

DOCKETED

Docket Number:	08-AFC-03C
Project Title:	Marsh Landing Generating Station Compliance
TN #:	248582
Document Title:	2022 Q4 MLGS Quarterly Operations Report - OCR
Description:	Quarterly Compliance Operations Report
Filer:	David Frandsen
Organization:	NRG
Submitter Role:	Applicant
Submission Date:	1/27/2023 3:40:32 PM
Docketed Date:	1/27/2023



Marsh Landing LLC
Marsh Landing Generating Station
3201-C Wilbur Avenue
P.O. Box 1687
Antioch, CA 94509

January 27, 2023

Mr. Keith Winstead
Compliance Project Manager
California Energy Commission
1516 Ninth Street, MS 15
Sacramento, CA 95814-5512

Subject: Quarterly Operations Report - 2022 Q4

Mr. Winstead,

The Marsh Landing Generating Station achieved Commercial Operation status on May 1, 2013.

Per the requirements of Revised Staff Assessment please find enclosed a copy of the Quarterly Operations Report for the Commercial Operations period, October 1st – December 31st, 2022.

This report includes updates to the table of CEC requirements which include the new requirements associated with Black Start Operations.

This information is being submitted to comply with the requirements of the Energy Commission's Final Decision for this project, docket number 08-AFC-3C.

Please let me know if you have any questions. (925-779-6695)

Sincerely,

David Frandsen

David Frandsen
MLGS Compliance Manager

Enclosures: 1 Electronic copy on Memory Stick of QOR 2022 Q4

MARSH LANDING GENERATING STATION

QUARTERLY OPERATION REPORT

Report Period: Q3 July 1 – September 30, 2022



For Submittal to
California Energy Commission
Sacramento, California
08 – AFC – 3C

Quarterly Operation Report

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MARSH LANDING GENERATING STATION QUARTERLY OPERATION REPORT

Section 1.0 Fleet Performance Report



For Submittal to
California Energy Commission
Sacramento, California
08 – AFC – 3C

FLEET PERFORMANCE REPORT

(NERC, Inc. OMC)

From: 10/01/2022 To: 12/31/2022

	Net Max Capacity	Net Dependable Capacity	Equivalent Availability Factor	Equivalent UnPlanned Outage Factor	Equivalent Forced Outage Rate	Net Capacity Factor	Net Actual Generation	Successful Starts	Start Reliability	Service Hours	Total Net Heat Rate
MLGS1 Oct 2022	194.60	194.60	100.00	0.00	0.00	0.00	-142.07	1.00	100.00	1.18	0.00
MLGS1 Nov 2022	200.60	200.60	100.00	0.00	0.00	3.46	5002.36	1.00	100.00	33.13	11321.67
MLGS1 Dec 2022	201.60	201.60	98.99	1.01	0.00	0.53	802.19	1.00	100.00	5.72	14636.49
Unit Summary	198.93	198.93	99.65	0.35	0.00	1.32	5662.48	3.00	100.00	40.03	12423.47

FLEET PERFORMANCE REPORT

(NERC, Inc. OMC)

From: 10/01/2022 To: 12/31/2022

	Net Max Capacity	Net Dependable Capacity	Equivalent Availability Factor	Equivalent UnPlanned Outage Factor	Equivalent Forced Outage Rate	Net Capacity Factor	Net Actual Generation	Successful Starts	Start Reliability	Service Hours	Total Net Heat Rate
MLGS2 Oct 2022	193.80	193.80	100.00	0.00	0.00	0.00	-47.53	1.00	100.00	1.43	0.00
MLGS2 Nov 2022	199.70	199.70	100.00	0.00	0.00	1.76	2530.95	2.00	100.00	16.55	12243.82
MLGS2 Dec 2022	200.70	200.70	98.99	1.01	0.00	2.12	3164.26	3.00	100.00	17.62	13862.34
Unit Summary	198.07	198.07	99.65	0.35	0.00	1.30	5647.68	6.00	100.00	35.60	13673.09

FLEET PERFORMANCE REPORT

(NERC, Inc. OMC)

From: 10/01/2022 To: 12/31/2022

	Net Max Capacity	Net Dependable Capacity	Equivalent Availability Factor	Equivalent UnPlanned Outage Factor	Equivalent Forced Outage Rate	Net Capacity Factor	Net Actual Generation	Successful Starts	Start Reliability	Service Hours	Total Net Heat Rate
MLGS3 Oct 2022	193.40	193.40	97.99	2.01	0.00	0.01	14.22	1.00	100.00	1.20	141799.14
MLGS3 Nov 2022	199.30	199.30	100.00	0.00	0.00	1.55	2227.90	1.00	100.00	17.18	11783.54
MLGS3 Dec 2022	200.30	200.30	99.07	0.93	0.00	0.66	988.30	1.00	100.00	5.74	11972.56
Unit Summary	197.67	197.67	99.02	0.98	0.00	0.74	3230.42	3.00	100.00	24.12	12413.71

FLEET PERFORMANCE REPORT

(NERC, Inc. OMC)

From: 10/01/2022 To: 12/31/2022

	Net Max Capacity	Net Dependable Capacity	Equivalent Availability Factor	Equivalent UnPlanned Outage Factor	Equivalent Forced Outage Rate	Net Capacity Factor	Net Actual Generation	Successful Starts	Start Reliability	Service Hours	Total Net Heat Rate
MLGS4 Oct 2022	195.20	195.20	97.99	2.01	0.00	0.03	46.73	1.00	100.00	0.96	33128.38
MLGS4 Nov 2022	201.20	201.20	100.00	0.00	0.00	1.27	1835.92	1.00	100.00	12.25	10605.55
MLGS4 Dec 2022	202.20	202.20	99.04	0.96	0.00	3.57	5374.35	4.00	100.00	27.97	13380.23
Unit Summary	199.53	199.53	99.01	0.99	0.00	1.65	7257.00	6.00	100.00	41.18	12805.38

FLEET PERFORMANCE REPORT

(NERC, Inc. OMC)

From: 10/01/2022 To: 12/31/2022

	Net Max Capacity	Net Dependable Capacity	Equivalent Availability Factor	Equivalent UnPlanned Outage Factor	Equivalent Forced Outage Rate	Net Capacity Factor	Net Actual Generation	Successful Starts	Start Reliability	Service Hours	Total Net Heat Rate
Marsh Landing Rollup	794.20	794.20	99.33	0.67	0.00	1.25	21797.58	18.00	100.00	140.93	12873.02

FLEET PERFORMANCE REPORT

(NERC, Inc. OMC)

From: Oct 2022 To: Dec 2022

	Net Max Capacity	Net Dependable Capacity	Equivalent Availability Factor	Equivalent UnPlanned Outage Factor	Equivalent Forced Outage Rate	Net Capacity Factor	Net Actual Generation	Successful Starts	Start Reliability	Service Hours	Total Net Heat Rate
Grand Summary	794.20	794.20	99.33	0.67	0.00	1.25	21797.58	18.00	100.00	140.93	12873.02

MARSH LANDING GENERATING STATION QUARTERLY OPERATION REPORT

Section 2.0 Event Data Report



For Submittal to
California Energy Commission
Sacramento, California
08 – AFC – 3C

Clearway Energy
Event Report
10/01/2022 To 12/01/2022 (Exc. OMC)

Marsh Landing 1

Event Start	Event End	Event Duration	Eq Hrs	Event Num	Event Index	Event Type	Event Red	Event Cap	Cause Code	Amp Code	Fail Code	Event Description
09/09/2022 21:04	10/31/2022 21:10	1248.10	0.00	22	1	RS	0	191.9	0			Reserve Shutdown
10/31/2022 22:21	11/01/2022 12:10	13.82	0.00	23	1	RS	0	194.6	0			Reserve Shutdown
11/02/2022 21:18	12/03/2022 08:00	731.70	0.00	24	1	RS	0	200.6	0			Reserve Shutdown

Clearway Energy
Event Report
10/01/2022 To 12/01/2022 (Exc. OMC)

Marsh Landing 2

Event Start	Event End	Event Duration	Eq Hrs	Event Num	Event Index	Event Type	Event Red	Event Cap	Cause Code	Amp Code	Fail Code	Event Description
09/09/2022 23:06	10/31/2022 21:10	1246.07	0.00	46	1	RS	0	191.1	0			Reserve Shutdown
10/31/2022 22:36	11/02/2022 11:52	37.27	0.00	47	1	RS	0	193.8	0			Reserve Shutdown
11/03/2022 00:02	11/28/2022 16:44	617.70	0.00	48	1	RS	0	199.7	0			Reserve Shutdown
11/28/2022 21:07	12/03/2022 08:00	106.88	0.00	49	1	RS	0	199.7	0			Reserve Shutdown

Clearway Energy
Event Report
10/01/2022 To 12/01/2022 (Exc. OMC)

Marsh Landing 3

Event Start	Event End	Event Duration	Eq Hrs	Event Num	Event Index	Event Type	Event Red	Event Cap	Cause Code	Amp Code	Fail Code	Event Description
09/09/2022 21:04	10/15/2022 07:00	849.93	0.00	46	1	RS	0	190.4	0			Reserve Shutdown
10/15/2022 07:00	10/15/2022 21:58	14.97	14.97	49	1	MO	193.4	0	3643	79	F790	OMS #255742 Testing of Black Start Electrical System and Black Start Inverters.
10/15/2022 21:58	10/31/2022 21:10	383.20	0.00	50	1	RS	0	193.4	0			Reserve Shutdown
10/31/2022 22:22	11/03/2022 11:50	61.47	0.00	47	1	RS	0	193.4	0			Reserve Shutdown
11/04/2022 05:01	12/04/2022 08:00	723.98	0.00	48	1	RS	0	199.3	0			Reserve Shutdown

Clearway Energy
Event Report
10/01/2022 To 12/01/2022 (Exc. OMC)

Marsh Landing 4

Event Start	Event End	Event Duration	Eq Hrs	Event Num	Event Index	Event Type	Event Red	Event Cap	Cause Code	Amp Code	Fail Code	Event Description
09/09/2022 23:06	10/15/2022 07:00	847.90	0.00	42	1	RS	0	191.8	0			Reserve Shutdown
10/15/2022 07:00	10/15/2022 21:58	14.97	14.97	45	1	MO	195.2	0	3643	79	F790	OMS # 255743 Testing of Black Start Electrical System and Black Start Inverters
10/15/2022 21:58	10/31/2022 21:24	383.43	0.00	46	1	RS	0	195.2	0			Reserve Shutdown
10/31/2022 22:22	11/04/2022 11:50	85.47	0.00	43	1	RS	0	195.2	0			Reserve Shutdown
11/05/2022 00:05	12/04/2022 08:00	704.92	0.00	44	1	RS	0	201.2	0			Reserve Shutdown

MARSH LANDING GENERATING STATION QUARTERLY OPERATION REPORT

Section 3.0 Generation Report



For Submittal to
California Energy Commission
Sacramento, California
08 – AFC – 3C

Generation Report

From: 10/01/2022 To: 12/01/2022

(NERC, Inc OMC)

	Date	Period Hours	Gross MWh	Net MWh	SS MWh	SH	RS	FOH	POH	MOH	EFDH	EPDH	EFDHRS	EMDH	SF	BS	IS
MLGS1	10/01/2022	24	0	-10	10	0.00	24.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0
MLGS1	10/02/2022	24	0	-10	10	0.00	24.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0
MLGS1	10/03/2022	24	0	-10	10	0.00	24.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0
MLGS1	10/04/2022	24	0	-10	10	0.00	24.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0
MLGS1	10/05/2022	24	0	-10	10	0.00	24.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0
MLGS1	10/06/2022	24	0	-10	10	0.00	24.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0
MLGS1	10/07/2022	24	0	-10	10	0.00	24.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0
MLGS1	10/08/2022	24	0	-10	10	0.00	24.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0
MLGS1	10/09/2022	24	0	-10	10	0.00	24.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0
MLGS1	10/10/2022	24	0	-10	10	0.00	24.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0
MLGS1	10/11/2022	24	0	-10	10	0.00	24.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0
MLGS1	10/12/2022	24	0	-10	10	0.00	24.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0
MLGS1	10/13/2022	24	0	-10	10	0.00	24.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0
MLGS1	10/14/2022	24	0	-10	10	0.00	24.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0
MLGS1	10/15/2022	24	0	-11	11	0.00	24.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0
MLGS1	10/16/2022	24	0	-10	10	0.00	24.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0
MLGS1	10/17/2022	24	0	-10	10	0.00	24.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0
MLGS1	10/18/2022	24	0	-10	10	0.00	24.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0
MLGS1	10/19/2022	24	0	-10	10	0.00	24.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0
MLGS1	10/20/2022	24	0	-10	10	0.00	24.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0
MLGS1	10/21/2022	24	0	-10	10	0.00	24.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0
MLGS1	10/22/2022	24	0	-11	11	0.00	24.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0
MLGS1	10/23/2022	24	0	-10	10	0.00	24.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0
MLGS1	10/24/2022	24	0	-10	10	0.00	24.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0
MLGS1	10/25/2022	24	0	-10	10	0.00	24.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0
MLGS1	10/26/2022	24	0	-10	10	0.00	24.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0
MLGS1	10/27/2022	24	0	-10	10	0.00	24.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0

Generation Report

From: 10/01/2022 To: 12/01/2022

(NERC, Inc OMC)

	Date	Period Hours	Gross MWh	Net MWh	SS MWh	SH	RS	FOH	POH	MOH	EFDH	EPDH	EFDHRS	EMDH	SF	BS	IS
MLGS1	10/28/2022	24	0	-10	10	0.00	24.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0
MLGS1	10/29/2022	24	0	-11	11	0.00	24.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0
MLGS1	10/30/2022	24	0	-11	11	0.00	24.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0
MLGS1	10/31/2022	24	169	156	13	1.18	22.82	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0

Generation Report

From: 10/01/2022 To: 12/01/2022

(NERC, Inc OMC)

	Date	Period Hours	Gross MWh	Net MWh	SS MWh	SH	RS	FOH	POH	MOH	EFDH	EPDH	EFDHRS	EMDH	SF	BS	IS
MLGS1	11/01/2022	24	1651	1615	36	11.83	12.17	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0
MLGS1	11/02/2022	24	3719	3666	53	21.30	2.70	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0
MLGS1	11/03/2022	24	0	-7	7	0.00	24.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0
MLGS1	11/04/2022	24	0	-5	5	0.00	24.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0
MLGS1	11/05/2022	24	0	-11	11	0.00	24.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0
MLGS1	11/06/2022	25	0	-10	10	0.00	25.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0
MLGS1	11/07/2022	24	0	-10	10	0.00	24.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0
MLGS1	11/08/2022	24	0	-10	10	0.00	24.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0
MLGS1	11/09/2022	24	0	-12	12	0.00	24.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0
MLGS1	11/10/2022	24	0	-10	10	0.00	24.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0
MLGS1	11/11/2022	24	0	-10	10	0.00	24.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0
MLGS1	11/12/2022	24	0	-10	10	0.00	24.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0
MLGS1	11/13/2022	24	0	-10	10	0.00	24.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0
MLGS1	11/14/2022	24	0	-10	10	0.00	24.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0
MLGS1	11/15/2022	24	0	-10	10	0.00	24.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0
MLGS1	11/16/2022	24	0	-10	10	0.00	24.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0
MLGS1	11/17/2022	24	0	-10	10	0.00	24.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0
MLGS1	11/18/2022	24	0	-10	10	0.00	24.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0
MLGS1	11/19/2022	24	0	-10	10	0.00	24.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0
MLGS1	11/20/2022	24	0	-10	10	0.00	24.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0
MLGS1	11/21/2022	24	0	-10	10	0.00	24.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0
MLGS1	11/22/2022	24	0	-10	10	0.00	24.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0
MLGS1	11/23/2022	24	0	-10	10	0.00	24.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0
MLGS1	11/24/2022	24	0	-10	10	0.00	24.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0
MLGS1	11/25/2022	24	0	-10	10	0.00	24.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0
MLGS1	11/26/2022	24	0	-10	10	0.00	24.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0
MLGS1	11/27/2022	24	0	-10	10	0.00	24.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0

Generation Report

From: 10/01/2022 To: 12/01/2022

(NERC, Inc OMC)

	Date	Period Hours	Gross MWh	Net MWh	SS MWh	SH	RS	FOH	POH	MOH	EFDH	EPDH	EFDHRS	EMDH	SF	BS	IS
MLGS1	11/28/2022	24	0	-9	9	0.00	24.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0
MLGS1	11/29/2022	24	0	-11	11	0.00	24.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0
MLGS1	11/30/2022	24	0	-11	11	0.00	24.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0

Generation Report

From: 10/01/2022 To: 12/01/2022

(NERC, Inc OMC)

	Date	Period Hours	Gross MWh	Net MWh	SS MWh	SH	RS	FOH	POH	MOH	EFDH	EPDH	EFDHRS	EMDH	SF	BS	IS
MLGS1	12/01/2022	24	0	-10	10	0.00	24.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0
MLGS1 Summary		1489	5539	4850	689	34.32	1454.68	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0

Generation Report

From: 10/01/2022 To: 12/01/2022

(NERC, Inc OMC)

	Date	Period Hours	Gross MWh	Net MWh	SS MWh	SH	RS	FOH	POH	MOH	EFDH	EPDH	EFDHRS	EMDH	SF	BS	IS
MLGS2	10/01/2022	24	0	-8	8	0.00	24.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0
MLGS2	10/02/2022	24	0	-7	7	0.00	24.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0
MLGS2	10/03/2022	24	0	-8	8	0.00	24.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0
MLGS2	10/04/2022	24	0	-8	8	0.00	24.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0
MLGS2	10/05/2022	24	0	-8	8	0.00	24.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0
MLGS2	10/06/2022	24	0	-8	8	0.00	24.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0
MLGS2	10/07/2022	24	0	-8	8	0.00	24.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0
MLGS2	10/08/2022	24	0	-8	8	0.00	24.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0
MLGS2	10/09/2022	24	0	-7	7	0.00	24.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0
MLGS2	10/10/2022	24	0	-8	8	0.00	24.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0
MLGS2	10/11/2022	24	0	-7	7	0.00	24.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0
MLGS2	10/12/2022	24	0	-7	7	0.00	24.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0
MLGS2	10/13/2022	24	0	-7	7	0.00	24.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0
MLGS2	10/14/2022	24	0	-8	8	0.00	24.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0
MLGS2	10/15/2022	24	0	-9	9	0.00	24.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0
MLGS2	10/16/2022	24	0	-7	7	0.00	24.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0
MLGS2	10/17/2022	24	0	-7	7	0.00	24.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0
MLGS2	10/18/2022	24	0	-7	7	0.00	24.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0
MLGS2	10/19/2022	24	0	-7	7	0.00	24.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0
MLGS2	10/20/2022	24	0	-7	7	0.00	24.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0
MLGS2	10/21/2022	24	0	-7	7	0.00	24.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0
MLGS2	10/22/2022	24	0	-8	8	0.00	24.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0
MLGS2	10/23/2022	24	0	-7	7	0.00	24.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0
MLGS2	10/24/2022	24	0	-7	7	0.00	24.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0
MLGS2	10/25/2022	24	0	-7	7	0.00	24.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0
MLGS2	10/26/2022	24	0	-7	7	0.00	24.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0
MLGS2	10/27/2022	24	0	-7	7	0.00	24.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0

Generation Report

From: 10/01/2022 To: 12/01/2022

(NERC, Inc OMC)

	Date	Period Hours	Gross MWh	Net MWh	SS MWh	SH	RS	FOH	POH	MOH	EFDH	EPDH	EFDHRS	EMDH	SF	BS	IS
MLGS2	10/28/2022	24	0	-7	7	0.00	24.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0
MLGS2	10/29/2022	24	0	-8	8	0.00	24.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0
MLGS2	10/30/2022	24	0	-8	8	0.00	24.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0
MLGS2	10/31/2022	24	190	179	11	1.43	22.57	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0

Generation Report

From: 10/01/2022 To: 12/01/2022

(NERC, Inc OMC)

	Date	Period Hours	Gross MWh	Net MWh	SS MWh	SH	RS	FOH	POH	MOH	EFDH	EPDH	EFDHRS	EMDH	SF	BS	IS
MLGS2	11/01/2022	24	0	-6	6	0.00	24.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0
MLGS2	11/02/2022	24	1924	1900	24	12.13	11.87	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0
MLGS2	11/03/2022	24	1	-5	6	0.03	23.97	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0
MLGS2	11/04/2022	24	0	-4	4	0.00	24.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0
MLGS2	11/05/2022	24	0	-8	8	0.00	24.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0
MLGS2	11/06/2022	25	0	-7	7	0.00	25.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0
MLGS2	11/07/2022	24	0	-7	7	0.00	24.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0
MLGS2	11/08/2022	24	0	-7	7	0.00	24.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0
MLGS2	11/09/2022	24	0	-9	9	0.00	24.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0
MLGS2	11/10/2022	24	0	-8	8	0.00	24.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0
MLGS2	11/11/2022	24	0	-8	8	0.00	24.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0
MLGS2	11/12/2022	24	0	-7	7	0.00	24.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0
MLGS2	11/13/2022	24	0	-7	7	0.00	24.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0
MLGS2	11/14/2022	24	0	-7	7	0.00	24.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0
MLGS2	11/15/2022	24	0	-7	7	0.00	24.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0
MLGS2	11/16/2022	24	0	-8	8	0.00	24.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0
MLGS2	11/17/2022	24	0	-8	8	0.00	24.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0
MLGS2	11/18/2022	24	0	-7	7	0.00	24.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0
MLGS2	11/19/2022	24	0	-7	7	0.00	24.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0
MLGS2	11/20/2022	24	0	-7	7	0.00	24.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0
MLGS2	11/21/2022	24	0	-7	7	0.00	24.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0
MLGS2	11/22/2022	24	0	-7	7	0.00	24.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0
MLGS2	11/23/2022	24	0	-8	8	0.00	24.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0
MLGS2	11/24/2022	24	0	-8	8	0.00	24.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0
MLGS2	11/25/2022	24	0	-7	7	0.00	24.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0
MLGS2	11/26/2022	24	0	-7	7	0.00	24.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0
MLGS2	11/27/2022	24	0	-7	7	0.00	24.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0

Generation Report

From: 10/01/2022 To: 12/01/2022

(NERC, Inc OMC)

	Date	Period Hours	Gross MWh	Net MWh	SS MWh	SH	RS	FOH	POH	MOH	EFDH	EPDH	EFDHRS	EMDH	SF	BS	IS
MLGS2	11/28/2022	24	854	835	19	4.38	19.62	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0
MLGS2	11/29/2022	24	0	-8	8	0.00	24.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0
MLGS2	11/30/2022	24	0	-8	8	0.00	24.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0

Generation Report

From: 10/01/2022 To: 12/01/2022

(NERC, Inc OMC)

	Date	Period Hours	Gross MWh	Net MWh	SS MWh	SH	RS	FOH	POH	MOH	EFDH	EPDH	EFDHRS	EMDH	SF	BS	IS
MLGS2	12/01/2022	24	0	-8	8	0.00	24.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0
MLGS2 Summary		1489	2969	2476	493	17.98	1471.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0

