC - Hazardous Waste Facility Permit, EPA ID Number CAT080011653,

dated September 14, 2017

CCRWQCB Order No. R3-2014-0029 dated July 31, 2014

The secondary (now the top lining system) 80-mil-thick high density polyethylene (HDPE) liner of the double lining system for Metal Cleaning Waste Pond No. 2 (MCWP No. 2) was inspected on August 22, 2018. The pond was emptied of its contents and cleaned before the inspection. The inspection found:

- No holes, tears or cracks in the liner or seams.
- No excessive folds or bridging in the liner.
- Splash sheets in place at influent pipes.
- No movement of liner at the top of the ponds at the batten attachment strip.

I certify that I visually inspected the secondary lining system (now the top lining system) for the MCWP No. 2 on August 22, 2018.

No. 74188 Exp. 6.30 Jois STEP

Tim Bauters, PhD, P.E. R.C.E. No. C 74188

Date

Signed a Sampes on Portoler 22, 2018.

MOSS LANDING POWER PLANT SURFACE IMPOUNDMENTS METAL CLEANING WASTE POND NO. 3 OCTOBER 2018 ENGINEERING INSPECTION OF SECONDARY LINER

References:

DTSC - Hazardous Waste Facility Permit, EPA ID Number CAT080011653,

dated September 14, 2017

CCRWQCB Order No. R3-2014-0029 dated July 31, 2014

The secondary (now the top lining system) 80-mil-thick high density polyethylene (HDPE) liner of the double lining system for Metal Cleaning Waste Pond No. 3 (MCWP No. 3) was inspected on August 22, 2018. The pond was emptied of its contents and cleaned before the inspection. The inspection found:

- No holes, tears or cracks in the liner or seams.
- No excessive folds or bridging in the liner.
- Splash sheets in place at influent pipes.
- No movement of liner at the top of the ponds at the batten attachment strip.

I certify that I visually inspected the secondary lining system (now the top lining system) for the MCWP No. 3 on August 22, 2018.

No. 74188 Exp. 6.30.27 9 Exp. GOLIFORNIA

Tim Bauters, PhD, P.E. R.C.E. No. C 74188

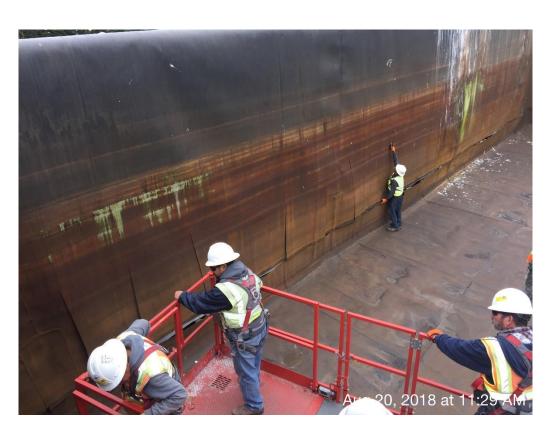
Date

Signed a Slonger

APPENDIX B



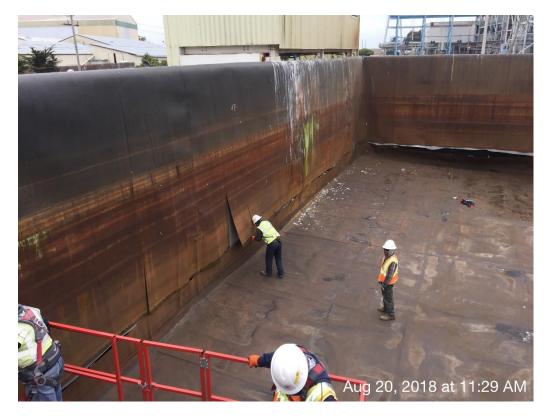
Crane is ready after weight checks to lift boom lift into the MCWP No.3



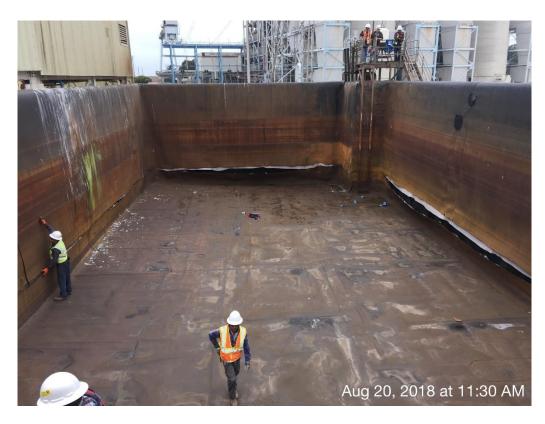
Liner crew from International Lining Technology started cutting "strips" with a hooked blade in the upper primary liner (geomembrane) as of not to damage the underlying secondary liner.