Generation Report

From: 10/01/2022 To: 12/01/2022

(NERC, Inc OMC)

	Date	Period Hours	Gross MWh	Net MWh	SS MWh	SH	RS	FOH	POH	MOH	EFDH	EPDH	EFDHRS	EMDH	SF	BS	IS
MLGS3	10/01/2022	24	0	-5	5	0.00	24.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0
MLGS3	10/02/2022	24	0	-5	5	0.00	24.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0
MLGS3	10/03/2022	24	0	-5	5	0.00	24.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0
MLGS3	10/04/2022	24	0	-5	5	0.00	24.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0
MLGS3	10/05/2022	24	0	-5	5	0.00	24.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0
MLGS3	10/06/2022	24	0	-5	5	0.00	24.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0
MLGS3	10/07/2022	24	0	-5	5	0.00	24.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0
MLGS3	10/08/2022	24	0	-5	5	0.00	24.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0
MLGS3	10/09/2022	24	0	-5	5	0.00	24.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0
MLGS3	10/10/2022	24	0	-5	5	0.00	24.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0
MLGS3	10/11/2022	24	0	-5	5	0.00	24.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0
MLGS3	10/12/2022	24	0	-5	5	0.00	24.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0
MLGS3	10/13/2022	24	0	-5	5	0.00	24.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0
MLGS3	10/14/2022	24	0	-5	5	0.00	24.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0
MLGS3	10/15/2022	24	0	-6	6	0.00	9.03	0.00	0.00	14.97	0.00	0.00	0.00	0.00	0	0	0
MLGS3	10/16/2022	24	0	-5	5	0.00	24.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0
MLGS3	10/17/2022	24	0	-5	5	0.00	24.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0
MLGS3	10/18/2022	24	0	-5	5	0.00	24.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0
MLGS3	10/19/2022	24	0	-5	5	0.00	24.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0
MLGS3	10/20/2022	24	0	-5	5	0.00	24.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0
MLGS3	10/21/2022	24	0	-5	5	0.00	24.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0
MLGS3	10/22/2022	24	0	-5	5	0.00	24.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0
MLGS3	10/23/2022	24	0	-5	5	0.00	24.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0
MLGS3	10/24/2022	24	0	-5	5	0.00	24.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0
MLGS3	10/25/2022	24	0	-5	5	0.00	24.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0
MLGS3	10/26/2022	24	0	-5	5	0.00	24.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0
MLGS3	10/27/2022	24	0	-5	5	0.00	24.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0

Generation Report

From: 10/01/2022 To: 12/01/2022

(NERC, Inc OMC)

	Date	Period Hours	Gross MWh	Net MWh	SS MWh	SH	RS	FOH	POH	MOH	EFDH	EPDH	EFDHRS	EMDH	SF	BS	IS
MLGS3	10/28/2022	24	0	-5	5	0.00	24.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0
MLGS3	10/29/2022	24	0	-5	5	0.00	24.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0
MLGS3	10/30/2022	24	0	-5	5	0.00	24.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0
MLGS3	10/31/2022	24	167	160	7	1.20	22.80	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0

Generation Report

From: 10/01/2022 To: 12/01/2022

(NERC, Inc OMC)

	Date	Period Hours	Gross MWh	Net MWh	SS MWh	SH	RS	FOH	POH	MOH	EFDH	EPDH	EFDHRS	EMDH	SF	BS	IS
MLGS3	11/01/2022	24	0	-4	4	0.00	24.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0
MLGS3	11/02/2022	24	0	-2	2	0.00	24.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0
MLGS3	11/03/2022	24	1647	1615	32	12.17	11.83	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0
MLGS3	11/04/2022	24	759	744	15	5.02	18.98	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0
MLGS3	11/05/2022	24	0	-5	5	0.00	24.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0
MLGS3	11/06/2022	25	0	-5	5	0.00	25.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0
MLGS3	11/07/2022	24	0	-5	5	0.00	24.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0
MLGS3	11/08/2022	24	0	-5	5	0.00	24.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0
MLGS3	11/09/2022	24	0	-5	5	0.00	24.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0
MLGS3	11/10/2022	24	0	-5	5	0.00	24.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0
MLGS3	11/11/2022	24	0	-5	5	0.00	24.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0
MLGS3	11/12/2022	24	0	-5	5	0.00	24.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0
MLGS3	11/13/2022	24	0	-5	5	0.00	24.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0
MLGS3	11/14/2022	24	0	-5	5	0.00	24.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0
MLGS3	11/15/2022	24	0	-5	5	0.00	24.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0
MLGS3	11/16/2022	24	0	-5	5	0.00	24.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0
MLGS3	11/17/2022	24	0	-5	5	0.00	24.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0
MLGS3	11/18/2022	24	0	-5	5	0.00	24.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0
MLGS3	11/19/2022	24	0	-5	5	0.00	24.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0
MLGS3	11/20/2022	24	0	-5	5	0.00	24.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0
MLGS3	11/21/2022	24	0	-5	5	0.00	24.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0
MLGS3	11/22/2022	24	0	-5	5	0.00	24.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0
MLGS3	11/23/2022	24	0	-5	5	0.00	24.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0
MLGS3	11/24/2022	24	0	-5	5	0.00	24.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0
MLGS3	11/25/2022	24	0	-5	5	0.00	24.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0
MLGS3	11/26/2022	24	0	-5	5	0.00	24.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0
MLGS3	11/27/2022	24	0	-5	5	0.00	24.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0

Generation Report

From: 10/01/2022 To: 12/01/2022

(NERC, Inc OMC)

	Date	Period Hours	Gross MWh	Net MWh	SS MWh	SH	RS	FOH	POH	MOH	EFDH	EPDH	EFDHRS	EMDH	SF	BS	IS
MLGS3	11/28/2022	24	0	-4	4	0.00	24.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0
MLGS3	11/29/2022	24	0	-5	5	0.00	24.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0
MLGS3	11/30/2022	24	0	-5	5	0.00	24.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0

Generation Report

From: 10/01/2022 To: 12/01/2022

(NERC, Inc OMC)

	Date	Period Hours	Gross MWh	Net MWh	SS MWh	SH	RS	FOH	POH	MOH	EFDH	EPDH	EFDHRS	EMDH	SF	BS	IS
MLGS3	12/01/2022	24	0	-5	5	0.00	24.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0
MLGS3 Summary		1489	2573	2237	336	18.38	1455.65	0.00	0.00	14.97	0.00	0.00	0.00	0.00	0	0	0

Generation Report

From: 10/01/2022 To: 12/01/2022

(NERC, Inc OMC)

	Date	Period Hours	Gross MWh	Net MWh	SS MWh	SH	RS	FOH	POH	MOH	EFDH	EPDH	EFDHRS	EMDH	SF	BS	IS
MLGS4	10/01/2022	24	0	-2	2	0.00	24.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0
MLGS4	10/02/2022	24	0	-2	2	0.00	24.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0
MLGS4	10/03/2022	24	0	-2	2	0.00	24.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0
MLGS4	10/04/2022	24	0	-2	2	0.00	24.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0
MLGS4	10/05/2022	24	0	-2	2	0.00	24.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0
MLGS4	10/06/2022	24	0	-2	2	0.00	24.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0
MLGS4	10/07/2022	24	0	-3	3	0.00	24.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0
MLGS4	10/08/2022	24	0	-2	2	0.00	24.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0
MLGS4	10/09/2022	24	0	-2	2	0.00	24.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0
MLGS4	10/10/2022	24	0	-2	2	0.00	24.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0
MLGS4	10/11/2022	24	0	-2	2	0.00	24.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0
MLGS4	10/12/2022	24	0	-2	2	0.00	24.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0
MLGS4	10/13/2022	24	0	-2	2	0.00	24.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0
MLGS4	10/14/2022	24	0	-2	2	0.00	24.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0
MLGS4	10/15/2022	24	0	-3	3	0.00	9.03	0.00	0.00	14.97	0.00	0.00	0.00	0.00	0	0	0
MLGS4	10/16/2022	24	0	-2	2	0.00	24.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0
MLGS4	10/17/2022	24	0	-2	2	0.00	24.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0
MLGS4	10/18/2022	24	0	-2	2	0.00	24.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0
MLGS4	10/19/2022	24	0	-2	2	0.00	24.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0
MLGS4	10/20/2022	24	0	-2	2	0.00	24.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0
MLGS4	10/21/2022	24	0	-2	2	0.00	24.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0
MLGS4	10/22/2022	24	0	-3	3	0.00	24.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0
MLGS4	10/23/2022	24	0	-2	2	0.00	24.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0
MLGS4	10/24/2022	24	0	-2	2	0.00	24.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0
MLGS4	10/25/2022	24	0	-2	2	0.00	24.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0
MLGS4	10/26/2022	24	0	-2	2	0.00	24.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0
MLGS4	10/27/2022	24	0	-2	2	0.00	24.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0

Generation Report

From: 10/01/2022 To: 12/01/2022

(NERC, Inc OMC)

	Date	Period Hours	Gross MWh	Net MWh	SS MWh	SH	RS	FOH	POH	MOH	EFDH	EPDH	EFDHRS	EMDH	SF	BS	IS
MLGS4	10/28/2022	24	0	-2	2	0.00	24.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0
MLGS4	10/29/2022	24	0	-3	3	0.00	24.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0
MLGS4	10/30/2022	24	0	-2	2	0.00	24.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0
MLGS4	10/31/2022	24	123	119	4	0.97	23.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0

Generation Report

From: 10/01/2022 To: 12/01/2022

(NERC, Inc OMC)

	Date	Period Hours	Gross MWh	Net MWh	SS MWh	SH	RS	FOH	POH	MOH	EFDH	EPDH	EFDHRS	EMDH	SF	BS	IS
MLGS4	11/01/2022	24	0	-1	1	0.00	24.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0
MLGS4	11/02/2022	24	0	0	0	0.00	24.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0
MLGS4	11/03/2022	24	0	-1	1	0.00	24.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0
MLGS4	11/04/2022	24	1925	1895	30	12.17	11.83	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0
MLGS4	11/05/2022	24	8	5	3	0.08	23.92	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0
MLGS4	11/06/2022	25	0	-2	2	0.00	25.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0
MLGS4	11/07/2022	24	0	-2	2	0.00	24.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0
MLGS4	11/08/2022	24	0	-2	2	0.00	24.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0
MLGS4	11/09/2022	24	0	-2	2	0.00	24.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0
MLGS4	11/10/2022	24	0	-2	2	0.00	24.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0
MLGS4	11/11/2022	24	0	-2	2	0.00	24.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0
MLGS4	11/12/2022	24	0	-2	2	0.00	24.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0
MLGS4	11/13/2022	24	0	-2	2	0.00	24.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0
MLGS4	11/14/2022	24	0	-2	2	0.00	24.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0
MLGS4	11/15/2022	24	0	-2	2	0.00	24.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0
MLGS4	11/16/2022	24	0	-2	2	0.00	24.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0
MLGS4	11/17/2022	24	0	-3	3	0.00	24.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0
MLGS4	11/18/2022	24	0	-2	2	0.00	24.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0
MLGS4	11/19/2022	24	0	-2	2	0.00	24.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0
MLGS4	11/20/2022	24	0	-2	2	0.00	24.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0
MLGS4	11/21/2022	24	0	-3	3	0.00	24.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0
MLGS4	11/22/2022	24	0	-3	3	0.00	24.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0
MLGS4	11/23/2022	24	0	-3	3	0.00	24.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0
MLGS4	11/24/2022	24	0	-3	3	0.00	24.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0
MLGS4	11/25/2022	24	0	-3	3	0.00	24.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0
MLGS4	11/26/2022	24	0	-3	3	0.00	24.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0
MLGS4	11/27/2022	24	0	-2	2	0.00	24.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0

Generation Report

From: 10/01/2022 To: 12/01/2022

(NERC, Inc OMC)

	Date	Period Hours	Gross MWh	Net MWh	SS MWh	SH	RS	FOH	POH	MOH	EFDH	EPDH	EFDHRS	EMDH	SF	BS	IS
MLGS4	11/28/2022	24	0	-2	2	0.00	24.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0
MLGS4	11/29/2022	24	0	-2	2	0.00	24.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0
MLGS4	11/30/2022	24	0	-3	3	0.00	24.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0

Generation Report

From: 10/01/2022 To: 12/01/2022

(NERC, Inc OMC)

	Date	Period Hours	Gross MWh	Net MWh	SS MWh	SH	RS	FOH	POH	MOH	EFDH	EPDH	EFDHRS	EMDH	SF	BS	IS
MLGS4	12/01/2022	24	0	-3	3	0.00	24.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0
MLGS4 Summary		1489	2056	1880	176	13.22	1460.82	0.00	0.00	14.97	0.00	0.00	0.00	0.00	0	0	0

Marsh Landing Generating Station Quarterly Operation Report

4.0 Air Quality Documents Submitted with this Report

The following table lists the Conditions of Certification that require quarterly input, and an indication to what if any information is included in this operation report at the end of this section. This table is updated to account for the 2019 Black Start Amendment and 2021 Source Testing Amendment.

Condition of Certification	Description	Item Included	Subsection
AQ-11	Natural Gas Sulfur Content	Yes	4.1
AQ-12	Hourly Heat Input Rate	Yes	4.2
AQ-13	Daily Heat Input Rate	Yes	4.3
AQ-14	Yearly Heat Input Rate	Yes	4.4
AQ-15	Combined Operating Hours	Yes	4.5
AQ-16	SCR/Oxidation Catalyst O&M	Yes	4.6
AQ-17	Operation Within Emission Limits	Yes	4.7
AQ-18	SU/SD Emission Limits	Yes	4.8
AQ-19	Combustor Tuning Limits	Yes	4.9
AQ-20	Daily Combined Emission Limits including SU/SD	Yes	4.10
AQ-21	Daily Combined Emission Limits including SU/SD/Tuning	Yes	4.11
AQ-22	Yearly Combined Emission Limits including SU/SD/Tuning/Malfunctions	Yes	4.12
AQ-23	Yearly Max Projected Toxic Emission Rates	Yes	4.13
AQ-31	Calculated Sulfuric Acid Mist Emission Rate	Yes	4.14
AQ-33	Yearly Combined Sulfuric Acid Mist Emissions	Yes	4.15
AQ-35	Air District Reports and Notifications	Yes	4.16
AQ-37	Air Permit Violation Reports	Yes	4.17
AQ-40	CEMS Audit Results	Yes	4.18
AQ-44	Black Start Operation Daily Emissions Limits	Yes	4.19
AQ-45	Black Start Readiness Testing Annual Emissions Limits	Yes	4.20
AQ-46	Black Start Operation and Readiness Testing Annual Emissions	Yes	4.21
AQ-47	Black Start Operation and Readiness Testing Offset Credit Accounting	Yes	4.22
AQ-48	Diesel Engine Hours for Reliability-Related Testing	Yes	4.23
AQ-49	Limitations for Operation of Diesel Engine	Yes	4.24

MARSH LANDING GENERATING STATION QUARTERLY OPERATION REPORT

Section 4.1 Natural Gas Sulfur Content



For Submittal to
California Energy Commission
Sacramento, California
08 – AFC – 3C

AQ-11 - Natural Gas Sulfur Content

The natural gas fuel supplied to Marsh Landing Generating Station was sampled and analyzed for sulfur content monthly during the report period of October 1 – December 31, 2022. The results of the analysis demonstrate that the sulfur content of the natural gas fuel was less than 1 grain per 100 standard cubic feet. The results from the analysis of the monthly samples are tabulated below for each month during the report period.

Month/Year	Sampling Date	Results (gr/100 scf)
October/2022	10/11/22	0.196
November/2022	11/16/22	<0.120
December/2022	12/5/22	0.214

Laboratory Analysis Reports are available upon request.

MARSH LANDING GENERATING STATION QUARTERLY OPERATION REPORT

Section 4.2 Hourly Heat Input Rate



For Submittal to
California Energy Commission
Sacramento, California
08 – AFC – 3C

AQ-12 – Hourly Heat Input Rate

The hourly heat input rate to each Gas Turbine at Marsh Landing Generating Station was less than 2,202 MMBtu per hour, as recorded by the Continuous Emissions Monitoring Systems (CEMS) during the report period of October 1 – December 31, 2022. The following table provides the maximum hourly heat input rate, in MMBtu per hour for each Gas Turbine during the report period, and the date and hour that the maximum hourly heat input rate occurred.

Unit	Maximum Heat Input Rate (MMBtu/Hr)	Date/Hour
1	2162.2	11/2/2022, Hour 05
2	2140.1	12/21/2022, Hour 20
3	2142.8	11/3/2022, Hour 13
4	2145.4	11/4/2022, Hour 14

Detailed records of hourly heat input rates to each gas turbine are available upon request.

MARSH LANDING GENERATING STATION QUARTERLY OPERATION REPORT

Section 4.3 Daily Heat Input Rate



For Submittal to
California Energy Commission
Sacramento, California
08 – AFC – 3C

AQ-13 – Daily Heat Input Rate

The daily heat input rate to each Gas Turbine at Marsh Landing Generating Station was less than 52,848 MMBtu per day, as recorded by the Continuous Emissions Monitoring Systems (CEMS) during the report period of October 1 – December 31, 2022. The following table provides the maximum daily heat input rate, in MMBtu per day for each Gas Turbine during the report period, and the date that the maximum daily heat input rate occurred.

Unit	Maximum Heat Input Rate (MMBtu/Day)	Date
1	38,703.7	11/2/2022
2	21,372.1	11/2/2022
3	21,145.1	11/3/2022
4	29,879.4	12/15/2022

Detailed records of daily heat input rates to each gas turbine are available upon request.

MARSH LANDING GENERATING STATION QUARTERLY OPERATION REPORT

Section 4.4 Yearly Heat Input Rate



For Submittal to
California Energy Commission
Sacramento, California
08 – AFC – 3C

AQ-14 – Yearly Heat Input Rate

The combined cumulative yearly heat input rate to all four Gas Turbines at Marsh Landing Generating Station was less than 13,994,976 MMBtu per year, **excluding heat input rate during black start readiness testing, commissioning, and emergency operations**, as recorded by the Continuous Emissions Monitoring Systems (CEMS) during the report period of October 1 – December 31, 2022. The following table provides the combined cumulative yearly heat input rate for all four Gas Turbines, in MMBtu per year for each month during the report period.

Month/Year	Combined Monthly Heat Input Rate (MMBtu/Month)	Combined Cumulative Yearly Heat Input Rate (MMBtu/Year)
October/2022	7,691.47	1,484,553.5
November/2022	138,389.94	1,467,741.6
December/2022	118,287.42	1,586,029.0

No black start commissioning, readiness testing, or emergency operation activities occurred during the reporting period.

Detailed records of yearly heat input rates to all four gas turbines are available upon request.

Note: The term “Year” is defined in the Permit to Operate issued by the BAAQMD for Marsh Landing Generating Station as “Any consecutive twelve-month period of time”. Therefore, the values for the combined yearly operating hours listed above, in hours per year, are for a “rolling” 12-month period (e.g. the yearly value listed for October/2022 includes the 12-month period from November 2021 through October 2022).

MARSH LANDING GENERATING STATION QUARTERLY OPERATION REPORT

Section 4.5 Combined Operating Hours



For Submittal to
California Energy Commission
Sacramento, California
08 – AFC – 3C

AQ-15 – Combined Operating Hours

The combined operating hours for all four units at Marsh Landing Generating Station was less than 7,008 hours per year, **excluding operations for black start commissioning, readiness testing, and/or emergency operations**, as recorded by the Continuous Emissions Monitoring Systems (CEMS) during the report period of October 1 – December 31, 2022. The following table provides the combined operating hours for all four units, in hours per year for each month during the report period.

Month/Year	Combined Monthly Operating Hours (Hours/Month)	Combined Yearly Operating Hours (Hours/Year)
October/2022	5.05	803.37
November/2022	79.5	799.92
December/2022	57.6	857.55

No black start commissioning, readiness testing, or emergency operation activities occurred during the reporting period.

Detailed records of the combined operating hours to all four units are available upon request.

Note: The term “Year” is defined in the Permit to Operate issued by the BAAQMD for Marsh Landing Generating Station as “Any consecutive twelve-month period of time”. Therefore, the values for the combined yearly operating hours listed above, in hours per year, are for a “rolling” 12-month period (e.g., the yearly value listed for October 2022 includes the 12-month period from November 2021 through October 2022).

MARSH LANDING GENERATING STATION QUARTERLY OPERATION REPORT

Section 4.6 SCR/Oxidation Catalyst O&M



For Submittal to
California Energy Commission
Sacramento, California
08 – AFC – 3C

AQ-16 – SCR/Oxidation Catalyst O&M

Each Gas Turbine at Marsh Landing Generating Station was properly abated by its associated Selective Catalytic Reduction (SCR) System and Oxidation Catalyst System during the report period of October 1 – December 31, 2022, whenever fuel was combusted in the gas turbine and the corresponding SCR catalyst bed temperature had reached the minimum operating temperature. The SCR System and Oxidation Catalyst System for each Gas Turbine was properly operated and maintained throughout this reporting period.

Detailed records of fuel combustion, SCR catalyst bed temperature and SCR System operation are available upon request.

MARSH LANDING GENERATING STATION QUARTERLY OPERATION REPORT

Section 4.7 Operation Within Emission Limits



For Submittal to
California Energy Commission
Sacramento, California
08 – AFC – 3C

AQ-17 – Operation Within Emission Limits

Summary reports of NO_x, CO and NH₃ emissions for each Gas Turbine at Marsh Landing Generating Station are provided for each month during the report period of October 1 – December 31, 2022. The summary reports provide a listing of the maximum 1-hour values for NO_x concentration, NO_x lb/MMBtu, NO_x lb/hr, NO_x lb/hour containing a startup, CO concentration, CO lb/MMBtu, CO lb/hr, CO lb/hr containing a startup and the maximum 3-hour values for NH₃ concentration. **These requirements do not apply during black start readiness testing, commissioning, and/or emergency operations.** The emission values listed in the summary reports are calculated directly from CEMS analyzer measurements and do not include any data recorded during startups, combustor tuning events or shutdowns except for the maximum NO_x and CO lb/hr values during an hour containing a startup. The data in these reports demonstrate compliance with the emissions limits identified in Conditions 17 a, b, c, d and e.

Emissions of POC, SO₂ and PM-10/PM are calculated using emission factors, either determined by source testing (POC, PM-10/PM), or from an EPA default value (SO₂, for PNG fuel) and the maximum hourly heat input rate, in lb/MMBtu recorded during the report period of October 1 – December 31, 2022. (Values of Maximum Hourly Heat Input Rate are listed in AQ-12). The maximum calculated values for the emissions of POC, SO₂ and PM-10/PM are listed in the following table. The values listed in this table demonstrate compliance with the emissions limits identified in Conditions 17 f, g, h and i.

Maximum Calculated Emissions 10/1/2022 – 12/31/2022						
	POC Lb/MMBtu	POC Lb/Hr	SO ₂ Lb/MMBtu	SO ₂ Lb/Hr	PM-10/PM Lb/MMBtu	PM-10/PM Lb/Hr
Unit 1	0.00014	0.30271	0.0006	1.30	0.0020	4.32
Unit 2	0.00014	0.29961	0.0006	1.28	0.0020	4.28
Unit 3	0.00041	0.87855	0.0006	1.29	0.0030	6.43
Unit 4	0.00010	0.21454	0.0006	1.29	0.0030	6.44

No black start commissioning, readiness testing, or emergency operation activities occurred during the reporting period.

Detailed records of emissions data are available upon request.

NRG Marsh Landing
Marsh Landing Generating Station, Unit 1
NOx, CO and NH3 Emissions

October 2022	NOx					CO					NH3
	Max 1-hr ppm @ 15% O2	Max 1-hr lb/mmBtu	Max 1-hr lbs/hr	Max 1-hr lb/startup	Daily Total lbs	Max 1-hr ppm @ 15% O2	Max 1-hr lb/mmBtu	Max 1-hr lbs/hr	Max 1-hr lb/startup	Daily Total lbs	
1-Oct-22	0.0	0.00000	0.00	0.0	0.0	0.0	0.00000	0.0	0.0	0.0	0.0
2-Oct-22	0.0	0.00000	0.00	0.0	0.0	0.0	0.00000	0.0	0.0	0.0	0.0
3-Oct-22	0.0	0.00000	0.00	0.0	0.0	0.0	0.00000	0.0	0.0	0.0	0.0
4-Oct-22	0.0	0.00000	0.00	0.0	0.0	0.0	0.00000	0.0	0.0	0.0	0.0
5-Oct-22	0.0	0.00000	0.00	0.0	0.0	0.0	0.00000	0.0	0.0	0.0	0.0
6-Oct-22	0.0	0.00000	0.00	0.0	0.0	0.0	0.00000	0.0	0.0	0.0	0.0
7-Oct-22	0.0	0.00000	0.00	0.0	0.0	0.0	0.00000	0.0	0.0	0.0	0.0
8-Oct-22	0.0	0.00000	0.00	0.0	0.0	0.0	0.00000	0.0	0.0	0.0	0.0
9-Oct-22	0.0	0.00000	0.00	0.0	0.0	0.0	0.00000	0.0	0.0	0.0	0.0
10-Oct-22	0.0	0.00000	0.00	0.0	0.0	0.0	0.00000	0.0	0.0	0.0	0.0
11-Oct-22	0.0	0.00000	0.00	0.0	0.0	0.0	0.00000	0.0	0.0	0.0	0.0
12-Oct-22	0.0	0.00000	0.00	0.0	0.0	0.0	0.00000	0.0	0.0	0.0	0.0
13-Oct-22	0.0	0.00000	0.00	0.0	0.0	0.0	0.00000	0.0	0.0	0.0	0.0
14-Oct-22	0.0	0.00000	0.00	0.0	0.0	0.0	0.00000	0.0	0.0	0.0	0.0
15-Oct-22	0.0	0.00000	0.00	0.0	0.0	0.0	0.00000	0.0	0.0	0.0	0.0
16-Oct-22	1.6	0.00000	0.00	0.0	0.0	0.0	0.00000	0.0	0.0	0.0	0.0
17-Oct-22	0.0	0.00000	0.00	0.0	0.0	0.0	0.00000	0.0	0.0	0.0	0.0
18-Oct-22	0.0	0.00000	0.00	0.0	0.0	0.0	0.00000	0.0	0.0	0.0	0.0
19-Oct-22	0.0	0.00000	0.00	0.0	0.0	0.0	0.00000	0.0	0.0	0.0	0.0
20-Oct-22	0.0	0.00000	0.00	0.0	0.0	0.0	0.00000	0.0	0.0	0.0	0.0
21-Oct-22	0.0	0.00000	0.00	0.0	0.0	0.0	0.00000	0.0	0.0	0.0	0.0
22-Oct-22	0.0	0.00000	0.00	0.0	0.0	0.0	0.00000	0.0	0.0	0.0	0.0
23-Oct-22	0.0	0.00000	0.00	0.0	0.0	0.0	0.00000	0.0	0.0	0.0	0.0
24-Oct-22	0.0	0.00000	0.00	0.0	0.0	0.0	0.00000	0.0	0.0	0.0	0.0
25-Oct-22	0.0	0.00000	0.00	0.0	0.0	0.0	0.00000	0.0	0.0	0.0	0.0
26-Oct-22	0.0	0.00000	0.00	0.0	0.0	0.0	0.00000	0.0	0.0	0.0	0.0
27-Oct-22	0.0	0.00000	0.00	0.0	0.0	0.0	0.00000	0.0	0.0	0.0	0.0
28-Oct-22	0.0	0.00000	0.00	0.0	0.0	0.0	0.00000	0.0	0.0	0.0	0.0
29-Oct-22	0.0	0.00000	0.00	0.0	0.0	0.0	0.00000	0.0	0.0	0.0	0.0
30-Oct-22	0.0	0.00000	0.00	0.0	0.0	0.0	0.00000	0.0	0.0	0.0	0.0
31-Oct-22	*1.5	*0.00569	*9.31	20.6	28.6	*0.6	*0.00140	*2.2	108.1	180.8	**
Mo. Total					28.6					180.8	
12-Mo. Total					1,623.1					3,486.0	

Notes:

Maximum 1-hr values indicate rolling 60 minute values for all but NH3.

* Less than 60 minute rolling value

** Invalid 3-hr rolling value

NRG Marsh Landing
Marsh Landing Generating Station, Unit 2
NOx, CO and NH3 Emissions

October 2022	NOx					CO					NH3
	Max 1-hr ppm @ 15% O2	Max 1-hr lb/mmBtu	Max 1-hr lbs/hr	Max 1-hr lb/startup	Daily Total lbs	Max 1-hr ppm @ 15% O2	Max 1-hr lb/mmBtu	Max 1-hr lbs/hr	Max 1-hr lb/startup	Daily Total lbs	
1-Oct-22	0.0	0.00000	0.00	0.0	0.0	0.0	0.00000	0.0	0.0	0.0	0.0
2-Oct-22	0.0	0.00000	0.00	0.0	0.0	0.0	0.00000	0.0	0.0	0.0	0.0
3-Oct-22	0.0	0.00000	0.00	0.0	0.0	0.0	0.00000	0.0	0.0	0.0	0.0
4-Oct-22	0.0	0.00000	0.00	0.0	0.0	0.0	0.00000	0.0	0.0	0.0	0.0
5-Oct-22	0.0	0.00000	0.00	0.0	0.0	0.0	0.00000	0.0	0.0	0.0	0.0
6-Oct-22	0.0	0.00000	0.00	0.0	0.0	0.0	0.00000	0.0	0.0	0.0	0.0
7-Oct-22	0.0	0.00000	0.00	0.0	0.0	0.0	0.00000	0.0	0.0	0.0	0.0
8-Oct-22	0.0	0.00000	0.00	0.0	0.0	0.0	0.00000	0.0	0.0	0.0	0.0
9-Oct-22	0.0	0.00000	0.00	0.0	0.0	0.0	0.00000	0.0	0.0	0.0	0.0
10-Oct-22	0.0	0.00000	0.00	0.0	0.0	0.0	0.00000	0.0	0.0	0.0	0.0
11-Oct-22	0.0	0.00000	0.00	0.0	0.0	0.0	0.00000	0.0	0.0	0.0	0.0
12-Oct-22	0.0	0.00000	0.00	0.0	0.0	0.0	0.00000	0.0	0.0	0.0	0.0
13-Oct-22	0.0	0.00000	0.00	0.0	0.0	0.0	0.00000	0.0	0.0	0.0	0.0
14-Oct-22	0.0	0.00000	0.00	0.0	0.0	0.0	0.00000	0.0	0.0	0.0	0.0
15-Oct-22	0.0	0.00000	0.00	0.0	0.0	0.0	0.00000	0.0	0.0	0.0	0.0
16-Oct-22	0.0	0.00000	0.00	0.0	0.0	0.0	0.00000	0.0	0.0	0.0	0.0
17-Oct-22	0.0	0.00000	0.00	0.0	0.0	0.0	0.00000	0.0	0.0	0.0	0.0
18-Oct-22	0.0	0.00000	0.00	0.0	0.0	0.0	0.00000	0.0	0.0	0.0	0.0
19-Oct-22	0.0	0.00000	0.00	0.0	0.0	0.0	0.00000	0.0	0.0	0.0	0.0
20-Oct-22	0.0	0.00000	0.00	0.0	0.0	0.0	0.00000	0.0	0.0	0.0	0.0
21-Oct-22	0.0	0.00000	0.00	0.0	0.0	0.0	0.00000	0.0	0.0	0.0	0.0
22-Oct-22	0.0	0.00000	0.00	0.0	0.0	0.0	0.00000	0.0	0.0	0.0	0.0
23-Oct-22	0.0	0.00000	0.00	0.0	0.0	0.0	0.00000	0.0	0.0	0.0	0.0
24-Oct-22	0.0	0.00000	0.00	0.0	0.0	0.0	0.00000	0.0	0.0	0.0	0.0
25-Oct-22	0.0	0.00000	0.00	0.0	0.0	0.0	0.00000	0.0	0.0	0.0	0.0
26-Oct-22	0.0	0.00000	0.00	0.0	0.0	0.0	0.00000	0.0	0.0	0.0	0.0
27-Oct-22	0.0	0.00000	0.00	0.0	0.0	0.0	0.00000	0.0	0.0	0.0	0.0
28-Oct-22	0.0	0.00000	0.00	0.0	0.0	0.0	0.00000	0.0	0.0	0.0	0.0
29-Oct-22	0.0	0.00000	0.00	0.0	0.0	0.0	0.00000	0.0	0.0	0.0	0.0
30-Oct-22	0.0	0.00000	0.00	0.0	0.0	0.0	0.00000	0.0	0.0	0.0	0.0
31-Oct-22	1.6	0.00582	9.31	20.0	30.7	0.4	0.00099	1.5	118.5	178.0	**
Mo. Total					30.7					178.0	
12-Mo. Total					4,646.5					7,827.8	

Notes:

Maximum 1-hr values indicate rolling 60 minute values for all but NH3.

* Less than 60 minute rolling value

** Invalid 3-hr rolling value

NRG Marsh Landing
Marsh Landing Generating Station, Unit 3
NOx, CO and NH3 Emissions

October 2022	NOx					CO					NH3
Day	Max 1-hr ppm @ 15% O2	Max 1-hr lb/mmBtu	Max 1-hr lbs/hr	Max 1-hr lb/startup	Daily Total lbs	Max 1-hr ppm @ 15% O2	Max 1-hr lb/mmBtu	Max 1-hr lbs/hr	Max 1-hr lb/startup	Daily Total lbs	Max 3-hr ppm @ 15% O2
1-Oct-22	0.0	0.00000	0.00	0.0	0.0	0.0	0.00000	0.0	0.0	0.0	0.0
2-Oct-22	0.0	0.00000	0.00	0.0	0.0	0.0	0.00000	0.0	0.0	0.0	0.0
3-Oct-22	0.0	0.00000	0.00	0.0	0.0	0.0	0.00000	0.0	0.0	0.0	0.0
4-Oct-22	0.0	0.00000	0.00	0.0	0.0	0.0	0.00000	0.0	0.0	0.0	0.0
5-Oct-22	0.0	0.00000	0.00	0.0	0.0	0.0	0.00000	0.0	0.0	0.0	0.0
6-Oct-22	0.0	0.00000	0.00	0.0	0.0	0.0	0.00000	0.0	0.0	0.0	0.0
7-Oct-22	0.0	0.00000	0.00	0.0	0.0	0.0	0.00000	0.0	0.0	0.0	0.0
8-Oct-22	0.0	0.00000	0.00	0.0	0.0	0.0	0.00000	0.0	0.0	0.0	0.0
9-Oct-22	0.0	0.00000	0.00	0.0	0.0	0.0	0.00000	0.0	0.0	0.0	0.0
10-Oct-22	0.0	0.00000	0.00	0.0	0.0	0.0	0.00000	0.0	0.0	0.0	0.0
11-Oct-22	0.0	0.00000	0.00	0.0	0.0	0.0	0.00000	0.0	0.0	0.0	0.0
12-Oct-22	0.0	0.00000	0.00	0.0	0.0	0.0	0.00000	0.0	0.0	0.0	0.0
13-Oct-22	0.0	0.00000	0.00	0.0	0.0	0.0	0.00000	0.0	0.0	0.0	0.0
14-Oct-22	0.0	0.00000	0.00	0.0	0.0	0.0	0.00000	0.0	0.0	0.0	0.0
15-Oct-22	0.0	0.00000	0.00	0.0	0.0	0.0	0.00000	0.0	0.0	0.0	0.0
16-Oct-22	0.0	0.00000	0.00	0.0	0.0	0.0	0.00000	0.0	0.0	0.0	0.0
17-Oct-22	0.0	0.00000	0.00	0.0	0.0	0.0	0.00000	0.0	0.0	0.0	0.0
18-Oct-22	0.0	0.00000	0.00	0.0	0.0	0.0	0.00000	0.0	0.0	0.0	0.0
19-Oct-22	0.0	0.00000	0.00	0.0	0.0	0.0	0.00000	0.0	0.0	0.0	0.0
20-Oct-22	0.0	0.00000	0.00	0.0	0.0	0.0	0.00000	0.0	0.0	0.0	0.0
21-Oct-22	0.0	0.00000	0.00	0.0	0.0	0.0	0.00000	0.0	0.0	0.0	0.0
22-Oct-22	0.0	0.00000	0.00	0.0	0.0	0.0	0.00000	0.0	0.0	0.0	0.0
23-Oct-22	0.0	0.00000	0.00	0.0	0.0	0.0	0.00000	0.0	0.0	0.0	0.0
24-Oct-22	0.0	0.00000	0.00	0.0	0.0	0.0	0.00000	0.0	0.0	0.0	0.0
25-Oct-22	0.0	0.00000	0.00	0.0	0.0	0.0	0.00000	0.0	0.0	0.0	0.0
26-Oct-22	0.0	0.00000	0.00	0.0	0.0	0.0	0.00000	0.0	0.0	0.0	0.0
27-Oct-22	0.0	0.00000	0.00	0.0	0.0	0.0	0.00000	0.0	0.0	0.0	0.0
28-Oct-22	0.0	0.00000	0.00	0.0	0.0	0.0	0.00000	0.0	0.0	0.0	0.0
29-Oct-22	0.0	0.00000	0.00	0.0	0.0	0.0	0.00000	0.0	0.0	0.0	0.0
30-Oct-22	0.0	0.00000	0.00	0.0	0.0	0.0	0.00000	0.0	0.0	0.0	0.0
31-Oct-22	*1.5	*0.00535	*8.56	22.4	29.9	*0.4	*0.00088	*1.4	113.0	163.8	**
Mo. Total					29.9					163.8	
12-Mo. Total					1,627.0					2,915.6	

Notes:

Maximum 1-hr values indicate rolling 60 minute values for all but NH3.

* Less than 60 minute rolling value

** Invalid 3-hr rolling value

NRG Marsh Landing
Marsh Landing Generating Station, Unit 4
NOx, CO and NH3 Emissions

October 2022	NOx					CO					NH3
Day	Max 1-hr ppm @ 15% O2	Max 1-hr lb/mmBtu	Max 1-hr lbs/hr	Max 1-hr lb/startup	Daily Total lbs	Max 1-hr ppm @ 15% O2	Max 1-hr lb/mmBtu	Max 1-hr lbs/hr	Max 1-hr lb/startup	Daily Total lbs	Max 3-hr ppm @ 15% O2
1-Oct-22	0.0	0.00000	0.00	0.0	0.0	0.0	0.00000	0.0	0.0	0.0	0.0
2-Oct-22	0.0	0.00000	0.00	0.0	0.0	0.0	0.00000	0.0	0.0	0.0	0.0
3-Oct-22	0.0	0.00000	0.00	0.0	0.0	0.0	0.00000	0.0	0.0	0.0	0.0
4-Oct-22	0.0	0.00000	0.00	0.0	0.0	0.0	0.00000	0.0	0.0	0.0	0.0
5-Oct-22	0.0	0.00000	0.00	0.0	0.0	0.0	0.00000	0.0	0.0	0.0	0.0
6-Oct-22	0.0	0.00000	0.00	0.0	0.0	0.0	0.00000	0.0	0.0	0.0	0.0
7-Oct-22	0.0	0.00000	0.00	0.0	0.0	0.0	0.00000	0.0	0.0	0.0	0.0
8-Oct-22	0.0	0.00000	0.00	0.0	0.0	0.0	0.00000	0.0	0.0	0.0	0.0
9-Oct-22	0.0	0.00000	0.00	0.0	0.0	0.0	0.00000	0.0	0.0	0.0	0.0
10-Oct-22	0.0	0.00000	0.00	0.0	0.0	0.0	0.00000	0.0	0.0	0.0	0.0
11-Oct-22	0.0	0.00000	0.00	0.0	0.0	0.0	0.00000	0.0	0.0	0.0	0.0
12-Oct-22	0.0	0.00000	0.00	0.0	0.0	0.0	0.00000	0.0	0.0	0.0	0.0
13-Oct-22	0.0	0.00000	0.00	0.0	0.0	0.0	0.00000	0.0	0.0	0.0	0.0
14-Oct-22	0.0	0.00000	0.00	0.0	0.0	0.0	0.00000	0.0	0.0	0.0	0.0
15-Oct-22	0.0	0.00000	0.00	0.0	0.0	0.0	0.00000	0.0	0.0	0.0	0.0
16-Oct-22	0.0	0.00000	0.00	0.0	0.0	0.0	0.00000	0.0	0.0	0.0	0.0
17-Oct-22	0.0	0.00000	0.00	0.0	0.0	0.0	0.00000	0.0	0.0	0.0	0.0
18-Oct-22	0.0	0.00000	0.00	0.0	0.0	0.0	0.00000	0.0	0.0	0.0	0.0
19-Oct-22	0.0	0.00000	0.00	0.0	0.0	0.0	0.00000	0.0	0.0	0.0	0.0
20-Oct-22	0.0	0.00000	0.00	0.0	0.0	0.0	0.00000	0.0	0.0	0.0	0.0
21-Oct-22	0.0	0.00000	0.00	0.0	0.0	0.0	0.00000	0.0	0.0	0.0	0.0
22-Oct-22	0.0	0.00000	0.00	0.0	0.0	0.0	0.00000	0.0	0.0	0.0	0.0
23-Oct-22	0.0	0.00000	0.00	0.0	0.0	0.0	0.00000	0.0	0.0	0.0	0.0
24-Oct-22	0.0	0.00000	0.00	0.0	0.0	0.0	0.00000	0.0	0.0	0.0	0.0
25-Oct-22	0.0	0.00000	0.00	0.0	0.0	0.0	0.00000	0.0	0.0	0.0	0.0
26-Oct-22	0.0	0.00000	0.00	0.0	0.0	0.0	0.00000	0.0	0.0	0.0	0.0
27-Oct-22	0.0	0.00000	0.00	0.0	0.0	0.0	0.00000	0.0	0.0	0.0	0.0
28-Oct-22	0.0	0.00000	0.00	0.0	0.0	0.0	0.00000	0.0	0.0	0.0	0.0
29-Oct-22	0.0	0.00000	0.00	0.0	0.0	0.0	0.00000	0.0	0.0	0.0	0.0
30-Oct-22	0.0	0.00000	0.00	0.0	0.0	0.0	0.00000	0.0	0.0	0.0	0.0
31-Oct-22	*1.2	*0.00459	*7.60	18.5	22.3	*0.0	*0.00011	*0.1	121.8	159.3	**
Mo. Total					22.3					159.3	
12-Mo. Total					2,866.4					4,685.0	

Notes:

Maximum 1-hr values indicate rolling 60 minute values for all but NH3.

* Less than 60 minute rolling value

** Invalid 3-hr rolling value

NRG Marsh Landing
Marsh Landing Generating Station, Unit 1
NOx, CO and NH3 Emissions

November 2022	NOx					CO					NH3
	Max 1-hr ppm @ 15% O2	Max 1-hr lb/mmBtu	Max 1-hr lbs/hr	Max 1-hr lb/startup	Daily Total lbs	Max 1-hr ppm @ 15% O2	Max 1-hr lb/mmBtu	Max 1-hr lbs/hr	Max 1-hr lb/startup	Daily Total lbs	
1-Nov-22	2.1	0.00763	13.40	20.5	164.4	0.7	0.00165	2.5	128.2	325.0	5.2
2-Nov-22	2.1	0.00768	15.73	N/A	270.9	0.9	0.00198	2.9	N/A	61.5	4.6
3-Nov-22	0.0	0.00000	0.00	0.0	0.0	0.0	0.00000	0.0	0.0	0.0	0.0
4-Nov-22	0.0	0.00000	0.00	0.0	0.0	0.0	0.00000	0.0	0.0	0.0	0.0
5-Nov-22	0.0	0.00000	0.00	0.0	0.0	0.0	0.00000	0.0	0.0	0.0	0.0
6-Nov-22	0.0	0.00000	0.00	0.0	0.0	0.0	0.00000	0.0	0.0	0.0	0.0
7-Nov-22	0.0	0.00000	0.00	0.0	0.0	0.0	0.00000	0.0	0.0	0.0	0.0
8-Nov-22	0.0	0.00000	0.00	0.0	0.0	0.0	0.00000	0.0	0.0	0.0	0.0
9-Nov-22	0.0	0.00000	0.00	0.0	0.0	0.0	0.00000	0.0	0.0	0.0	0.0
10-Nov-22	0.0	0.00000	0.00	0.0	0.0	0.0	0.00000	0.0	0.0	0.0	0.0
11-Nov-22	0.0	0.00000	0.00	0.0	0.0	0.0	0.00000	0.0	0.0	0.0	0.0
12-Nov-22	0.0	0.00000	0.00	0.0	0.0	0.0	0.00000	0.0	0.0	0.0	0.0
13-Nov-22	0.0	0.00000	0.00	0.0	0.0	0.0	0.00000	0.0	0.0	0.0	0.0
14-Nov-22	0.0	0.00000	0.00	0.0	0.0	0.0	0.00000	0.0	0.0	0.0	0.0
15-Nov-22	0.0	0.00000	0.00	0.0	0.0	0.0	0.00000	0.0	0.0	0.0	0.0
16-Nov-22	0.0	0.00000	0.00	0.0	0.0	0.0	0.00000	0.0	0.0	0.0	0.0
17-Nov-22	0.0	0.00000	0.00	0.0	0.0	0.0	0.00000	0.0	0.0	0.0	0.0
18-Nov-22	0.0	0.00000	0.00	0.0	0.0	0.0	0.00000	0.0	0.0	0.0	0.0
19-Nov-22	0.0	0.00000	0.00	0.0	0.0	0.0	0.00000	0.0	0.0	0.0	0.0
20-Nov-22	0.0	0.00000	0.00	0.0	0.0	0.0	0.00000	0.0	0.0	0.0	0.0
21-Nov-22	0.0	0.00000	0.00	0.0	0.0	0.0	0.00000	0.0	0.0	0.0	0.0
22-Nov-22	0.0	0.00000	0.00	0.0	0.0	0.0	0.00000	0.0	0.0	0.0	0.0
23-Nov-22	0.0	0.00000	0.00	0.0	0.0	0.0	0.00000	0.0	0.0	0.0	0.0
24-Nov-22	0.0	0.00000	0.00	0.0	0.0	0.0	0.00000	0.0	0.0	0.0	0.0
25-Nov-22	0.0	0.00000	0.00	0.0	0.0	0.0	0.00000	0.0	0.0	0.0	0.0
26-Nov-22	0.0	0.00000	0.00	0.0	0.0	0.0	0.00000	0.0	0.0	0.0	0.0
27-Nov-22	0.0	0.00000	0.00	0.0	0.0	0.0	0.00000	0.0	0.0	0.0	0.0
28-Nov-22	0.0	0.00000	0.00	0.0	0.0	0.0	0.00000	0.0	0.0	0.0	0.0
29-Nov-22	0.0	0.00000	0.00	0.0	0.0	0.0	0.00000	0.0	0.0	0.0	0.0
30-Nov-22	0.0	0.00000	0.00	0.0	0.0	0.0	0.00000	0.0	0.0	0.0	0.0
Mo. Total					435.3					386.5	
12-Mo. Total					1,746.9					3,524.7	

Notes:

Maximum 1-hr values indicate rolling 60 minute values for all but NH3.