FIGURE A-1

PROJECT PHOTOGRAPHS



Liner crew gradually getting oriented and started the "de-construction" of the primary liner.



Bottom of the vertical primary liner was cut with hook blades and the liner crew gradually made vertical cuts to delineate what could be done from the bottom of MCWP No. 3

PROJECT PHOTOGRAPHS

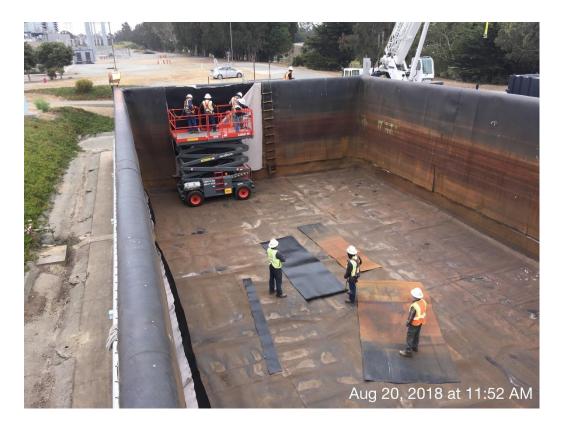


View towards the west, bottom cut made alongside the vertical walls



Vertical cuts starting on this side of the impoundment

PROJECT PHOTOGRAPHS



Cuts into the primary liner and gradually the primary liner is being de-constructed and pieces laid in the middle of the impoundment for the crane to take them out



Liner crew making nice progress with the primary liner about ½ removed and the upper geotextile overlying the geonet as well FIGURE **A-4**

PROJECT PHOTOGRAPHS



Boom lift used to make the vertical cuts in the primary liner



Detail of the batten strip, it was determined most optimal to leave the small little portion of primary liner in place and was used as a "washer" to hold the liner sandwich in place; otherwise the entire batten strip assembly would needed to be redone

FIGURE A-5 PROJECT PHOTOGRAPHS

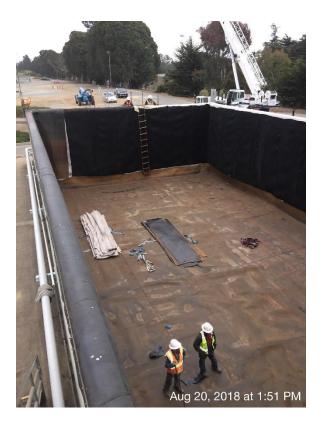


Removal of the primary liner from the top of the concrete walls



View of the removal progress

FIGURE A-7 PROJECT PHOTOGRAPHS

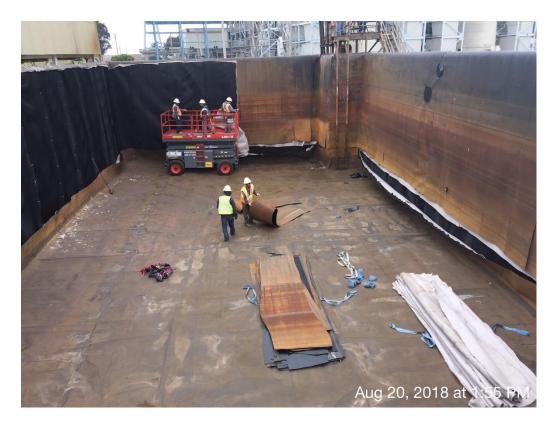


Major progress made so far today, the pieces/strips of geotextile and primary stacked in the middle of the impoundment



The geonet just started to be de-constructed as well on the eastern wall of the impoundment

FIGURE A-8 PROJECT PHOTOGRAPHS



Two laborers stacking the strips of geomembrane and geotextile to be taking out with the crane



Larger piece of primary liner in the corner removed, it will be cut into smaller strip to be hauled out of the impoundment with the crane

PROJECT PHOTOGRAPHS



View into MCWP No.2, inspection of the "secondary liner (geomembrane). Since the primary liner was removed, this liner system now becomes a double lined system



Different view into MCWP No. 2, original geomembrane roll listed, together with the length of the "panel".