* Less than 60 minute rolling value

** Invalid 3-hr rolling value

NRG Marsh Landing
Marsh Landing Generating Station, Unit 2
NOx, CO and NH3 Emissions

November 2022	NOx					CO					NH3
	Max 1-hr ppm @ 15% O2	Max 1-hr lb/mmBtu	Max 1-hr lbs/hr	Max 1-hr lb/startup	Daily Total lbs	Max 1-hr ppm @ 15% O2	Max 1-hr lb/mmBtu	Max 1-hr lbs/hr	Max 1-hr lb/startup	Daily Total lbs	
1-Nov-22	0.0	0.00000	0.00	0.0	0.0	0.0	0.00000	0.0	0.0	0.0	0.0
2-Nov-22	2.0	0.00749	14.24	21.3	165.1	0.5	0.00115	2.0	137.3	172.6	2.1
3-Nov-22	0.0	0.00000	0.00	0.0	0.0	0.0	0.00000	0.0	0.0	0.0	0.0
4-Nov-22	0.0	0.00000	0.00	0.0	0.0	0.0	0.00000	0.0	0.0	0.0	0.0
5-Nov-22	0.0	0.00000	0.00	0.0	0.0	0.0	0.00000	0.0	0.0	0.0	0.0
6-Nov-22	0.0	0.00000	0.00	0.0	0.0	0.0	0.00000	0.0	0.0	0.0	0.0
7-Nov-22	0.0	0.00000	0.00	0.0	0.0	0.0	0.00000	0.0	0.0	0.0	0.0
8-Nov-22	0.0	0.00000	0.00	0.0	0.0	0.0	0.00000	0.0	0.0	0.0	0.0
9-Nov-22	0.0	0.00000	0.00	0.0	0.0	0.0	0.00000	0.0	0.0	0.0	0.0
10-Nov-22	0.0	0.00000	0.00	0.0	0.0	0.0	0.00000	0.0	0.0	0.0	0.0
11-Nov-22	0.0	0.00000	0.00	0.0	0.0	0.0	0.00000	0.0	0.0	0.0	0.0
12-Nov-22	0.0	0.00000	0.00	0.0	0.0	0.0	0.00000	0.0	0.0	0.0	0.0
13-Nov-22	0.0	0.00000	0.00	0.0	0.0	0.0	0.00000	0.0	0.0	0.0	0.0
14-Nov-22	0.0	0.00000	0.00	0.0	0.0	0.0	0.00000	0.0	0.0	0.0	0.0
15-Nov-22	0.0	0.00000	0.00	0.0	0.0	0.0	0.00000	0.0	0.0	0.0	0.0
16-Nov-22	0.0	0.00000	0.00	0.0	0.0	0.0	0.00000	0.0	0.0	0.0	0.0
17-Nov-22	0.0	0.00000	0.00	0.0	0.0	0.0	0.00000	0.0	0.0	0.0	0.0
18-Nov-22	0.0	0.00000	0.00	0.0	0.0	0.0	0.00000	0.0	0.0	0.0	0.0
19-Nov-22	0.0	0.00000	0.00	0.0	0.0	0.0	0.00000	0.0	0.0	0.0	0.0
20-Nov-22	0.0	0.00000	0.00	0.0	0.0	0.0	0.00000	0.0	0.0	0.0	0.0
21-Nov-22	0.0	0.00000	0.00	0.0	0.0	0.0	0.00000	0.0	0.0	0.0	0.0
22-Nov-22	0.0	0.00000	0.00	0.0	0.0	0.0	0.00000	0.0	0.0	0.0	0.0
23-Nov-22	0.0	0.00000	0.00	0.0	0.0	0.0	0.00000	0.0	0.0	0.0	0.0
24-Nov-22	0.0	0.00000	0.00	0.0	0.0	0.0	0.00000	0.0	0.0	0.0	0.0
25-Nov-22	0.0	0.00000	0.00	0.0	0.0	0.0	0.00000	0.0	0.0	0.0	0.0
26-Nov-22	0.0	0.00000	0.00	0.0	0.0	0.0	0.00000	0.0	0.0	0.0	0.0
27-Nov-22	0.0	0.00000	0.00	0.0	0.0	0.0	0.00000	0.0	0.0	0.0	0.0
28-Nov-22	2.0	0.00750	17.01	24.1	82.8	0.1	0.00024	0.5	127.4	173.6	1.1
29-Nov-22	0.0	0.00000	0.00	0.0	0.0	0.0	0.00000	0.0	0.0	0.0	0.0
30-Nov-22	0.0	0.00000	0.00	0.0	0.0	0.0	0.00000	0.0	0.0	0.0	0.0
Mo. Total					247.8					346.2	
12-Mo. Total					4,517.0					7,850.8	

Notes:

Maximum 1-hr values indicate rolling 60 minute values for all but NH3.

* Less than 60 minute rolling value

** Invalid 3-hr rolling value

NRG Marsh Landing
Marsh Landing Generating Station, Unit 3
NOx, CO and NH3 Emissions

November 2022	NOx					CO					NH3
	Max 1-hr ppm @ 15% O2	Max 1-hr lb/mmBtu	Max 1-hr lbs/hr	Max 1-hr lb/startup	Daily Total lbs	Max 1-hr ppm @ 15% O2	Max 1-hr lb/mmBtu	Max 1-hr lbs/hr	Max 1-hr lb/startup	Daily Total lbs	
1-Nov-22	0.0	0.00000	0.00	0.0	0.0	0.0	0.00000	0.0	0.0	0.0	0.0
2-Nov-22	0.0	0.00000	0.00	0.0	0.0	0.0	0.00000	0.0	0.0	0.0	0.0
3-Nov-22	1.8	0.00681	15.12	23.0	149.1	0.9	0.00195	2.9	134.1	148.6	0.6
4-Nov-22	1.7	0.00636	13.08	N/A	41.9	0.6	0.00144	2.1	N/A	38.4	0.5
5-Nov-22	0.0	0.00000	0.00	0.0	0.0	0.0	0.00000	0.0	0.0	0.0	0.0
6-Nov-22	0.0	0.00000	0.00	0.0	0.0	0.0	0.00000	0.0	0.0	0.0	0.0
7-Nov-22	0.0	0.00000	0.00	0.0	0.0	0.0	0.00000	0.0	0.0	0.0	0.0
8-Nov-22	0.0	0.00000	0.00	0.0	0.0	0.0	0.00000	0.0	0.0	0.0	0.0
9-Nov-22	0.0	0.00000	0.00	0.0	0.0	0.0	0.00000	0.0	0.0	0.0	0.0
10-Nov-22	0.0	0.00000	0.00	0.0	0.0	0.0	0.00000	0.0	0.0	0.0	0.0
11-Nov-22	0.0	0.00000	0.00	0.0	0.0	0.0	0.00000	0.0	0.0	0.0	0.0
12-Nov-22	0.0	0.00000	0.00	0.0	0.0	0.0	0.00000	0.0	0.0	0.0	0.0
13-Nov-22	0.0	0.00000	0.00	0.0	0.0	0.0	0.00000	0.0	0.0	0.0	0.0
14-Nov-22	0.0	0.00000	0.00	0.0	0.0	0.0	0.00000	0.0	0.0	0.0	0.0
15-Nov-22	0.0	0.00000	0.00	0.0	0.0	0.0	0.00000	0.0	0.0	0.0	0.0
16-Nov-22	0.0	0.00000	0.00	0.0	0.0	0.0	0.00000	0.0	0.0	0.0	0.0
17-Nov-22	0.0	0.00000	0.00	0.0	0.0	0.0	0.00000	0.0	0.0	0.0	0.0
18-Nov-22	0.0	0.00000	0.00	0.0	0.0	0.0	0.00000	0.0	0.0	0.0	0.0
19-Nov-22	0.0	0.00000	0.00	0.0	0.0	0.0	0.00000	0.0	0.0	0.0	0.0
20-Nov-22	0.0	0.00000	0.00	0.0	0.0	0.0	0.00000	0.0	0.0	0.0	0.0
21-Nov-22	0.0	0.00000	0.00	0.0	0.0	0.0	0.00000	0.0	0.0	0.0	0.0
22-Nov-22	0.0	0.00000	0.00	0.0	0.0	0.0	0.00000	0.0	0.0	0.0	0.0
23-Nov-22	0.0	0.00000	0.00	0.0	0.0	0.0	0.00000	0.0	0.0	0.0	0.0
24-Nov-22	0.0	0.00000	0.00	0.0	0.0	0.0	0.00000	0.0	0.0	0.0	0.0
25-Nov-22	0.0	0.00000	0.00	0.0	0.0	0.0	0.00000	0.0	0.0	0.0	0.0
26-Nov-22	0.0	0.00000	0.00	0.0	0.0	0.0	0.00000	0.0	0.0	0.0	0.0
27-Nov-22	0.0	0.00000	0.00	0.0	0.0	0.0	0.00000	0.0	0.0	0.0	0.0
28-Nov-22	0.0	0.00000	0.00	0.0	0.0	0.0	0.00000	0.0	0.0	0.0	0.0
29-Nov-22	0.0	0.00000	0.00	0.0	0.0	0.0	0.00000	0.0	0.0	0.0	0.0
30-Nov-22	0.0	0.00000	0.00	0.0	0.0	0.0	0.00000	0.0	0.0	0.0	0.0
Mo. Total					191.0					187.0	
12-Mo. Total					1,533.3					2,859.4	

Notes:

Maximum 1-hr values indicate rolling 60 minute values for all but NH3.

* Less than 60 minute rolling value

** Invalid 3-hr rolling value

NRG Marsh Landing
Marsh Landing Generating Station, Unit 4
NOx, CO and NH3 Emissions

November 2022	NOx					CO					NH3
	Max 1-hr ppm @ 15% O2	Max 1-hr lb/mmBtu	Max 1-hr lbs/hr	Max 1-hr lb/startup	Daily Total lbs	Max 1-hr ppm @ 15% O2	Max 1-hr lb/mmBtu	Max 1-hr lbs/hr	Max 1-hr lb/startup	Daily Total lbs	
1-Nov-22	0.0	0.00000	0.00	0.0	0.0	0.0	0.00000	0.0	0.0	0.0	0.0
2-Nov-22	0.0	0.00000	0.00	0.0	0.0	0.0	0.00000	0.0	0.0	0.0	0.0
3-Nov-22	0.0	0.00000	0.00	0.0	0.0	0.0	0.00000	0.0	0.0	0.0	0.0
4-Nov-22	1.8	0.00674	14.92	20.4	151.0	0.8	0.00182	2.7	130.9	171.5	2.0
5-Nov-22	0.0	0.00000	0.00	0.0	0.0	0.0	0.00000	0.0	0.0	0.0	0.0
6-Nov-22	0.0	0.00000	0.00	0.0	0.0	0.0	0.00000	0.0	0.0	0.0	0.0
7-Nov-22	0.0	0.00000	0.00	0.0	0.0	0.0	0.00000	0.0	0.0	0.0	0.0
8-Nov-22	0.0	0.00000	0.00	0.0	0.0	0.0	0.00000	0.0	0.0	0.0	0.0
9-Nov-22	0.0	0.00000	0.00	0.0	0.0	0.0	0.00000	0.0	0.0	0.0	0.0
10-Nov-22	0.0	0.00000	0.00	0.0	0.0	0.0	0.00000	0.0	0.0	0.0	0.0
11-Nov-22	0.0	0.00000	0.00	0.0	0.0	0.0	0.00000	0.0	0.0	0.0	0.0
12-Nov-22	0.0	0.00000	0.00	0.0	0.0	0.0	0.00000	0.0	0.0	0.0	0.0
13-Nov-22	0.0	0.00000	0.00	0.0	0.0	0.0	0.00000	0.0	0.0	0.0	0.0
14-Nov-22	0.0	0.00000	0.00	0.0	0.0	0.0	0.00000	0.0	0.0	0.0	0.0
15-Nov-22	0.0	0.00000	0.00	0.0	0.0	0.0	0.00000	0.0	0.0	0.0	0.0
16-Nov-22	0.0	0.00000	0.00	0.0	0.0	0.0	0.00000	0.0	0.0	0.0	0.0
17-Nov-22	0.0	0.00000	0.00	0.0	0.0	0.0	0.00000	0.0	0.0	0.0	0.0
18-Nov-22	0.0	0.00000	0.00	0.0	0.0	0.0	0.00000	0.0	0.0	0.0	0.0
19-Nov-22	0.0	0.00000	0.00	0.0	0.0	0.0	0.00000	0.0	0.0	0.0	0.0
20-Nov-22	0.0	0.00000	0.00	0.0	0.0	0.0	0.00000	0.0	0.0	0.0	0.0
21-Nov-22	0.0	0.00000	0.00	0.0	0.0	0.0	0.00000	0.0	0.0	0.0	0.0
22-Nov-22	0.0	0.00000	0.00	0.0	0.0	0.0	0.00000	0.0	0.0	0.0	0.0
23-Nov-22	0.0	0.00000	0.00	0.0	0.0	0.0	0.00000	0.0	0.0	0.0	0.0
24-Nov-22	0.0	0.00000	0.00	0.0	0.0	0.0	0.00000	0.0	0.0	0.0	0.0
25-Nov-22	0.0	0.00000	0.00	0.0	0.0	0.0	0.00000	0.0	0.0	0.0	0.0
26-Nov-22	0.0	0.00000	0.00	0.0	0.0	0.0	0.00000	0.0	0.0	0.0	0.0
27-Nov-22	0.0	0.00000	0.00	0.0	0.0	0.0	0.00000	0.0	0.0	0.0	0.0
28-Nov-22	0.0	0.00000	0.00	0.0	0.0	0.0	0.00000	0.0	0.0	0.0	0.0
29-Nov-22	0.0	0.00000	0.00	0.0	0.0	0.0	0.00000	0.0	0.0	0.0	0.0
30-Nov-22	0.0	0.00000	0.00	0.0	0.0	0.0	0.00000	0.0	0.0	0.0	0.0
Mo. Total					151.0					171.5	
12-Mo. Total					2,751.3					4,621.1	

Notes:

Maximum 1-hr values indicate rolling 60 minute values for all but NH3.

* Less than 60 minute rolling value

** Invalid 3-hr rolling value

NRG Marsh Landing
Marsh Landing Generating Station, Unit 1
NOx, CO and NH3 Emissions

December 2022	NOx					CO					NH3
	Max 1-hr ppm @ 15% O2	Max 1-hr lb/mmBtu	Max 1-hr lbs/hr	Max 1-hr lb/startup	Daily Total lbs	Max 1-hr ppm @ 15% O2	Max 1-hr lb/mmBtu	Max 1-hr lbs/hr	Max 1-hr lb/startup	Daily Total lbs	
1-Dec-22	0.0	0.00000	0.00	0.0	0.0	0.0	0.00000	0.0	0.0	0.0	0.0
2-Dec-22	0.0	0.00000	0.00	0.0	0.0	0.0	0.00000	0.0	0.0	0.0	0.0
3-Dec-22	0.0	0.00000	0.00	0.0	0.0	0.0	0.00000	0.0	0.0	0.0	0.0
4-Dec-22	0.0	0.00000	0.00	0.0	0.0	0.0	0.00000	0.0	0.0	0.0	0.0
5-Dec-22	0.0	0.00000	0.00	0.0	0.0	0.0	0.00000	0.0	0.0	0.0	0.0
6-Dec-22	0.0	0.00000	0.00	0.0	0.0	0.0	0.00000	0.0	0.0	0.0	0.0
7-Dec-22	0.0	0.00000	0.00	0.0	0.0	0.0	0.00000	0.0	0.0	0.0	0.0
8-Dec-22	0.0	0.00000	0.00	0.0	0.0	0.0	0.00000	0.0	0.0	0.0	0.0
9-Dec-22	0.0	0.00000	0.00	0.0	0.0	0.0	0.00000	0.0	0.0	0.0	0.0
10-Dec-22	0.0	0.00000	0.00	0.0	0.0	0.0	0.00000	0.0	0.0	0.0	0.0
11-Dec-22	0.0	0.00000	0.00	0.0	0.0	0.0	0.00000	0.0	0.0	0.0	0.0
12-Dec-22	0.0	0.00000	0.00	0.0	0.0	0.0	0.00000	0.0	0.0	0.0	0.0
13-Dec-22	0.0	0.00000	0.00	0.0	0.0	0.0	0.00000	0.0	0.0	0.0	0.0
14-Dec-22	0.0	0.00000	0.00	0.0	0.0	0.0	0.00000	0.0	0.0	0.0	0.0
15-Dec-22	0.0	0.00000	0.00	0.0	0.0	0.0	0.00000	0.0	0.0	0.0	0.0
16-Dec-22	0.0	0.00000	0.00	0.0	0.0	0.0	0.00000	0.0	0.0	0.0	0.0
17-Dec-22	0.0	0.00000	0.00	0.0	0.0	0.0	0.00000	0.0	0.0	0.0	0.0
18-Dec-22	0.0	0.00000	0.00	0.0	0.0	0.0	0.00000	0.0	0.0	0.0	0.0
19-Dec-22	0.0	0.00000	0.00	0.0	0.0	0.0	0.00000	0.0	0.0	0.0	0.0
20-Dec-22	0.0	0.00000	0.00	0.0	0.0	0.0	0.00000	0.0	0.0	0.0	0.0
21-Dec-22	1.9	0.00685	15.04	25.5	100.6	0.4	0.00092	2.0	149.9	236.7	2.9
22-Dec-22	0.0	0.00000	0.00	0.0	0.0	0.0	0.00000	0.0	0.0	0.0	0.0
23-Dec-22	0.0	0.00000	0.00	0.0	0.0	0.0	0.00000	0.0	0.0	0.0	0.0
24-Dec-22	0.0	0.00000	0.00	0.0	0.0	0.0	0.00000	0.0	0.0	0.0	0.0
25-Dec-22	0.0	0.00000	0.00	0.0	0.0	0.0	0.00000	0.0	0.0	0.0	0.0
26-Dec-22	0.0	0.00000	0.00	0.0	0.0	0.0	0.00000	0.0	0.0	0.0	0.0
27-Dec-22	0.0	0.00000	0.00	0.0	0.0	0.0	0.00000	0.0	0.0	0.0	0.0
28-Dec-22	0.0	0.00000	0.00	0.0	0.0	0.0	0.00000	0.0	0.0	0.0	0.0
29-Dec-22	0.0	0.00000	0.00	0.0	0.0	0.0	0.00000	0.0	0.0	0.0	0.0
30-Dec-22	0.0	0.00000	0.00	0.0	0.0	0.0	0.00000	0.0	0.0	0.0	0.0
31-Dec-22	0.0	0.00000	0.00	0.0	0.0	0.0	0.00000	0.0	0.0	0.0	0.0
Mo. Total					100.6					236.7	
12-Mo. Total					1,847.5					3,761.4	

Notes:

Maximum 1-hr values indicate rolling 60 minute values for all but NH3.

* Less than 60 minute rolling value

** Invalid 3-hr rolling value

NRG Marsh Landing
Marsh Landing Generating Station, Unit 2
NOx, CO and NH3 Emissions

December 2022	NOx					CO					NH3
	Max 1-hr ppm @ 15% O2	Max 1-hr lb/mmBtu	Max 1-hr lbs/hr	Max 1-hr lb/startup	Daily Total lbs	Max 1-hr ppm @ 15% O2	Max 1-hr lb/mmBtu	Max 1-hr lbs/hr	Max 1-hr lb/startup	Daily Total lbs	
1-Dec-22	0.0	0.00000	0.00	0.0	0.0	0.0	0.00000	0.0	0.0	0.0	0.0
2-Dec-22	0.0	0.00000	0.00	0.0	0.0	0.0	0.00000	0.0	0.0	0.0	0.0
3-Dec-22	0.0	0.00000	0.00	0.0	0.0	0.0	0.00000	0.0	0.0	0.0	0.0
4-Dec-22	0.0	0.00000	0.00	0.0	0.0	0.0	0.00000	0.0	0.0	0.0	0.0
5-Dec-22	0.0	0.00000	0.00	0.0	0.0	0.0	0.00000	0.0	0.0	0.0	0.0
6-Dec-22	0.0	0.00000	0.00	0.0	0.0	0.0	0.00000	0.0	0.0	0.0	0.0
7-Dec-22	0.0	0.00000	0.00	0.0	0.0	0.0	0.00000	0.0	0.0	0.0	0.0
8-Dec-22	0.0	0.00000	0.00	0.0	0.0	0.0	0.00000	0.0	0.0	0.0	0.0
9-Dec-22	0.0	0.00000	0.00	0.0	0.0	0.0	0.00000	0.0	0.0	0.0	0.0
10-Dec-22	0.0	0.00000	0.00	0.0	0.0	0.0	0.00000	0.0	0.0	0.0	0.0
11-Dec-22	0.0	0.00000	0.00	0.0	0.0	0.0	0.00000	0.0	0.0	0.0	0.0
12-Dec-22	0.0	0.00000	0.00	0.0	0.0	0.0	0.00000	0.0	0.0	0.0	0.0
13-Dec-22	0.0	0.00000	0.00	0.0	0.0	0.0	0.00000	0.0	0.0	0.0	0.0
14-Dec-22	0.0	0.00000	0.00	0.0	0.0	0.0	0.00000	0.0	0.0	0.0	0.0
15-Dec-22	2.0	0.00753	16.14	24.5	153.2	0.1	0.00017	0.4	126.7	138.5	1.2
16-Dec-22	2.0	0.00738	15.20	N/A	8.2	0.0	0.00003	0.1	N/A	39.3	0.8
17-Dec-22	0.0	0.00000	0.00	0.0	0.0	0.0	0.00000	0.0	0.0	0.0	0.0
18-Dec-22	0.0	0.00000	0.00	0.0	0.0	0.0	0.00000	0.0	0.0	0.0	0.0
19-Dec-22	0.0	0.00000	0.00	0.0	0.0	0.0	0.00000	0.0	0.0	0.0	0.0
20-Dec-22	2.1	0.00765	16.85	26.2	69.8	0.0	0.00002	0.0	163.2	429.3	0.7
21-Dec-22	2.0	0.00754	16.01	25.5	111.8	0.0	0.00006	0.1	131.7	167.5	1.1
22-Dec-22	0.0	0.00000	0.00	0.0	0.0	0.0	0.00000	0.0	0.0	0.0	0.0
23-Dec-22	0.0	0.00000	0.00	0.0	0.0	0.0	0.00000	0.0	0.0	0.0	0.0
24-Dec-22	0.0	0.00000	0.00	0.0	0.0	0.0	0.00000	0.0	0.0	0.0	0.0
25-Dec-22	0.0	0.00000	0.00	0.0	0.0	0.0	0.00000	0.0	0.0	0.0	0.0
26-Dec-22	0.0	0.00000	0.00	0.0	0.0	0.0	0.00000	0.0	0.0	0.0	0.0
27-Dec-22	0.0	0.00000	0.00	0.0	0.0	0.0	0.00000	0.0	0.0	0.0	0.0
28-Dec-22	0.0	0.00000	0.00	0.0	0.0	0.0	0.00000	0.0	0.0	0.0	0.0
29-Dec-22	0.0	0.00000	0.00	0.0	0.0	0.0	0.00000	0.0	0.0	0.0	0.0
30-Dec-22	0.0	0.00000	0.00	0.0	0.0	0.0	0.00000	0.0	0.0	0.0	0.0
31-Dec-22	0.0	0.00000	0.00	0.0	0.0	0.0	0.00000	0.0	0.0	0.0	0.0
Mo. Total					342.9					774.6	
12-Mo. Total					4,859.9					8,625.4	

Notes:

Maximum 1-hr values indicate rolling 60 minute values for all but NH3.