PROJECT PHOTOGRAPHS



View of the MCWP No.1, as well as the dividing wall between MCWP No. 2

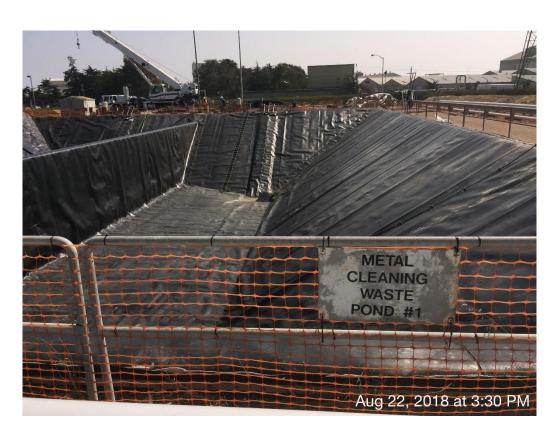


View from the corner of MCWP No. 1, original height delineations on the center concrete wall still visible

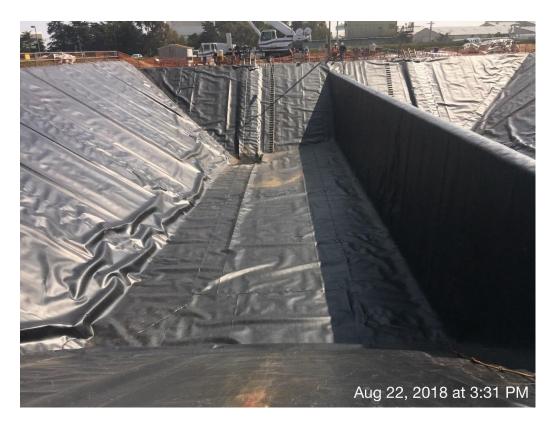
PROJECT PHOTOGRAPHS



View towards the south, into MCWP No.1



PROJECT PHOTOGRAPHS



View into MCWP No. 2 from the other side



Review of MCWP No. 2 from the outside

FIGURE A-14 PROJECT PHOTOGRAPHS



Review of MCWP No. 2 from the outside



Detail of the leak detection piping system, as removed from MCWP No. 1 and 2.

FIGURE A-15 PROJECT PHOTOGRAPHS



The pipe was sandwiched between 2 foam blocks to minimize the stress cracking of the liner surrounding the pipe



Detail of the secondary liner draped on the concrete wall

FIGURE A-16 PROJECT PHOTOGRAPHS



Detail of the sump area, minimal amount of water present to make the observations, a sacrificial piece of liner will be placed above it and a sump pump placed to evacuate the surface water that accumulate into the lined area



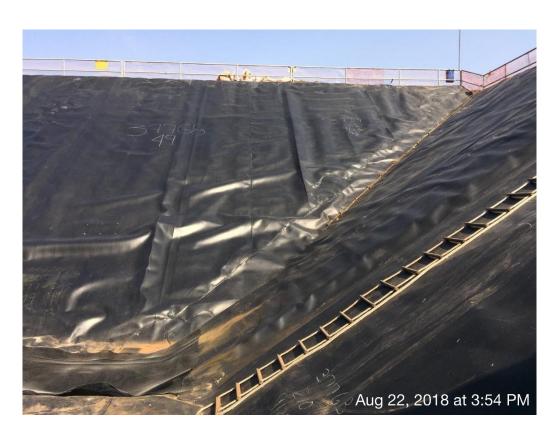
Detail of a "stretched" piece of liner in MCWP No.1. It was recommended to the liner crew that this would be repaired to ensure integrity.

FIGURE A-17 PROJECT PHOTOGRAPHS





Photo showing the single repair made on the liner by placing a bead on it, the repair was checked by spark testing. The repair was successful



View inside MCWP No.1, with the detail of the repair area

PROJECT PHOTOGRAPHS



Detail of the sump area MCWP No. 2, minimal amount of water present



Detail of the MCWP No. 3 detailing the "secondary liner", the original lining detail are still visible on the panels.

PROJECT PHOTOGRAPHS