* Less than 60 minute rolling value

** Invalid 3-hr rolling value

NRG Marsh Landing
Marsh Landing Generating Station, Unit 3
NOx, CO and NH3 Emissions

December 2022	NOx					CO					NH3
	Max 1-hr ppm @ 15% O2	Max 1-hr lb/mmBtu	Max 1-hr lbs/hr	Max 1-hr lb/startup	Daily Total lbs	Max 1-hr ppm @ 15% O2	Max 1-hr lb/mmBtu	Max 1-hr lbs/hr	Max 1-hr lb/startup	Daily Total lbs	
1-Dec-22	0.0	0.00000	0.00	0.0	0.0	0.0	0.00000	0.0	0.0	0.0	0.0
2-Dec-22	0.0	0.00000	0.00	0.0	0.0	0.0	0.00000	0.0	0.0	0.0	0.0
3-Dec-22	0.0	0.00000	0.00	0.0	0.0	0.0	0.00000	0.0	0.0	0.0	0.0
4-Dec-22	0.0	0.00000	0.00	0.0	0.0	0.0	0.00000	0.0	0.0	0.0	0.0
5-Dec-22	0.0	0.00000	0.00	0.0	0.0	0.0	0.00000	0.0	0.0	0.0	0.0
6-Dec-22	0.0	0.00000	0.00	0.0	0.0	0.0	0.00000	0.0	0.0	0.0	0.0
7-Dec-22	0.0	0.00000	0.00	0.0	0.0	0.0	0.00000	0.0	0.0	0.0	0.0
8-Dec-22	0.0	0.00000	0.00	0.0	0.0	0.0	0.00000	0.0	0.0	0.0	0.0
9-Dec-22	0.0	0.00000	0.00	0.0	0.0	0.0	0.00000	0.0	0.0	0.0	0.0
10-Dec-22	0.0	0.00000	0.00	0.0	0.0	0.0	0.00000	0.0	0.0	0.0	0.0
11-Dec-22	0.0	0.00000	0.00	0.0	0.0	0.0	0.00000	0.0	0.0	0.0	0.0
12-Dec-22	0.0	0.00000	0.00	0.0	0.0	0.0	0.00000	0.0	0.0	0.0	0.0
13-Dec-22	0.0	0.00000	0.00	0.0	0.0	0.0	0.00000	0.0	0.0	0.0	0.0
14-Dec-22	0.0	0.00000	0.00	0.0	0.0	0.0	0.00000	0.0	0.0	0.0	0.0
15-Dec-22	0.0	0.00000	0.00	0.0	0.0	0.0	0.00000	0.0	0.0	0.0	0.0
16-Dec-22	0.0	0.00000	0.00	0.0	0.0	0.0	0.00000	0.0	0.0	0.0	0.0
17-Dec-22	0.0	0.00000	0.00	0.0	0.0	0.0	0.00000	0.0	0.0	0.0	0.0
18-Dec-22	0.0	0.00000	0.00	0.0	0.0	0.0	0.00000	0.0	0.0	0.0	0.0
19-Dec-22	0.0	0.00000	0.00	0.0	0.0	0.0	0.00000	0.0	0.0	0.0	0.0
20-Dec-22	0.0	0.00000	0.00	0.0	0.0	0.0	0.00000	0.0	0.0	0.0	0.0
21-Dec-22	1.7	0.00632	13.48	32.1	102.0	0.3	0.00067	1.4	131.8	193.2	0.4
22-Dec-22	0.0	0.00000	0.00	0.0	0.0	0.0	0.00000	0.0	0.0	0.0	0.0
23-Dec-22	0.0	0.00000	0.00	0.0	0.0	0.0	0.00000	0.0	0.0	0.0	0.0
24-Dec-22	0.0	0.00000	0.00	0.0	0.0	0.0	0.00000	0.0	0.0	0.0	0.0
25-Dec-22	0.0	0.00000	0.00	0.0	0.0	0.0	0.00000	0.0	0.0	0.0	0.0
26-Dec-22	0.0	0.00000	0.00	0.0	0.0	0.0	0.00000	0.0	0.0	0.0	0.0
27-Dec-22	0.0	0.00000	0.00	0.0	0.0	0.0	0.00000	0.0	0.0	0.0	0.0
28-Dec-22	0.0	0.00000	0.00	0.0	0.0	0.0	0.00000	0.0	0.0	0.0	0.0
29-Dec-22	0.0	0.00000	0.00	0.0	0.0	0.0	0.00000	0.0	0.0	0.0	0.0
30-Dec-22	0.0	0.00000	0.00	0.0	0.0	0.0	0.00000	0.0	0.0	0.0	0.0
31-Dec-22	0.0	0.00000	0.00	0.0	0.0	0.0	0.00000	0.0	0.0	0.0	0.0
Mo. Total					102.0					193.2	
12-Mo. Total					1,635.3					3,052.6	

Notes:

Maximum 1-hr values indicate rolling 60 minute values for all but NH3.

* Less than 60 minute rolling value

** Invalid 3-hr rolling value

NRG Marsh Landing
Marsh Landing Generating Station, Unit 4
NOx, CO and NH3 Emissions

December 2022	NOx					CO					NH3
	Max 1-hr ppm @ 15% O2	Max 1-hr lb/mmBtu	Max 1-hr lbs/hr	Max 1-hr lb/startup	Daily Total lbs	Max 1-hr ppm @ 15% O2	Max 1-hr lb/mmBtu	Max 1-hr lbs/hr	Max 1-hr lb/startup	Daily Total lbs	
1-Dec-22	0.0	0.00000	0.00	0.0	0.0	0.0	0.00000	0.0	0.0	0.0	0.0
2-Dec-22	0.0	0.00000	0.00	0.0	0.0	0.0	0.00000	0.0	0.0	0.0	0.0
3-Dec-22	0.0	0.00000	0.00	0.0	0.0	0.0	0.00000	0.0	0.0	0.0	0.0
4-Dec-22	0.0	0.00000	0.00	0.0	0.0	0.0	0.00000	0.0	0.0	0.0	0.0
5-Dec-22	0.0	0.00000	0.00	0.0	0.0	0.0	0.00000	0.0	0.0	0.0	0.0
6-Dec-22	0.0	0.00000	0.00	0.0	0.0	0.0	0.00000	0.0	0.0	0.0	0.0
7-Dec-22	0.0	0.00000	0.00	0.0	0.0	0.0	0.00000	0.0	0.0	0.0	0.0
8-Dec-22	0.0	0.00000	0.00	0.0	0.0	0.0	0.00000	0.0	0.0	0.0	0.0
9-Dec-22	0.0	0.00000	0.00	0.0	0.0	0.0	0.00000	0.0	0.0	0.0	0.0
10-Dec-22	0.0	0.00000	0.00	0.0	0.0	0.0	0.00000	0.0	0.0	0.0	0.0
11-Dec-22	0.0	0.00000	0.00	0.0	0.0	0.0	0.00000	0.0	0.0	0.0	0.0
12-Dec-22	0.0	0.00000	0.00	0.0	0.0	0.0	0.00000	0.0	0.0	0.0	0.0
13-Dec-22	0.0	0.00000	0.00	0.0	0.0	0.0	0.00000	0.0	0.0	0.0	0.0
14-Dec-22	0.0	0.00000	0.00	0.0	0.0	0.0	0.00000	0.0	0.0	0.0	0.0
15-Dec-22	1.8	0.00657	13.83	25.2	214.0	0.2	0.00051	1.1	161.6	332.4	1.1
16-Dec-22	1.7	0.00633	13.25	N/A	7.0	0.2	0.00044	0.9	N/A	37.1	0.9
17-Dec-22	0.0	0.00000	0.00	0.0	0.0	0.0	0.00000	0.0	0.0	0.0	0.0
18-Dec-22	0.0	0.00000	0.00	0.0	0.0	0.0	0.00000	0.0	0.0	0.0	0.0
19-Dec-22	1.8	0.00648	14.10	24.4	109.0	0.2	0.00033	0.6	159.5	205.4	1.2
20-Dec-22	0.0	0.00000	0.00	0.0	0.0	0.0	0.00000	0.0	0.0	0.0	0.0
21-Dec-22	1.7	0.00640	13.18	22.0	94.6	0.2	0.00042	0.8	118.0	156.4	1.3
22-Dec-22	0.0	0.00000	0.00	0.0	0.0	0.0	0.00000	0.0	0.0	0.0	0.0
23-Dec-22	0.0	0.00000	0.00	0.0	0.0	0.0	0.00000	0.0	0.0	0.0	0.0
24-Dec-22	0.0	0.00000	0.00	0.0	0.0	0.0	0.00000	0.0	0.0	0.0	0.0
25-Dec-22	0.0	0.00000	0.00	0.0	0.0	0.0	0.00000	0.0	0.0	0.0	0.0
26-Dec-22	0.0	0.00000	0.00	0.0	0.0	0.0	0.00000	0.0	0.0	0.0	0.0
27-Dec-22	0.0	0.00000	0.00	0.0	0.0	0.0	0.00000	0.0	0.0	0.0	0.0
28-Dec-22	0.0	0.00000	0.00	0.0	0.0	0.0	0.00000	0.0	0.0	0.0	0.0
29-Dec-22	0.0	0.00000	0.00	0.0	0.0	0.0	0.00000	0.0	0.0	0.0	0.0
30-Dec-22	0.0	0.00000	0.00	0.0	0.0	0.0	0.00000	0.0	0.0	0.0	0.0
31-Dec-22	0.0	0.00000	0.00	0.0	0.0	0.0	0.00000	0.0	0.0	0.0	0.0
Mo. Total					424.6					731.2	
12-Mo. Total					3,175.9					5,352.4	

Notes:

Maximum 1-hr values indicate rolling 60 minute values for all but NH3.

* Less than 60 minute rolling value

** Invalid 3-hr rolling value

MARSH LANDING GENERATING STATION QUARTERLY OPERATION REPORT

Section 4.8 SU/SD Emission Limits



For Submittal to
California Energy Commission
Sacramento, California
08 – AFC – 3C

AQ-18 – Startup and Shutdown Emissions

The mass emission rates for each of the Gas Turbines did not exceed the limits established for startups and shutdowns during the report period of October 1 – December 31, 2022.

The limits contained in AQ-18 for mass emissions of NO_x (as NO₂), CO and POC (as CH₄) for each startup, during each hour containing a startup, and for each shutdown are listed in the following table for reference. **These requirements do not apply during black start readiness testing, commissioning, and/or emergency operations.** Additionally, the startup of each Gas Turbine did not exceed 30 minutes in duration and the shutdown of each Gas Turbine did not exceed 15 minutes in duration during the report period of October 1 – December 31, 2022.

Pollutant	Maximum Emissions Per Startup	Maximum Emissions During Hour Containing a Startup	Maximum Emissions Per Shutdown
	(lb/startup)	(lb/hour)	(lb/shutdown)
NO _x (as NO ₂)	36.4	45.1	15.1
CO	216.2	541.3	111.5
POC (as CH ₄)	11.9	28.5	5.4

The following tables provide a listing of the Startup and Shutdown mass emission rates of NO_x, CO and POC for each Gas Turbine at Marsh Landing Generating Station during the report period of October 1 – December 31, 2022. Separate tables are provided for each Gas Turbine for all startups, for all hours containing a startup and for all shutdowns.

No black start commissioning, readiness testing or emergency operation activities occurred during the reporting period.

Unit 1					
Startup Emissions					
10/1/2022 – 12/31/2022					
Date	Time Period	Minutes	NOx Lbs	CO Lbs	POC Lbs
10/31/2022	2007-2025	19	14.3	106.6	10.7
11/1/2022	1048-1051	4	0.5	75.4	10.6
11/1/2022	1107-1117	11	11.8	127.0	10.6
12/21/2022	1619-1635	17	17.5	148.5	10.7

Unit 2					
Startup Emissions					
10/1/2022 – 12/31/2022					
Date	Time Period	Minutes	NOx Lbs	CO Lbs	POC Lbs
10/31/2022	2007-2018	12	12.3	117.8	8.4
11/2/2022	1049-1058	10	14.1	137.0	8.4
11/28/2022	1641-1651	11	13.0	127.3	8.4
12/15/2022	1447-1456	10	12.9	126.6	8.4
12/20/2022	0812-0821	10	15.2	163.0	8.4
12/21/2022	1547-1556	10	14.2	131.6	8.4

Unit 3					
Startup Emissions					
10/1/2022 – 12/31/2022					
Date	Time Period	Minutes	NOx Lbs	CO Lbs	POC Lbs
10/31/2022	2007-2025	19	16.6	112.0	6.8
11/3/2022	1047-1104	18	18.1	133.3	6.7
12/21/2022	1619-1636	18	23.9	130.7	6.8

Unit 4					
Startup Emissions					
10/1/2022 – 12/31/2022					
Date	Time Period	Minutes	NOx Lbs	CO Lbs	POC Lbs
10/31/2022	2021-2031	11	10.8	111.2	6.9
11/4/2022	1047-1057	11	13.1	130.3	6.9
12/15/2022	0349-0401	13	15.4	160.9	6.9
12/15/2022	1447-1456	10	7.6	119.8	6.9
12/19/2022	1549-1606	18	17.5	158.8	6.9
12/21/2022	1547-1559	13	13.6	117.3	6.9

Unit 1					
Emissions During Hour Containing a Startup					
10/1/2022 – 12/31/2022					
Date	Time Period	Minutes	NOx Lbs	CO Lbs	POC Lbs
10/31/2022	2007-2106	60	20.6	108.1	10.8
11/1/2022	1048-1051	4	0.5	75.4	10.6
11/1/2022	1107-1206	60	20.5	128.2	10.8
12/21/2022	1619-1718	60	25.5	149.9	10.9

Unit 2					
Emissions During Hour Containing a Startup					
10/1/2022 – 12/31/2022					
Date	Time Period	Minutes	NOx Lbs	CO Lbs	POC Lbs
10/31/2022	2007-2106	60	20.0	118.5	8.6
11/2/2022	1049-1148	60	21.3	137.3	8.6
11/28/2022	1641-1740	60	24.1	127.4	8.7
12/15/2022	1447-1546	60	24.5	126.7	8.7
12/20/2022	0812-0911	60	26.2	163.2	8.7
12/21/2022	1547-1646	60	25.5	131.7	8.7

Unit 3					
Emissions During Hour Containing a Startup					
10/1/2022 – 12/31/2022					
Date	Time Period	Minutes	NOx Lbs	CO Lbs	POC Lbs
10/31/2022	2007-2106	60	22.4	113.0	7.3
11/3/2022	1047-1146	60	23.0	134.1	7.2
12/21/2022	1619-1718	60	32.1	131.8	7.4

Unit 4					
Emissions During Hour Containing a Startup					
10/1/2022 – 12/31/2022					
Date	Time Period	Minutes	NOx Lbs	CO Lbs	POC Lbs
10/31/2022	2021-2120	60	18.5	121.8	7.0
11/4/2022	1047-1146	60	20.4	130.9	7.0
12/15/2022	0349-0448	60	25.2	161.6	7.1
12/15/2022	1447-1546	60	18.2	120.0	7.1
12/19/2022	1549-1648	60	24.4	159.5	7.1
12/21/2022	1547-1646	60	22.0	118.0	7.1

Unit 1 Shutdown Emissions 10/1/2022 – 12/31/2022					
Date	Time Period	Minutes	NOx Lbs	CO Lbs	POC Lbs
10/31/2022	2118-2121	4	2.1	29.9	2.8
11/2/2022	2015-2018	4	2.1	33.8	2.8
12/21/2022	2201-2205	5	2.1	43.4	2.8

Unit 2 Shutdown Emissions 10/1/2022 – 12/31/2022					
Date	Time Period	Minutes	NOx Lbs	CO Lbs	POC Lbs
10/31/2022	2133-2136	4	2.3	29.2	4.4
11/2/2022	2259-2302	4	2.3	36.9	4.4
11/28/2022	2104-2107	4	2.3	37.0	4.4
12/16/2022	0018-0021	4	2.6	37.0	4.4
12/20/2022	1003-1006	4	2.7	37.0	4.4
12/21/2022	2202-2205	4	2.3	36.1	4.4

Unit 3 Shutdown Emissions 10/1/2022 – 12/31/2022					
Date	Time Period	Minutes	NOx Lbs	CO Lbs	POC Lbs
10/31/2022	2118-2122	5	1.8	25.9	2.7
11/4/2022	0357-0401	5	2.0	29.9	2.7
12/21/2022	2203-2206	4	1.2	25.8	2.7

Unit 4 Shutdown Emissions 10/1/2022 – 12/31/2022					
Date	Time Period	Minutes	NOx Lbs	CO Lbs	POC Lbs
10/31/2022	2119-2122	4	2.0	33.0	4.5
11/4/2022	2302-2305	4	2.2	31.4	4.5
12/15/2022	0904-0907	4	2.4	41.4	4.5
12/16/2022	0018-0021	4	2.3	37.5	4.5
12/19/2022	2245-2248	4	2.4	46.6	4.5
12/21/2022	2203-2206	4	2.1	30.2	4.5

Detailed Records of all Startup and Shutdown emissions for each of the Gas Turbines are available upon request.

MARSH LANDING GENERATING STATION QUARTERLY OPERATION REPORT

Section 4.9 Combustor Tuning Limits



For Submittal to
California Energy Commission
Sacramento, California
08 – AFC – 3C

AQ-19 – Combustor Tuning Limits

No online combustor tuning occurred during the October 1 – December 31, 2022 reporting period.

The hourly emission limits during a tuning event, in pounds per hour for each pollutant, are provided in the table for reference.

Pollutant	Hourly Emission Limit During Combustor Tuning Event (Pounds/Hour)	Maximum Hourly Emission During Combustor Tuning Event (Pounds/Hour)	Date/Hour
NOx	80	N/A	N/A
CO	450	N/A	N/A
POC	30	N/A	N/A

MARSH LANDING GENERATING STATION QUARTERLY OPERATION REPORT

Section 4.10

Daily Combined Emission Limits including SU/SD



For Submittal to
California Energy Commission
Sacramento, California
08 – AFC – 3C

AQ-20 – Daily Combined Emissions Limits including SU/SD

The daily combined emissions of NO_x, CO, POC's, PM-10 and SO₂ from all four Gas Turbines at Marsh Landing Generating Station was less than the corresponding daily emission limit for each pollutant, in pounds per day, as recorded by the Continuous Emissions Monitoring Systems (CEMS) during the report period of October 1 – December 31, 2022. The daily combined emissions include emissions generated during gas turbine start-ups and shutdowns, **but exclude emissions generated during readiness testing for black start, commissioning and/or emergency operations.** The following table provides the maximum daily combined emission, in pounds per day for each pollutant during the report period, and the date that the maximum daily emission occurred. The corresponding daily combined emission limit, in pounds per day for each pollutant, is also provided in the table for reference.

Pollutant	Combined Daily Emission Limit (Pounds/Day)	Maximum Combined Daily Emission (Pounds/Day)	Date
NO _x	2,468	435.95	11/2/2022
CO	4,858	753.84	12/21/2022
POC	476	9.42	12/21/2022
PM-10	864	126.97	12/15/2022
SO ₂	596	35.75	11/2/2022

No black start commissioning, readiness testing, or emergency operation activities occurred during the reporting period.

Detailed records of daily combined emissions from all four gas turbines are available upon request.

MARSH LANDING GENERATING STATION QUARTERLY OPERATION REPORT

Section 4.11

Daily Combined Emission Limits including
SU/SD/Tuning



For Submittal to
California Energy Commission
Sacramento, California
08 – AFC – 3C

AQ-21 – Daily Combined Emissions Limits including SU/SD/Tuning

No combustor tuning occurred which required operation outside of normal operating emission limits during the reporting period of October 1 – December 31, 2022.

The following table provides the daily combined emissions, in pounds per day for each pollutant, for any calendar day on which a tuning event occurred during the report period, and the date that the daily emission and tuning event occurred. **These limits exclude emissions generated during black start readiness testing, commissioning, and emergency operations.** The corresponding daily combined emission limit, in pounds per day for each pollutant, for any calendar day on which a tuning event occurs, is also provided in the table for reference.

Pollutant	Combined Daily Emission Limit on Days With Tuning Event (Pounds/Day)	Maximum Combined Daily Emission on Days With Tuning Event (Pounds/Day)	Date
NOx	2,941	N/A	N/A
CO	8,378	N/A	N/A
POC	693	N/A	N/A
PM-10	864	N/A	N/A
SO2	596	N/A	N/A

No black start commissioning, readiness testing, or emergency operation activities occurred during the reporting period.

MARSH LANDING GENERATING STATION QUARTERLY OPERATION REPORT

Section 4.12

Yearly Combined Emission Limits including
SU/SD/Tuning/Malfunctions



For Submittal to
California Energy Commission
Sacramento, California
08 – AFC – 3C

AQ-22 – Yearly Cumulative Combined Emission Limits

The yearly cumulative combined emissions of NO_x, CO, POC, PM-10 and SO₂ from all four Gas Turbines at Marsh Landing Generating Station was less than the corresponding yearly cumulative combined emission limit for each pollutant, in tons per year, as recorded by the Continuous Emissions Monitoring Systems (CEMS) during the report period of October 1 – December 31, 2022. The following table provides the yearly combined cumulative emissions, in tons per year for each pollutant, for each month during the report period. The corresponding yearly cumulative combined emission limit, in tons per year for each pollutant, is also provided in the table for reference. **These limits exclude emissions generated during black start readiness testing, commissioning, and/or black start emergency operations.**

Month/Year	Cumulative Combined Emissions During Consecutive Twelve-Month Period (Tons/Year)				
	NO _x	CO	POC	PM-10	SO ₂
Emission Limit	78.57	138.57	14.21	31.54	4.94
October/2022	5.38	9.46	0.14	1.76	0.43
November/2022	5.27	9.43	0.12	1.73	0.43
December/2022	5.76	10.40	0.13	1.88	0.46

No black start commissioning, readiness testing, or emergency operation activities occurred during the reporting period.

Detailed records of yearly cumulative combined emissions from all four gas turbines during any consecutive twelve-month period are available upon request.

MARSH LANDING GENERATING STATION QUARTERLY OPERATION REPORT

Section 4.13

Yearly Max Projected Toxic Emission Rates



For Submittal to
California Energy Commission
Sacramento, California
08 – AFC – 3C

AQ-23 – Yearly Maximum Projected Toxic Emission Rates

The maximum projected annual toxic air contaminant emissions from Marsh Landing Generating Station were calculated using the emission rates determined by the most recent (November 2021) source testing and the maximum permitted combined heat input for the facility of 13,994,976 MMBtu/year. The following table provides the calculated projected values of the annual toxic air contaminant combined emissions, in pounds per year along with the corresponding limits.

Toxic Air Contaminant	Projected Annual Emissions (Pounds/Year)	Limit (Pounds/Year)*
Formaldehyde	1817	<u>8,459</u>
Benzene	54	<u>205</u>
PAH's	0.30	<u>2.00</u>

Detailed records of the source test data are available upon request.

MARSH LANDING GENERATING STATION QUARTERLY OPERATION REPORT

Section 4.14

Calculated Sulfuric Acid Mist Emission Rate



For Submittal to
California Energy Commission
Sacramento, California
08 – AFC – 3C

AQ-31 – Calculated Sulfuric Acid Mist Emission Rate

The Sulfuric Acid Mist (SAM) emission rate was calculated using the cumulative 12-month total heat input for all four Gas Turbines and the highest emission factor determined from any Sulfuric Acid Mist source testing (0.0013 lb/MMBtu from April, 2014 source testing). The calculated cumulative 12-month SAM mass emission rate is listed in the table below for each month during the report period of October 1 – December 31, 2022.

Month/Year	Combined Cumulative 12-month Heat Input Rate (MMBtu/Year)	Combined Cumulative 12-month SAM Emission Rate (Tons/Year)
October/2022	1,484,553.5	1.0
November/2022	1,467,741.6	1.0
December/2022	1,586,029.0	1.0

The maximum calculated cumulative 12-month SAM mass emission rate during the report period of October 1 – December 31, 2022, was **1.0 tons**. Since the maximum calculated cumulative 12-month SAM mass emission rate was less than the limit of 7.0 tons in a consecutive 12-month period, the requirement to utilize air dispersion modeling to determine the impact of the sulfuric acid mist emissions was not triggered.

Detailed records of the calculated sulfuric acid mist emissions are available upon request.

MARSH LANDING GENERATING STATION QUARTERLY OPERATION REPORT

Section 4.15

Yearly Combined Sulfuric Acid Mist Emissions



For Submittal to
California Energy Commission
Sacramento, California
08 – AFC – 3C

AQ-33 – Yearly Combined Sulfuric Acid Mist Emissions

The calculated cumulative Sulfuric Acid Mist emissions from all four Gas Turbines at Marsh Landing Generating Station was less than 7 tons in any consecutive 12-month period during the report period of October 1 – December 31, 2022. The Sulfuric Acid Mist (SAM) emission rate was calculated using the cumulative 12-month heat input for all four Gas Turbines and the highest emission factor determined from any Sulfuric Acid Mist source testing (0.0013 lb/MMBtu, from April, 2014 source testing). The calculated cumulative 12-month SAM mass emission rate is listed in the table below for each month during the report period October 1 – December 31, 2022.

Month/Year	Combined Cumulative Yearly Heat Input Rate (MMBtu/Year)	Combined Cumulative Yearly Sulfuric Acid Mist Emissions (tons/Year)
Emission Limit	N/A	7.0
October/2022	1,484,553.5	1.0
November/2022	1,467,741.6	1.0
December/2022	1,586,029.0	1.0

Detailed records of the calculated sulfuric acid mist emissions are available upon request.

MARSH LANDING GENERATING STATION QUARTERLY OPERATION REPORT

Section 4.16

Air District Reports and Notifications



For Submittal to
California Energy Commission
Sacramento, California
08 – AFC – 3C

AQ-35 – Air District Reports and Notifications

All reports and notifications for Marsh Landing Generating Station that are required by District Rules or Regulations, or by Federal Regulations were submitted in accordance with all specified procedures and time limits during the report period of October 1 – December 31, 2022. The following reports and notifications were submitted for Marsh Landing Generating Station during this reporting period:

Monthly CEMS Report Submittals

1. Monthly CEM Report for September 2022.
2. Monthly CEM Report for October 2022.
3. Monthly CEM Report for November 2022.

Monitor Breakdown Report Submittals

No breakdown reports were submitted during Fourth Quarter 2022.

Emission Excess Report Submittals

No excess emissions reports were submitted during Fourth Quarter 2022.

Equipment Breakdown Report Submittals

No equipment breakdown reports were submitted during Fourth Quarter 2022.

Quarterly Emissions Data Report Submittals – submitted electronically to USEPA

1. Unit 1 Quarterly Emissions Data Report for QTR 3-2022.
2. Unit 2 Quarterly Emissions Data Report for QTR 3-2022.
3. Unit 3 Quarterly Emissions Data Report for QTR 3-2022.
4. Unit 4 Quarterly Emissions Data Report for QTR 3-2022.

Other Emissions Report Submittals

1. Units 1 through 4 Source Test Reports NST-7823, 7824, 7825, and 7826 were submitted on December 20, 2022

Agency Notifications

EPA and BAAQMD notifications for November 2022 RATA testing was submitted October 14, 2022.

Copies of all reports and notifications listed above, or Feedback Reports for electronic submittals are available upon request.

MARSH LANDING GENERATING STATION QUARTERLY OPERATION REPORT

Section 4.17 Air Permit Violation Reports



For Submittal to
California Energy Commission
Sacramento, California
08 – AFC – 3C

AQ-37 –Permit Condition Violation Notifications

During the report period of October 1 – December 31, 2022, no permit condition violations occurred or were reported for Marsh Landing Generating Station.

Notifications of Air Permit Violations 10/1/2022 – 12/31/2022					
Date of Violation	Date of Notification	Permit Condition Violated	Episode ID No.	Breakdown Reported? (Yes/No)	Comments
None					

MARSH LANDING GENERATING STATION QUARTERLY OPERATION REPORT

Section 4.18 CEMS Audit Results



For Submittal to
California Energy Commission
Sacramento, California
08 – AFC – 3C

AQ-40 – CEMS Audits

As required under 40 CFR Part 75, quarterly reports are prepared and submitted to the USEPA for each unit at Marsh Landing Generating Station. The quarterly reports are submitted electronically to the USEPA via the EPA's Emission Collection and Monitoring Plan System (ECMPS) Client Tool.

As part of the process to prepare the quarterly reports for submittal to the USEPA, the reports must undergo an extensive evaluation process using the ECMPS Client Tool that checks the report data for errors and conformance with the continuous emission monitoring requirements of 40 CFR Part 75. The following report files must be evaluated and found to be free of all errors prior to submittal to and acceptance by the USEPA:

- Emissions Data Files
- Monitoring Plan Files
- Quality Assurance and Certification Test Files
- QA Certification Event Files
- Test Extensions and Exemptions Files

As these report files are evaluated by the ECMPS Client Tool, the following checks are performed to determine compliance with the requirements of 40 CFR Part 75:

- Hourly Data Validity
- Proper application of Missing Data Substitution values and related calculations
- Results of all On-line Calibration Error Tests and Calibration status of parameters
- Results of all QA and Certification Tests and QA status of parameters
- Accuracy of all calculated parameters
- Proper application Of Bias Adjustment Factor

After the quarterly report is determined to be free of errors, the report can then be submitted electronically to the USEPA. After successful submittal of the quarterly reports, a Feedback Report is returned by the EPA indicating that the report was accepted with no errors and was therefore, in compliance with the requirements of 40 CFR Part 75.

Copies of the EPA Quarterly Emissions Reports for each unit at Marsh Landing Generating Station covering the reporting period October 1 – December 31, 2022 are available upon request.

MARSH LANDING GENERATING STATION QUARTERLY OPERATION REPORT

Section 4.19

Daily Combined Emission Limits For Black Start
Readiness Testing And Emergency Operations



For Submittal to
California Energy Commission
Sacramento, California
08 – AFC – 3C

AQ-44 – Daily Combined Emissions Limits for Black Start Readiness Testing and Emergency Operations

No black start readiness testing or emergency operations occurred during the reporting period of October 1 – December 31, 2022.

The following table provides the maximum daily combined emissions for Units 3 and 4, in pounds per day for each pollutant, for days in which black start readiness testing or emergency operations occurred during the report period, and the date that the daily emission and black start operations event occurred. These emissions exclude normal operating emissions on Units 1 through 4. The corresponding daily combined emission limits, in pounds per day for each pollutant, for any calendar day on which a black start operations event occurs, are also provided in the table for reference.

Pollutant	Combined Daily Emissions Limit on Days With Black Start Readiness Testing and Emergency Operation (Pounds/Day)	Maximum Combined Daily Emission on Days With Readiness Testing and Emergency Operation (Pounds/Day)	Date
NOx	8,048	N/A	N/A
CO	100,673	N/A	N/A
POC	7,422	N/A	N/A
PM-10	255	N/A	N/A
SO2	174	N/A	N/A

MARSH LANDING GENERATING STATION QUARTERLY OPERATION REPORT

Section 4.20

Annual Combined Emission Limits For Black Start
Readiness Testing Operations



For Submittal to
California Energy Commission
Sacramento, California
08 – AFC – 3C

AQ-45 – Annual Combined Emissions Limits for Black Start Readiness Testing Operations

No black start readiness testing operations occurred during the reporting period of October 1 – December 31, 2022.

The following table provides the combined emissions from Units 3 and 4, in pounds per year for each pollutant associated with black start readiness testing operations occurring during the report period. These emissions exclude normal operating emissions. The corresponding annual combined emission limits, in pounds per year for each pollutant, are also provided in the table for reference.

Annual Emissions From Black Start Readiness Testing Operations 10/1/2022 – 12/31/2022					
Month/Year	NOx Limit 414 lb/yr	CO Limit 12,936 lb/yr	POC Limit 1,011 lb/yr	PM-10 Limit 15 lb/yr	SO2 Limit 10 lb/yr
October/2022	N/A	N/A	N/A	N/A	N/A
November/2022	N/A	N/A	N/A	N/A	N/A
December/2022	N/A	N/A	N/A	N/A	N/A

MARSH LANDING GENERATING STATION QUARTERLY OPERATION REPORT

Section 4.21

Annual Combined Emission Limits For Black Start
Emergency Operations



For Submittal to
California Energy Commission
Sacramento, California
08 – AFC – 3C

AQ-46 – Annual Combined Emissions Limits for Black Start Readiness Testing and Emergency Operations

No black start emergency operations occurred during the reporting period of October 1 – December 31, 2022.

The following table provides the monthly combined emissions from Units 3 and 4, in pounds per year for each pollutant associated with black start readiness testing and emergency operations occurring during the report period. These emissions exclude normal operating emissions. The corresponding annual combined emission limits, in pounds per year for each pollutant, are also provided in the table for reference.

Annual Emissions From Black Start Readiness Testing and Emergency Operations 10/1/2022 – 12/31/2022					
Month/Year	NOx Limit 16,283 lb/yr	CO Limit 212,725 lb/yr	POC Limit 15,750 lb/yr	PM-10 Limit 518 lb/yr	SO2 Limit 354 lb/yr
October/2022	N/A	N/A	N/A	N/A	N/A
November/2022	N/A	N/A	N/A	N/A	N/A
December/2022	N/A	N/A	N/A	N/A	N/A

MARSH LANDING GENERATING STATION QUARTERLY OPERATION REPORT

Section 4.22

Black Start Emissions And Offsets Accounting



For Submittal to
California Energy Commission
Sacramento, California
08 – AFC – 3C

AQ-47 – Black Start Emissions and Offsets Accounting

In the event that total emissions from commissioning activities, readiness testing for black start capability, and black start emergency operations exceed (a) 16,283 pounds of NOx and/or (b) 15,750 pounds of POC during any 12-month period that includes commissioning activities, the owner/operator shall submit additional offset credits for the excess emissions according to the procedures set forth in District Regulation 2-2-302.1 through 302.4.

The following table provides the combined emissions from Units 3 and 4, in pounds per year for each pollutant associated with black start emergency operations occurring during the report period. These emissions exclude normal operating emissions. The corresponding annual combined emission limit, in pounds per year for each pollutant, is also provided in the table for reference.

Annual Emissions From All Black Start Emergency Operations 10/1/2022 – 12/31/2022		
Month/Year	NOx Limit 16,283 lb/yr	POC Limit 15,750 lb/yr
October/2022	N/A	N/A
November/2022	N/A	N/A
December/2022	N/A	N/A

No black start emergency operations occurred during the reporting period of October 1 – December 31, 2022, and no offset credits have been surrendered.

MARSH LANDING GENERATING STATION QUARTERLY OPERATION REPORT

Section 4.23

Diesel Engine Hours for Reliability-Related Testing



For Submittal to
California Energy Commission
Sacramento, California
08 – AFC – 3C

AQ-48 – Diesel Engine Hours for Reliability-Related Testing

The Emergency Standby Diesel Generator (S-7) operated for a total of 26.0 hours and the Emergency Standby Diesel Fire Pump (S-8) operated for 26.32 hours during calendar year 2022 for the purpose of reliability-related testing at Marsh Landing Generating Station and are therefore in compliance with the limit of 50 hours per year for each engine.

The hours that the Emergency Standby Diesel Generator (S-7) and the Emergency Standby Diesel Fire Pump Engine (S-8) were operated for reliability-related testing are provided in the following table for both the current report period of October 1 – December 31, and for the 2022 calendar year.

Diesel Engine Source	Hours Operated for Reliability-Related Testing 10/1/2022 – 12/31/2022	Hours Operated for Reliability-Related Testing Calendar Year 2022
Emergency Standby Diesel Generator (S-7)	6.4	26.0
Emergency Standby Diesel Fire Pump Engine (S-8)	6.47	26.32

MARSH LANDING GENERATING STATION QUARTERLY OPERATION REPORT

Section 4.24

Limitations for Operation of Diesel Engine



For Submittal to
California Energy Commission
Sacramento, California
08 – AFC – 3C

AQ-49 – Limitations for Operation of Diesel Engine

During the current report period of October 1 – December 31, 2022, the Emergency Standby Diesel Generator (S-7) at Marsh Landing Generating Station operated for a total of 6.4 hours solely for the purpose of reliability-related testing, and the Emergency Standby Diesel Fire Pump Engine (S-8) operated for a total of 6.47 hours for reliability-related testing. Neither the Emergency Standby Diesel Generator, nor the Emergency Standby Diesel Fire Pump Engine operated during the report period for the purpose of mitigating an emergency condition or to demonstrate compliance with a District, State or Federal emission limit. Therefore, the Emergency Standby Diesel Generator (S-7) and the Emergency Standby Diesel Fire Pump Engine (S-8) at Marsh Landing Generating Station operated in compliance with the requirements of Condition of Certification AQ-49 during the current report period of October 1 – December 31, 2022.

MARSH LANDING GENERATING STATION QUARTERLY OPERATION REPORT

Section 5.0 Compliance Matrix



For Submittal to
California Energy Commission
Sacramento, California
08 – AFC – 3C

Color Code Key:

Pre-Const	Construction	Commiss.	Operations	To CEC or Agency	Approved by CEC
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Sort Code	Cond. #	Description of Project Owner's Responsibilities	Verification/Action/Submital Required by Project Owner	Timeframe	Date Due to CEC CPM	Lead Party	Date sent to CEC, CBO or agency	CEC Log # and Status	Comments	Date Submitted to GenOn	Date sent to CEC, CBO or agency2	Approved	CPM	CBO	Other	Responsible Party
PC-1	AQ-SC1	Designate and retain an on-site AQCCM who shall be responsible for directing and documenting compliance with conditions AQ-SC3, AQ-SC4 and AQ-SC5 for the entire project site and linear facility construction. The on-site AQCCM may delegate responsibilities to one or more AQCCM delegates.	Submit to the CPM for approval the name, resume, qualifications, and contact information for the on-site AQCCM and all AQCCM delegates. The AQCCM and all delegates must be approved by the CPM before the start of ground disturbance.	60 days prior to the start of ground disturbance	1/24/11	GenOn	9/13/2010 Submittal 001	2010-1172	Approved 9/23/2010 Resume for Stephen Erickson submitted 8/15/2012 Submittal 116		9/13/2010 Resume for Stephen Erickson submitted 8/15/2012	Approved 9/23/2010 by email (On File) from CEC: J. Caswell				Stephen L. Erickson
PC-1	AQ-SC2	Provide, for approval, an AQCCM that details the steps to be taken and the reporting requirements necessary to ensure compliance with conditions of certification AQ-SC3, AQ-SC4 and AQ-SC5.	Submit the AQCCM to the CPM for approval. The CPM will notify the project owner of any necessary modifications to the plan within 30 days from the date of receipt. The AQCCM must be approved by the CPM before the start of ground disturbance.	60 days prior to the start of any ground disturbance	1/24/11	GenOn	9/21/2010 Submittal 002	2010-1220	Approved 10/06/10		9/21/10	Approved 06/10/2010 by email (On File) from CEC: J. Caswell				Stephen L. Erickson
CONS	AQ-SC3	The AQCCM shall submit documentation to the CPM in each monthly compliance report (MCR) that demonstrates compliance with mitigation measures a. through m. for purposes of preventing all fugitive dust plumes from leaving the project site and linear facility routes. Any deviation from the following mitigation measures shall require prior CPM.	The project owner shall include in the MCR (1) a summary of all actions taken to maintain compliance with this condition; (2) copies of any complaints filed with the air district in relation to project construction; and (3) any other documentation deemed necessary by the CPM and AQCCM to verify compliance with this condition. Such information may be provided via electronic format or disk at the project owner's discretion.	Monthly	Include in MCR	GenOn					Monthly 10th Business day of each month	Currently No noted issues with any Monthly report			AQCCM	Stephen L. Erickson
CONS	AQ-SC4	The AQCCM or an AQCCM delegate shall monitor all construction activities for visible dust plumes. Observations of visible dust plumes with the potential to be transported off the project site, 200 feet beyond the centerline of the construction of linear facilities, or within 100 feet upwind of any regularly occupied structures not owned by the project owner indicate that existing mitigation measures are not providing effective mitigation. The AQCCM or delegate shall then implement the following procedures for additional mitigation measures in the event that such visible dust plumes are observed.	The AQCCM shall include a section detailing how additional mitigation measures will be accomplished within the specified time limits.	Monthly	Include in MCR	GenOn					Monthly 10th Business day of each month	Currently No noted issues with any Monthly report				Stephen L. Erickson
CONS	AQ-SC5	The AQCCM shall submit to the CPM, in the MCR, a construction mitigation report that demonstrates compliance with mitigation measures a. through f. for purposes of controlling diesel construction related emissions. Any deviation from the following mitigation measures shall require prior CPM notification and approval.	The project owner shall include in the MCR: (1) a summary of all actions taken to maintain compliance with this condition; (2) a list of all heavy equipment used on site during that month, including the owner of that equipment and a letter from each owner indicating that the equipment has been properly maintained; and (3) any other documentation deemed necessary by the CPM and AQCCM to verify compliance with this condition. Such information may be provided via electronic format or disk at the project owner's discretion.	Monthly	Include in MCR	GenOn	Jan 19, 2012 Submittal 086				Monthly 10th Business day of each month	Currently No noted issues with any Monthly report				Stephen L. Erickson
CONS	AQ-SC6	The project owner shall submit to the CPM for review and approval any modification proposed by the project owner to any project air permit. The project owner shall submit to the CPM any modification to any permit proposed by the District or U.S. EPA, and any revised permit issued by the District or U.S. EPA, for the project.	submit any proposed air permit modification to the CPM within five working days of either: 1) submitted by the project owner to an agency, or 2) receipt of proposed modifications from an agency. The project owner shall submit all modified air permits to the CPM within 15 days of receipt.	Within 5 working days of its submittal	Include in MCR	GenOn					Monthly 10th Business day of each month	Currently No noted issues with any Monthly report				Tom Bertolini
PC-2	AQ-SC7	Provide emission reductions in the form of offsets or emission reduction credits (ERCs) in the quantities of at least 78.83 tons per year (tpy) NOx, 14.23 tpy VOC, 31.57 tpy PM10, and 4.96 tpy SOx emissions. The project owner shall demonstrate that the reductions are provided in the form required by the Bay Area Air Quality Management District. The project owner shall surrender the ERCs from among Bay Area Air Quality Management District Certificate Numbers 756, 831, 863, and 918, or a modified list, as allowed by this condition. If additional ERCs are submitted, the project owner shall submit a modified list including the additional ERCs to the CPM. The project owner shall request CPM approval for any substitutions, modifications, or additions to the listed credits.	Submit to the CPM records showing that the project's offset requirements have been met prior to initiating construction. If the CPM approves a substitution or modification to the list of ERCs, the CPM shall file a statement of the approval with the project owner and the Energy Commission docket. The CPM shall maintain an updated list of approved ERCs for the project.	Prior to Initiating Construction	4/1/13	GenOn	10/13/2010 Submittal 006	2010-1361	Approved 10/29/2010	10/13/2010	10/13/2010	CEC Acceptance 11/01/2010 per email from J Caswell (On File) and additional verifications per acceptance of section 4.0 of MCR No. 14				Peter Landreth
COMM & OPS	AQ-SC8	Submit to the CPM quarterly operation reports that include operational and emissions information as necessary to demonstrate compliance with the conditions of certification. The quarterly operation report shall specifically note or highlight incidences of noncompliance.	Submit quarterly operation reports to the CPM and APCO no later than 30 days following the end of each calendar quarter. This information shall be maintained on site for a minimum of five years and shall be provided to the CPM and District personnel upon request.	Quarterly	30 days after end of quarter	NRG										Scott Seipel
COMM	AQ-SC9	The facility shall be operated such that simultaneous commissioning of no more than two combustion turbines will occur without abatement of nitrogen oxide and CO emissions by its SCR system and oxidation catalyst system. Operation of a combustion turbine during commissioning without abatement shall be limited to discrete commissioning activities that can only be properly executed without the SCR or Oxidation Catalyst Systems fully operational.	submit a monthly compliance report to the CPM during the commissioning period demonstrating compliance with this condition.	Monthly	Include in MCR	KIEWIT					Monthly 10th Business day of each month	Currently No noted issues with any Monthly report				Doug King
COMM	AQ-1	Minimize emissions of carbon monoxide and nitrogen oxides from Gas Turbines to the maximum extent possible during the commissioning period.	A summary of significant operation and maintenance events and monitoring records required shall be included in the quarterly operation report (AQSC8).	Quarterly	30 days after end of quarter	GenOn										Tom Bertolini
COMM	AQ-2	At the earliest feasible opportunity in accordance with the recommendations of the equipment manufacturers and the construction contractor, shall tune the S-1, S-2, S-3 and S-4 Gas Turbines combustors to minimize the emissions of carbon monoxide and nitrogen oxides.	A summary of significant operation and maintenance events and monitoring records required shall be included in the quarterly operation report (AQSC8).	Quarterly	30 days after end of quarter	K & N							CPM		AQMD	Tom Bertolini
COMM	AQ-3	At the earliest feasible opportunity in accordance with the recommendations of the equipment manufacturers and the construction contractor, shall install, adjust, and operate the A-1, A-3, A-5 and A-7 Oxidation Catalysts and A-2, A-4, A-6 and A-8 SCR Systems to minimize the emissions of carbon monoxide and nitrogen oxides from S-1, S-2, S-3, and S-4 Gas Turbines. (Basis: BACT, Regulation 2, Rule 2, Section 409)	A summary of significant operation and maintenance events and monitoring records required shall be included in the quarterly operation report (AQSC8).	Quarterly	30 days after end of quarter	K&G									AQMD	Doug King Randy Dixon

Pre-Const	Construction	Commiss.	Operations	To CEC or Agency	Approved by CEC
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Sort Code	Cond. #	Description of Project Owner's Responsibilities	Verification/Action/Submittal Required by Project Owner	Timeframe	Date Due to CEC CPM	Lead Party	Date sent to CEC, CBO or agency	CEC Log # and Status	Comments	Date Submitted to GenOn	Date sent to CEC, CBO or agency2	Approved	CPM	CBO	Other	Responsible Party
COMM	AQ-4	Submit a plan to the District Engineering Division and the CEC CPM, describing the procedures to be followed during the commissioning of the gas turbines. The plan shall include a description of each commissioning activity, the anticipated duration of each activity in hours, and the purpose of the activity. The activities described shall include, but not be limited to, the tuning of the Dry-Low-NOx combustors, the installation and operation of the required emission control systems, the installation, calibration, and testing of the CO and NOx continuous emission monitors, and any activities requiring the firing of the GT without abatement by their respective oxidation catalysts and/or SCR Systems. Do not fire any of the Gas Turbines sooner than 28 days after the District receives the commissioning plan.	Submit a commissioning plan to the CPM and APCO for approval at least four weeks prior to first firing of the gas turbine describing the procedures to be followed during the commissioning period and the anticipated duration of each commissioning activity.	Four weeks prior to first firing of GT during Commissioning	10/14/12	KIEWIT	10/17/12 Submittal 135								AQMD	Doug King
COMM	AQ-5	During the commissioning period, shall demonstrate compliance with AQ-7, AQ-8, AQ-9, and AQ-10 through the use of properly operated and maintained continuous emission monitors and data recorders for the following parameters and emission concentrations: firing hours, fuel flow rates, stack gas nitrogen oxide emission concentrations, stack gas carbon monoxide emission concentrations, stack gas oxygen concentrations. The monitored parameters shall be recorded at least once every 15 minutes (excluding normal calibration periods or when the monitored source is not in operation) for the Gas Turbines (S-1, S-2, S-3, and S-4). The owner/operator shall use District-approved methods to calculate heat input rates, nitrogen dioxide mass emission rates, carbon monoxide mass emission rates, and NOx and CO emission concentrations, summarized for each clock hour and each calendar day. The owner/operator shall retain records on site for at least 5 years from the date of entry and make such records available to District personnel upon request. (Basic: Regulation 2, Rule 2, Section 419)	Submit to the CPM and APCO for approval the commissioning plan as required in AQ-4.	Four weeks prior to first firing of GT during Commissioning	10/14/12	KIEWIT	10/17/12 Submittal 135								AQMD	Doug King
CONS	AQ-6	Install, calibrate, and operate the District-approved continuous monitors specified in AQ-5 prior to first firing of the Gas Turbines (S-1, S-2, S-3 and S-4). After first firing of the turbines, the owner/operator shall adjust the detection range of these continuous emission monitors as necessary to accurately measure the resulting range of CO and NOx emission concentrations. The type, specifications, and location of these monitors shall be subject to District review and approval. (Basic: Regulation 2, Rule 2, Section 419)	make the site available for inspection by representatives of the District, ARB, and the Commission upon request. A summary of significant operation and maintenance events and monitoring records required shall be included in the quarterly operation report.	As Required	As required	KIEWIT			Reports submitted quarterly.							Doug King
COMM	AQ-7	Do not fire Gas Turbine without abatement of nitrogen oxide emissions by the corresponding SCR System and/or abatement of carbon monoxide emissions by the corresponding Oxidation Catalyst for more than 232 hours each during the commissioning period. The owner/operator shall operate the facility such that simultaneous commissioning of no more than two gas turbines will occur without abatement of nitrogen oxides and carbon monoxide by its SCR system and oxidation catalyst system. Such operation of any Gas Turbine without abatement shall be limited to discrete commissioning activities that can only be properly executed without the SCR system and/or oxidation catalyst in place. Upon completion of these activities, provide written notice to the District Engineering and Enforcement Divisions and the unused balance of the 232 firing hours without abatement shall expire.	Submit to the CPM and APCO for approval the commissioning plan as required in AQ-4. A summary of significant operation and maintenance events and monitoring records required shall be included in the quarterly operation report (AQ-SC8).	Four weeks prior to first firing of GT during Commissioning	10/14/12	KIEWIT	10/17/12 Submittal 135		Awaiting Approval BAAQMD Per						AQMD	Doug King
OPS	AQ-8	Total mass emissions of nitrogen oxides, carbon monoxide, precursor organic compounds, PM10, and sulfur dioxide that are emitted by the Gas Turbines (S-1, S-2, S-3, and S-4) during the commissioning period shall accrue towards the consecutive twelve-month emission limitations specified in AQ-22.	A summary of significant operation and maintenance events and monitoring records required shall be included in the quarterly operation report (AQSC8).	Quarterly	30 days after end of quarter	NRG			Reports submitted quarterly.						AQMD	Scott Seipel
OPS	AQ-9	Shall not operate the Gas Turbines (S-1, S-2, S-3, and S-4) in a manner such that the pollutant emissions from each gas turbine will exceed the following limits during the commissioning period. These emission limits shall include emissions resulting from the start-up and shutdown of the Gas Turbines (S-1, S-2, S-3, S-4): NOx (as NO2) 3,063 pounds per calendar day, 168 pounds per hour, CO 33,922 pounds per calendar day, 2,405 pounds per hour, POC (as CH4) 2,000 pounds per calendar day, PM10 235 pounds per calendar day, SO2 149 pounds per calendar day.	A summary of significant operation and maintenance events and monitoring records required shall be included in the quarterly operation report (AQSC8).	Quarterly	30 days after end of quarter	NRG			Reports submitted quarterly.						AQMD	Scott Seipel
COMM	AQ-10	Within 90 days after startup of each turbine, the Owner/Operator shall conduct District and CEC approved source tests for that turbine to determine compliance with the emission limitations specified in AQ-17. The source tests shall determine NOx, CO, and POC emissions during start-up and shutdown of the gas turbines. The POC emissions shall be analyzed for methane and ethane to account for the presence of unburned natural gas. The source test shall include a minimum of three start-up and three shutdown periods. Thirty working days before the execution of the source tests, the Owner/Operator shall submit to the District and the CEC Compliance Program Manager (CPM) a detailed source test plan designed to satisfy the requirements of this Part. The District and the CEC CPM will notify the Owner/Operator of any necessary modifications to the plan within 20 working days of receipt of the plan; otherwise, the plan shall be deemed approved. The Owner/Operator shall incorporate the District and CEC CPM comments into the test plan. The Owner/Operator shall notify the District and the CEC CPM within seven (7) working days prior to the planned source testing date. The owner/operator shall submit the source test results to the District and the CEC CPM within 60 days of the source testing date. (Basic: Regulation 2, Rule 2, Section 419).	Submit to the CPM and APCO for approval the commissioning plan as required in AQ-4.	Thirty working days before the execution of the source tests	10/14/12	KIEWIT	10/17/12 CEC Submittal 135 2/25/13 CEC Submittal 151 Updates of planned Source Testing dates: 6/25/13 CEC Submittal 164 Source Test Report Submitted								AQMD	Doug King
OPS	AQ-11	Fire the Gas Turbines (S-1, S-2, S-3, and S-4) exclusively on PUC-regulated natural gas with a maximum sulfur content of 1 grain per 100 standard cubic feet. To demonstrate compliance with this limit, the operator of S-1, S-2, S-3 and S-4 shall sample and analyze the gas from each supply source at least monthly to determine the sulfur content of the gas. POC/E monthly sulfur data may be used provided that such data can be demonstrated to be representative of the gas delivered to the MLGS.	The result of the natural gas fuel sulfur monitoring data and other fuel sulfur content source data shall be submitted to the District and CPM in the quarterly operation report (AQ-SC8).	Quarterly	30 days after end of quarter	NRG			Reports submitted quarterly.							Scott Seipel

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OPS	AQ-12	Do not operate the units such that the heat input rate to each Gas Turbine (S-1, S-2, S-3, and S-4) exceeds 2,202 MMBtu (HHV) per hour.	A summary of significant operation and maintenance events and monitoring records required shall be included in the quarterly operation report.	Quarterly	30 days after end of quarter	NRG			Reports submitted quarterly.							Scott Seipel
OPS	AQ-13	Do not operate the units such that the heat input rate to each Gas Turbine (S-1, S-2, S-3, and S-4) exceeds 52,848 MMBtu (HHV) per day.	A summary of significant operation and maintenance events and monitoring records required shall be included in the quarterly operation report.	Quarterly	30 days after end of quarter	NRG			Reports submitted quarterly.							Scott Seipel
OPS	AQ-14	The owner/operator shall not operate the units such that the combined cumulative heat input rate for the Gas Turbines (S-1, S-2, S-3, and S-4) exceeds 13,994,976 MMBtu (HHV) per year <u>but excluding heat input rate during readiness testing for black start capability, commissioning activities for black start capability, and black start emergency operations.</u>	A summary of significant operation and maintenance events and monitoring records required shall be included in the quarterly operation report.	Quarterly	30 days after end of quarter	NRG			Reports submitted quarterly.						Amended February 2019	Scott Seipel
OPS	AQ-15	The owner operator shall not operate S-1, S-2, S-3, and S-4 such that the combined hours for all four units exceeds 7,008 hours per year (excluding operations necessary for maintenance, tuning, testing, <u>readiness testing for black start capability, commissioning activities for black start capability, and black start emergency operations.</u>)	A summary of significant operation and maintenance events and monitoring records required shall be included in the quarterly operation report (AQ-SC8).	Quarterly	30 days after end of quarter	NRG			Reports submitted quarterly.						Amended February 2019	Scott Seipel
OPS	AQ-16	Ensure that the each Gas Turbine (S-1, S-2, S-3, S-4) is abated by the properly operated and properly maintained Selective Catalytic Reduction (SCR) System A-2, A-4, A-6 or A-8 and Oxidation Catalyst System A-1, A-3, A-5, or A-7 whenever fuel is combusted at those sources and the corresponding SCR catalyst bed (A-2, A-4, A-6 or A-8) has reached minimum operating temperature.	Make the site available for inspection by representatives of the District, ARB, and the Commission upon request. A summary of significant operation and maintenance events and monitoring records required shall be included in the quarterly operation report (AQ-SC8).	As Required	As required	NRG			Reports submitted quarterly.							Scott Seipel
OPS	AQ-17	Normal Operations Emissions Limits "The owner/operator shall ensure that the Gas Turbines (S-1, S-2, S-3, S-4) comply with requirements (a) through (i). Requirements (a) through (f) do not apply during gas turbine start-ups, combustor tuning operations, shutdowns, <u>readiness testing for black start capability, commissioning activities for black start capability, or black start emergency operations.</u> "	A summary of significant operation and maintenance events and monitoring records required shall be included in the quarterly operation report.	Quarterly	30 days after end of quarter	NRG			Reports submitted quarterly.						Amended February 2019	Scott Seipel
OPS	AQ-18	Summary: Startup/Shutdown Limits: "The owner/operator shall ensure that the regulated air pollutant mass emission rates from each of the Gas Turbines (S-1, S-2, S-3, and S-4) during a start-up or shutdown does not exceed the limits established below. Startups shall not exceed 30 minutes. Shutdowns shall not exceed 15 minutes. <u>These requirements do not apply during readiness testing for black start capability, commissioning activities for black start capability, or black start emergency operations.</u>	A summary of significant operation and maintenance events and monitoring records required shall be included in the quarterly operation report (AQ-SC8).	Quarterly	30 days after end of quarter	NRG			Reports submitted quarterly.						Amended May 21, 2021	Scott Seipel
OPS	AQ-19	Do not perform combustor tuning on each Gas Turbine (S-1, S-2, S-3, or S-4) more than twice every consecutive 12 month period. Combustor tuning shall only be performed on one gas turbine per day. The owner/operator shall notify the District no later than seven days prior to combustor tuning activity. The emissions during combustor tuning from each gas turbine shall not exceed the limits established below: NOx (as NO2):90, CO:450, POC (as CH4):30	notify both the District and CPM at least 7 days prior to the combustor tuning. A summary of significant operation and maintenance events and monitoring records required shall be included in the quarterly operation report (AQ-SC8) This does not include Initial Construction Tunings	7 days prior to combustor tuning	11/1/12	NRG			Reporting on as needed basis.						AQ24D	Scott Seipel
OPS	AQ-20	Do not allow total combined emissions from the Gas Turbines (S-1, S-2, S-3, and S-4), including emissions generated during gas turbine start-ups, and shutdowns, <u>but excluding emissions generated during readiness testing for black start capability, commissioning activities for black start capability, and black start emergency operations.</u> to exceed the following limits during any calendar day (except for days during which combustor tuning events occur): (a) 2,468 pounds of NOx (as NO2) per day (Basis: Cumulative Increase) (b) 4,858 pounds of CO per day (Basis: Cumulative Increase) (c) 476 pounds of POC (as CH4) per day (Basis: Cumulative Increase) (d) 864 pounds of PM10 per day (Basis: Cumulative Increase) (e) 596 pounds of SO2 per day (Basis: Cumulative Increase)	A summary of significant operation and maintenance events and monitoring records required shall be included in the quarterly operation report (AQ-SC8).	Quarterly	30 days after end of quarter	NRG			Reports submitted quarterly.						Amended February 2019	Scott Seipel
OPS	AQ-21	Do not allow cumulative combined emissions from the Gas Turbines (S-1, S-2, S-3, and S-4), including emissions generated during gas turbine start-ups, combustor tuning, shutdowns, and malfunctions, <u>but excluding emissions generated during readiness testing for black start capability, commissioning activities for black start capability, and black start emergency operations.</u> to exceed the following limits during any consecutive twelve-month period: (a) 2,941 pounds of NOx (as NO2) per day (Basis: Cumulative Increase) (b) 8,378 pounds of CO per day (Basis: Cumulative Increase)(c) 693 pounds of POC (as CH4) per day (Basis: Cumulative Increase)(d) 864 pounds of PM10 per day (Basis: Cumulative Increase)(e) 596 pounds of SO2 per day (Basis: Cumulative Increase)	A summary of significant operation and maintenance events and monitoring records required shall be included in the quarterly operation report (AQ-SC8).	Quarterly	30 days after end of quarter	NRG			Reports submitted quarterly.						Amended February 2019	Scott Seipel
OPS	AQ-22	not allow cumulative combined emissions from the Gas Turbines (S-1, S-2, S-3, and S-4), including emissions generated during gas turbine start-ups, combustor tuning, shutdowns, and malfunctions, <u>but excluding emissions generated during readiness testing for black start capability, commissioning activities for black start capability, and black start emergency operations.</u> to exceed the following limits during any consecutive twelve-month period: (a) 78.57 tons of NOx (as NO2) per year (Basis: Offsets)(b) 138.57 tons of CO per year (Basis: Cumulative Increase)(c) 14.21 tons of POC (as CH4) per year (Basis: Offsets)(d) 31.54 tons of PM10 per year (Basis: Cumulative Increase)(e) 4.94 tons of SO2 per year (Basis: Cumulative Increase)	A summary of significant operation and maintenance events and monitoring records required shall be included in the quarterly operation report (AQ-SC8).	Quarterly	30 days after end of quarter	NRG			Reports submitted quarterly.						Amended February 2019	Scott Seipel
OPS	AQ-23a	Do not allow the maximum projected annual toxic air contaminant <u>emissions</u> (per AQ-26) from the Gas Turbines combined to exceed the following limits: formaldehyde 8,459 7,786 pounds per year, benzene 205 202 pounds per year, Specified polycyclic aromatic hydrocarbons (PAHs) 2.00 1.48 pounds per year unless the following requirement is satisfied: (1)Perform a health risk assessment to determine the total facility risk using the emission rates determined by source testing and the most current Bay Area Air Quality Management District approved procedures and unit risk factors in effect at the time of the analysis. Submit the risk analysis to the District and the CEC CPM. May request that the District and the CEC CPM revise the carcinogenic compound emission limits specified above. Demonstrates to the satisfaction of the APCO that these revised emission limits will not result in a significant cancer risk, the District and the CEC CPM may, at their discretion, adjust the carcinogenic compound emission limits listed above.	Source test results obtained through compliance with AQ-26 and AQ-30 shall confirm the toxic air contaminant emission rates or submit an updated health risk assessment.	Within 60 days of initial source testing. (See condition AQ-30b)	4/1/11	NRG			Initial Source Test submitted 6/18/13. Annual testing required.						Amended February 2019	Scott Seipel

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OPS	AQ-23b	Perform a health risk assessment to determine the total facility risk using the emission rates determined by source testing and the most current Bay Area Air Quality Management District approved procedures and unit risk factors in effect at the time of the analysis.	Submit the risk analysis to the District and the CEC CPM . May request that the District and the CEC CPM revise the carcinogenic compound emission limits specified above. Demonstrates to the satisfaction of the APCO that these revised emission limits will not result in a significant cancer risk, the District and the CEC CPM may, at their discretion, adjust the carcinogenic compound emission limits listed above.	Every 24 months submit within 60days of test	As required	NRG										Scott Seipel
OPS	AQ-24	Demonstrate compliance with AQ-12 through AQ-15, AQ-17(a) through AQ-17(e), AQ-18 (NOx and CO limits), AQ-19 (NOx and CO limits), AQ-20(a), AQ-20(b), AQ-21(a), AQ-21(b), AQ-22(a) and AQ-22(b), <u>AQ-41, AQ-42, AQ-43, AQ-44(a), AQ-44(b), AQ-45(a), and AQ-45(b)</u> , by using properly operated and maintained continuous monitors (during all hours of operation including gas turbine start-up, combustor tuning, and shut down periods, <u>readiness testing for black start capability, commissioning activities for black start capability, and black start emergency operations</u>). The owner/operator shall monitor for all of the following <u>through m. Black Start Specific: (f) for each calendar day, the average hourly Heat Input Rates, corrected NOx emission concentration, NOx mass emission rate (as NO2), corrected CO emission concentration, and CO mass emission rate during readiness testing for black start capability, commissioning activities for black start capability, and black start emergency operations. For the previous consecutive twelve-month period for sources S-3 and S-4 combined.</u> <u>Note: The required data in (f) thru (k) shall exclude any data during readiness testing for black start capability, commissioning activities for black start capability, and black start emergency operations.</u>	Make the site available for inspection by representatives of the District, ARB and the Commission to verify the continuous monitoring and recordkeeping system is properly installed and operational.	As Required	As required	NRG										Scott Seipel
OPS	AQ-25	Demonstrate compliance with AQ-17(f), AQ-17(g), AQ-17(h), AQ-17(i), AQ-20(c), AQ-20(d), AQ-20(e), AQ-21(c), AQ-21(d), AQ-21(e), AQ-22(c), AQ-22(d), AQ-22(e), <u>41, 42, 43, 44(c), 44(d), 44(e), 45(c), 45(d), and 45(e)</u> , the owner/operator shall calculate and record on a daily basis, the precursor organic compound (POC) mass emissions, fine particulate matter (PM10) mass emissions (including condensable particulate matter), and sulfur dioxide (SO2) mass emissions from each power train. The owner/operator shall use the actual heat input rates measured pursuant to AQ-24, actual Gas Turbine start-up times, actual Gas Turbine shutdown times, and CEC and District-approved emission factors developed pursuant to source testing under AQ-28 to calculate these emissions. The owner/operator shall present the calculated emissions in the following format: <u>The emissions calculated in (a) and (b) shall exclude any data during readiness testing for black start capability, commissioning activities for black start capability, and black start emergency operations.</u> (a) For each calendar day, POC, PM10, and SO2 emissions, summarized for each power train (Gas Turbine) and S-1, S-2, S-3, and S-4 combined. (b) on a monthly basis, the cumulative total POC, PM10, and SO2 mass emissions, for each year (12-month rolling average) for S-1, S-2, S-3, and S-4 combined (Basis: Offsets, Cumulative Increase)	Make the site available for inspection by representatives of the District, ARB and the Commission to verify the calculation and record keeping system is properly installed and operational.	As Required	As required	NRG								<u>Amended February 2019</u>	Scott Seipel	
OPS	AQ-26	Demonstrate compliance with AQ-23, the owner/operator shall calculate and record on an annual basis the maximum projected annual emissions of: Formaldehyde, Benzene, and Specified PAHs. The owner/operator shall calculate the maximum projected annual emissions using the maximum annual heat input rate of 13,994,976 MMBtu/year for S-1, S-2, S-3, and S-4 combined and the highest emission factor (pounds of pollutant per MMBtu of heat input) determined by the most recent of any source test of the S-1, S-2, S-3, or S-4 Gas Turbines. If the highest emission factor for a given pollutant occurs during minimum-load turbine operation, a reduced annual heat input rate may be utilized to calculate the maximum projected annual emissions to reflect the reduced heat input rates during gas turbine start-up and minimum load operation. The reduced annual heat input rate shall be subject to District review and approval.	Make the site available for inspection by representatives of the District, ARB and the Commission to verify the calculation and recordkeeping system is properly installed and operational.	As Required	As required	NRG										Scott Seipel
COMM	AQ-27a	Conduct a District-approved source test on each corresponding exhaust pointS to determine the corrected ammonia (NH3) emission concentration to determine compliance with AQ-17(e). The source test shall be conducted over the expected operating range of the turbine (including, but not limited to, minimum and full load modes) to establish the range of ammonia injection rates necessary to achieve NOx emission reductions while maintaining ammonia slip levels.	Submit the results and field data collected during source tests to the District and CPM within 60 days of testing and according to a preapproved protocol (AQ-29).	Within 60 days of initial source testing	4/1/11	NRG	6/25/13 CEC Submittal 164 Source Test Report								<u>Amended May 21, 2021</u>	Doug King
OPS	AQ-27b	<u>A source test shall be conducted at least once every 1,752 hours of turbine operation or once every 36 consecutive months, whichever comes first. Additional source testing may be required at the discretion of the District to address or ascertain compliance with the requirements of this permit.</u> Ongoing compliance with AQ-17(e) shall be demonstrated through calculations of corrected ammonia concentrations based upon the source test correlation and continuous records of ammonia injection rate.	<u>Testing for steady-state emissions shall be conducted upon initial operation and at least once every 12 months.</u>	within 60 days of test every 12 months	As required	NRG									<u>Amended May 21, 2021</u>	Scott Seipel

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OPS	AQ-28a	The owner/operator shall perform a relative accuracy test audit (RATA) on the CEMS, on at least an annual basis or as allowed by the regulations and approved by the District, in accordance with the applicable requirements of 40 Part 75 Appendix A and 40 CFR Part 60 Appendix B Performance Specifications.	Submit the results and field data collected during source tests to the District and CPM within 60 days of testing	Annually	Include in ACR	NRG									Updated February, 2019	Scott Seipel
COMM & OPS	AQ-28b	A referenced method source test shall be conducted at least once every 1,752 hours of turbine operation or once every 36 consecutive months, whichever comes first. Additional source testing may be required at the discretion of the District to address or ascertain compliance with the requirements of this permit. The owner shall conduct a District-approved source test on each corresponding exhaust point P-1, P-2, P-3 and P-4 while each Gas Turbine is operating at maximum load to determine compliance with AQ-17(a), AQ-17(b), AQ-17(c), AQ-17(d), AQ-17(f), AQ-17(g), AQ-17(h), AQ-17(i), and while each Gas Turbine is operating at minimum load to determine compliance with AQ-17(c) and AQ-17(d) and to verify the accuracy of the continuous emission monitors required in AQ-24. The owner/operator shall test for (as a minimum) water content, stack gas flow rate, oxygen concentration, precursor organic compound concentration and mass emissions, nitrogen oxide concentration and mass emissions (as NO ₂), carbon monoxide concentration and mass emissions, sulfur dioxide concentration and mass emissions, methane, ethane, and total particulate matter emissions including condensable particulate matter.	The owner/operator shall submit the source test results to the District and the CEC CPM within 60 days of conducting the tests.	At least once every 1,752 hours of turbine operation or once every 36 consecutive months, whichever comes first.	4/1/11	NRG									Updated February, 2019	Scott Seipel
COMM & OPS	AQ-29	Obtain approval for all source test procedures from the District's Source Test Section and the CEC CPM prior to conducting any tests. Comply with all applicable testing requirements for continuous emission monitors as specified in Volume V of the District's Manual of Procedures. Notify the District's Source Test Section and the CEC CPM in writing of the source test protocols and projected test dates at least 7 days prior to the testing date(s).	Submit the proposed source test plan or protocol for the source tests seven days prior to the proposed source test date to both the District and CPM for approval. The project owner shall notify the District and CPM no later than seven days prior to the proposed source test date and time.	No later than seven days prior to the proposed source test date and time	1/24/11	NRG	2/25/13 CEC Submittal 151 Update of planned Source Testing dates.								AQMD	Scott Seipel
COMM	AQ-30a	conduct a District-approved source test on one of the following exhaust points P-1, P-2, P-3 or P-4 while the Gas Turbine is operating at maximum allowable operating rates to demonstrate compliance with AQ-23. The owner/operator shall also test the gas turbine while it is operating at minimum load. If three consecutive biennial source tests demonstrate that the annual emission rates calculated pursuant to AQ-26 for any of the compounds listed below are less than the BAAQMD trigger levels, pursuant to Regulation 2, Rule 5, shown, then the owner/operator may discontinue future testing for that pollutant: Benzene < 2.9 pounds/year and 0.06 pounds/hour, Formaldehyde <14 pounds/year and 0.12 pounds/hour, Specified PAHs < 0.0033 pounds/year	The results and field data collected during source tests shall be submitted to the District and CPM within 60 days of testing and according to a preapproved protocol (AQ-29).	Within 60 days of initial source testing	4/1/11	KIEWIT	6/25/13 Submittal 164 Source Test Report Submitted								Amended February, 2019	Doug King
OPS	AQ-30b	Testing for toxic air contaminant emissions shall be conducted upon initial operation and at least once every 24 months.	The results and field data collected during source tests shall be submitted to the District and CPM within 60 days of testing	within 60 days of test every 24 months thereafter	As required	NRG	6/25/13 Submittal 164 Source Test Report Submitted									Scott Seipel
OPS	AQ-31	Calculate the sulfuric acid mist (SAM) emission rate using the total heat input for the sources and the highest results of any source testing conducted pursuant to AQ-32. If this SAM mass emission limit of AQ-33 is exceeded, the owner/operator must utilize air dispersion modeling to determine the impact (in µg/m ³) of the sulfuric acid mist emissions pursuant to Regulation 2, Rule 2, Sections 305 and 306. (Basis: Regulation 2, Rule 2, Section 41409)	Make the site available for inspection by representatives of the District, ARB and the Commission to verify the calculation and recordkeeping system is properly installed and operational. The quarterly operation report (AQ-30c) shall include a determination of the impact if triggered by this condition.	As Required & Quarterly	30 days after end of quarter	NRG		Reports submitted quarterly.							Amended May 21, 2021	Scott Seipel
COMM	AQ-32a	Conduct a District-approved source test on two of the four exhaust points while each gas turbine is operating at maximum heat input rates to demonstrate compliance with the SAM emission rates specified in AQ-33. Test for (as a minimum) SO ₂ , SO ₃ , and H ₂ SO ₄ . Submit the source test results to the District and the CEC CPM within 60 days of conducting the tests. (Basis: Regulation 2, Rule 2, Section 406227, and Regulation 2, Rule 2, Section 41409)	Submit the results and field data collected during source tests to the District and CPM within 60 days of testing and according to a preapproved protocol (AQ-29).	Within 60 days of initial source testing and	4/1/11	KIEWIT	6/25/13 Submittal 164 Source Test Report Submitted								AQMD	Doug King
OPS	AQ-32b	A source test shall be conducted at least once every 1,752 hours of turbine operation or once every 36 consecutive months, whichever comes first. Additional source testing may be required at the discretion of the District to address or ascertain compliance with the requirements of this permit.	Submit the results and field data collected during source tests to the District and CPM within 60 days of testing and according to a preapproved protocol (AQ-29).	within 60 days of test	As required	NRG	6/25/13 Submittal 164 Source Test Report Submitted								Amended May 21, 2021	Scott Seipel

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OPS	AQ-33	Do not allow sulfuric acid emissions (SAM) from stacks combined to exceed seven tons in any consecutive 12 month period. (Basic Regulation 2, Rule 2, Section 227, and Regulation 2, Rule 2, Section 409)	A summary of significant operation and maintenance events and monitoring records required shall be included in the quarterly operation report (AQSC8).	Quarterly	30 days after end of quarter	NRG			Reports submitted quarterly.							Scott Seipel
CONS	AQ-34	Ensure that the stack height of emission points are each at least 165 feet above grade level at the stack base	Make the site available for inspection by representatives of the District, ARB and the Commission	As Required	As required	GenOn			Kiewit to provide per email from Jason Lockwood 10.19.12							Randy Dixon
OPS	AQ-35	Submit all reports (including, but not limited to monthly CEM reports, monitor breakdown reports, emission excess reports, equipment breakdown reports, etc.) as required by District Rules or Regulations and in accordance with all procedures and time limits specified in the Rule, Regulation, Manual of Procedures, or Enforcement Division Policies & Procedures Manual	Ensure that notifications and reports, including the quarterly operation report (AQ-SC8), are prepared and submitted in compliance with this condition	As Required	As required	NRG										Scott Seipel
OPS	AQ-36	Maintain all records and reports on site for a minimum of five years. These records shall include but are not limited to: continuous monitoring records (firing hours, fuel flows, emission rates, monitor excesses, breakdowns, etc.), source test and analytical records, natural gas sulfur content analysis results, emission calculation records, records of plant upsets and related incidents. The owner/operator shall make all records and reports available to District and the CEC CPM staff upon request.	Make the site available for inspection by representatives of the District, ARB and the Commission.	As Required	As required	NRG										Joe Moura
OPS	AQ-37	notify the District and the CEC CPM of any violations of these permit conditions. Notification shall be submitted in a timely manner, in accordance with all applicable District Rules, Regulations, and the Manual of Procedures. Notwithstanding the notification and reporting requirements given in any District Rule, Regulation, or the Manual of Procedures, the owner/operator shall submit written notification (facsimile is acceptable) to the Enforcement Division within 96 hours of the violation of any permit condition.	A summary of significant operation and maintenance events and monitoring records required shall be included in the quarterly operation report.	Quarterly	30 days after end of quarter	NRG			Reports submitted quarterly.							Scott Seipel
CONS	AQ-38	Provide adequate stack sampling ports and platforms to enable the performance of source testing. The location and configuration of the stack sampling ports shall comply with the District Manual of Procedures, Volume IV, Source Test Policy and Procedures, and shall be subject to BAAQMD review and approval, except that the facility shall provide four sampling ports that are at least 6 inches in diameter in the same plane of each gas turbine stack.	The project owner shall make the site available for inspection by representatives of the District, ARB and the Commission.	As Required	As required	GenOn			Kiewit to provide per email from Jason Lockwood 10.19.12							Randy Dixon
CONS	AQ-39	Contact the BAAQMD Technical Services Division regarding requirements for the continuous emission monitors, sampling ports, platforms, and source tests required by AQ-10, AQ-27, AQ-28, AQ-30 and AQ-32. Conduct all source testing and monitoring in accordance with the District approved procedures.	Contact the District for specifications on monitors, ports, platforms and source tests and shall submit verification of this contact to the District and CPM with the initial source test protocol	With in 180 days of issuance of the Authority to Construct	9/25/11	KIEWIT	9/13/2011 Submittal 061 Approved by CEC 10/7/2011 Additional submittal 10/11/2011 Submittal 068		Approval received from BAAQMD bt letter from Ken Kuanieic, Air Quality Engineering Manager Dated 4/21/2011		10/11/2012 Submittal of BAAQMD letter only - No CEC Approval required.			N/A	AQMD	Tori Logan
OPS	AQ-40	Ensure that the MLGS complies with the continuous emission monitoring requirements of 40 CFR Part 75	Submit to the CPM and District the results of audits of the monitoring system demonstrating compliance with this condition as part of the quarterly operation report.	Quarterly	30 days after end of quarter	NRG			Kiewit to provide per email from Jason Lockwood 10.19.12							Scott Seipel
COMM	AQ-41	Commissioning Activities for Black Start Capability: The owner/operator shall perform commissioning activities for black start capability at S-3 and S-4 for no more than 84 hours combined. Upon completion of these activities, the owner/operator shall provide written notice to the District Engineering and Enforcement Divisions.	The project owner shall submit to the CPM the commissioning report to demonstrate the compliance of this condition within 30 days from the completion of black start capability commissioning.	Black Start Commissioning	30 days after end of commissioning	NRG			Add with Black Start Amendment February 2019							Amended February 2019
COMM	AQ-42	Emission Limits for Commissioning Activities for Black Start Capability: The owner/ operator shall not operate Gas Turbines S-3 and S-4 in a manner such that the combined pollutant emissions from these sources exceeds the following limits when performing commissioning activities for black start capability. NOx (as NO2) 3,311 pounds. CO 193,486 pounds. POC (as CH4) 8,089 pounds. PM10/PM2.5 123 pounds. SO2 84 pounds.	The project owner shall submit to the CPM the commissioning report to demonstrate the compliance of this condition within 30 days from the completion of black start capability commissioning.	Black Start Commissioning	30 days after end of commissioning				Add with Black Start Amendment February 2019							Amended February 2019
COMM	AQ-43	AQ-43 When performing any commissioning activities for black start capability at S-3 and S-4, the owner/operator of the MLGS shall demonstrate compliance with conditions AQ-41 and AQ-42 through the use of properly operated and maintained continuous emission monitors, and data recorders for the following parameters: -firing hours -fuel flow rates -stack gas nitrogen oxide emission concentrations -stack gas carbon monoxide emission concentrations -stack gas oxygen concentrations. The owner/operator shall use District-approved methods to calculate heat input rates, nitrogen dioxide mass emission rates, carbon monoxide mass emission rates, and NOx and CO emission concentrations, summarized for each clock hour. The owner/operator shall retain records on site for at least 5 years from the date of entry and make such records available to District personnel upon request.	The project owner shall submit to the CPM a commissioning report to demonstrate compliance with this condition within 30 days after the completion of black start capability commissioning.	Black Start Commissioning	30 days after end of commissioning				Add with Black Start Amendment February 2019							Amended February 2019
OPS	AQ-44	Daily Emission Limits for Black Start Operations: The owner/operator shall not allow total combined emissions from readiness testing for black start capability and black start emergency operations at Gas Turbines S-3 and S-4 to exceed the following limits during any consecutive 24-clock hour period: (a) NOx (as NO2) 8,048 pounds per day; (b) CO 100,673 pounds per day; (c) POC (as CH4) 7,422 pounds per day; (d) PM10/PM2.5 255 pounds per day; (e)SO2 174 pounds per day.	For days when Black Start Operations or readiness testing occurs, a summary of operation events, operating data and associated monitoring records shall be included in the subsequent quarterly operation report (AQ-SC8).	Quarterly	30 days after end of quarter				Add with Black Start Amendment February 2019							Amended February 2019

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OPS	AQ-45	Annual Emission Limits for Readiness Testing for Black Start Capability: The owner/operator shall not allow emissions from readiness testing for black start capability at Gas Turbines S-3 and S-4 to exceed the following limits during any consecutive twelve-month period: (a) NOx (as NO2) 414 pounds per year; (b) CO 12,936 pounds per year; (c) POC (as CH4) 1,011 pounds per year; (d) PM10/PM2.5 15 pounds per year; (e) SO2 10 pounds per year.	For days when readiness testing occurs, a summary of operation events, operating data and associated monitoring records shall be included in the subsequent quarterly operation report (AQ-SC8).	Black Start Operation	30 days after end of quarter				Add with Black Start Amendment February 2019						Amended February 2019		
OPS	AQ-46	AQ-46 Annual Emission Limits for Black Start Operations: The owner/operator shall not allow total combined emissions from readiness testing for black start capability and black start emergency operations at Gas Turbines S-3 and S-4 to exceed the following limits during any consecutive twelve-month period: (a) NOx (as NO2) 16,283 pounds per year; (b) CO 212,725 pounds per year; (c) POC (as CH4) 15,750 pounds per year; (d) PM10/PM2.5 518 pound per year; (e) SO2 354 pounds per year.	For days when readiness testing occurs, a summary of operation events, operating data and associated monitoring records shall be included in the subsequent quarterly operation report (AQ-SC8).	Black Start Operation	As required	NRG			Add with Black Start Amendment February 2019						Amended February 2019	Scott Seipel	
COMM / OPS	AQ-47	In the event that total emissions from commissioning activities, readiness testing for black start capability, and black start emergency operations exceed (a) 16,283 pounds of NOx and/or (b) 15,750 pounds of POC during any 12-month period that includes commissioning activities, the owner/operator shall submit additional offset credits for the excess emissions according to the procedures set forth in District Regulation 2-2-302.1 through 302.4.	If facility operations require additional offset credits to be surrendered to the District, an identification of the specific offset credits surrendered, a summary of operation events, operating data and associated monitoring records shall be included in the subsequent quarterly operation report (AQ-SC8).	Black Start Commissioning	As Required	NRG			Add with Black Start Amendment February 2019						Amended February 2019	Scott Seipel	
OPS	AQ-48	The project owner shall not exceed 50 hours per year per engine for reliability related testing on the diesel emergency generator and diesel fire pump engines. (Basis: Title 17, California Code of Regulations, Section 93115, ATCM for Stationary CI Engines)	The project owner shall verify compliance with this Condition of Certification in each quarterly report required by COC AQ-SC8.		Quarterly	30 days after end of quarter	NRG		AQ-41 added with petition to amend approved 11/17/2014. Revised to AQ-48 with February 2019 Black Start Amendment						Amended February 2019	Scott Seipel	
OPS	AQ-49	The project owner shall operate each emergency standby engine only for the following purposes: to mitigate emergency conditions, for emission testing, or for reliability related testing on the diesel emergency generator and diesel fire pump engines. (Basis: Title 17, California Code of Regulations, Section 93115, ATCM for Stationary CI Engines)	The project owner shall verify compliance with this Condition of Certification in each quarterly report required by COC AQ-SC8.		Quarterly	30 days after end of quarter	NRG		AQ-42 added with petition to amend approved 11/17/2014. Revised to AQ-49 with February 2019 Black Start Amendment						Amended February 2019	Scott Seipel	
OPS	AQ-50	The project owner shall operate each emergency standby engine only when a non-resettable totalizing meter (with a minimum display capability of 9,999 hours) that measures the hours of operation for the engine is installed, operated and properly maintained. (Basis: Title 17, California Code of Regulations, Section 93115, ATCM for Stationary CI Engines)	The project owner shall make the site available for inspection by representatives of the District, ARB and the Commission.		As Required	As Required	NRG		AQ-43 added with petition to amend approved 11/17/2014. Revised to AQ-50 with February 2019 Black Start Amendment						Amended February 2019	Scott Seipel	
OPS	AQ-51	Records: The project owner shall maintain the following monthly record in a District-approved log for at least 36 months from the date of entry (60 months if the facility has been issued a Title v Major Facility Review Permit or a Synthetic Minor Operating Permit). Log entries shall be retained on-site, either at a central location or at the engine's location, and made immediately available to the District staff and CPM upon request. a) Hours of operation for reliability testing. b) Hours of operation for emission testing. c) Hours of operation for emergencies. d) For each emergency, the nature of the emergency condition. e) Fuel usage for each engine(s). (Basis: Title 17, California Code of Regulations, Section 93115, ATCM for Stationary CI Engines)	The project owner shall make the site and records available for inspection by representatives of the District, ARB and the Commission.		As Required	As Required	NRG		AQ-44 added with petition to amend approved 11/17/2014. Revised to AQ-51 with February 2019 Black Start Amendment						Amended February 2019	Scott Seipel	
OPS	AQ-52	If the emergency standby engine is located on school grounds or within 500 feet of any school ground, the following requirements shall apply. MILGS is NOT within 500 feet of any school grounds.	The project owner shall make the site and records available for inspection by representatives of the District, ARB and the Commission.		As Required	As Required	NRG		AQ-45 added with petition to amend approved 11/17/2014. Revised to AQ-52 with February 2019 Black Start Amendment						Amended February 2019	Scott Seipel	
PC-1	BIO-1	Assign a Designated Biologist to the project. The DB must meet the specified qualifications. No site or related facility activities shall commence until an approved Designated Biologist is available to be on site. Adhere to condition specification if the DB needs to be replaced	Submit the resume of the proposed DB, with at least 3 references and contact information, to the (CPM) for approval.		At least 90 days prior to the start of any site (or related facilities) mobilization	11/17/10	GenOn	9/21/2010 Submission 002 Submission 006 & 0128.020 2/2/2012 - Submittal 088	2010-1221 Returned 10/6/2010	Approved 10/20/2010 Addntl resumes submitted 2/2/2012 Approved addntl monitors 2/24/12	9/21/2010					CEC approval per CEC Blue sheet report dated 10-06-10 (on file) Additional Verifications per implied acceptance of MCR No.2 & MCR No. 14 & MCR No.18	Stephen L. Erickson
CONS	BIO-2	Ensure that the DB performs the specified 1. through 9. of the condition during any site (or related facilities) mobilization, ground disturbance, grading, construction, operation, and closure activities. The DB may be assisted by the approved Biological Monitor(s), but remains the contact for the project owner and CPM.	Designated Biologist must maintain written records of the tasks described in condition and provide summaries for inclusion in the MCR.		Monthly	Include in MCR	BIOLOGIST				Monthly 10th Business day of each month	Currently No noted issues with any Monthly report					Stephen L. Erickson
CONS	BIO-3	Construction/Operation Manager shall act on the advice of the DB to ensure conformance with the biological resources Conditions of Certification. If required by the DB, Construction/Operation Manager shall halt all activities in areas specified by the DB. The Designated Biologist shall follow the process 1. through 3 in the condition if construction is halted	Designated Biologist must notify the CPM immediately of any non-compliance activity or halt of any site mobilization, ground disturbance, grading, construction, and ops activities.		As Required	As required	BIOLOGIST										Stephen L. Erickson

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PC-1	BIO-4a	Develop and implement a CPM-approved Worker Environmental Awareness Program (WEAP) in which each of its employees, as well as employees of contractors and subcontractors who work on the project site or any related facilities during site mobilization, ground disturbance, grading, construction, operation, and closure are informed about sensitive biological resources associated with the project. The WEAP must have the specified 1. through 6. of the condition.	Provide to the CPM the proposed WEAP and all supporting written materials and electronic media prepared or reviewed by the DB and a resume of the person(s) administering the program.	60 days prior to the start of any site (or related facilities) mobilization	12/17/10	BIOLOGIST	10/26/2010 Submittal 009 Resubmit WEAP Handout: 12/21/2010 Submittal 023 Submittal 029 Submittal 030 1/26/2011	2010-1490 2010-1790 12/3/2010	Additional Information Submitted 12/3/2010 WEAP handbook revised 1/24/2011 Submitted WEAP training video 1/26/2011 Approved (No Date Given)		10/26/10	2/4/2011 Verified MCR No.5 2/11/2011				Stephen L. Erickson
CONS	BIO-4b	Report the number of persons who have completed the training in the prior month and a running total of all persons who have completed the training to date.	Include a running total in MCR.	Monthly	Include in MCR	KIEWIT			Current as of MCR 24		Monthly 10th Business day of each month	Currently No noted issues with any Monthly report				Raja Ponniah
PC-1	BIO-4c	Deliver copies of final CPM approved WEAP materials to site.	Submit two copies of the CPM approved materials.	At least 10 days prior to site or related facilities mobilization	2/5/11	BIOLOGIST	1-28-11 Submittal 030 Submittal 032	2010-1490	Additional Information Submitted 12/3/2010 Approved 1/11/2011 Additional copies sent per request of Ann Crisp 1/28/2011		10/26/2010	1/11/2011 Delivery to site Verified by Project delivery records submittal to CEC no approval required				Stephen L. Erickson
OPS	BIO-4d	Keep signed WEAP statements in project files.	During project operation, signed statements for active project operational personnel shall be kept on file for six months following the termination of an individual's employment.	As required	As required	NRG						Verified Monthly in MCR's in sections 2.05				Dan Leach
PC-1	BIO-5	Prepare the proposed BRMIMP (see BIO-6 for detailed requirements of the BRMIMP).	Submit two copies of the BRMIMP to the CEC CPM for review and approval and to USFWS/CDFG for review and comment	At least 60 days prior to site or related facilities mobilization	12/17/10	BIOLOGIST	10/13/2010 Submittal 006 Resub 11/18/2010 Submittal 014 & Submittal 020 Submittal 030	21010-1362 11/3/10 2010-1679 11/18/2010	Additional Information Submitted 12/3/2010 Additional copy sent per request of Ann Crisp 1/28/2011 Approved (No Date Given)		10/13/10	2/4/2011 Verified MCR No.5 2/11/2011				Stephen L. Erickson
CONS	BIO-5b	Revise or supplement the BRMIMP to reflect any BIO permit conditions received after the original BRMIMP is accepted.	Submit any bio permits not yet received when the BRMIMP is first submitted to the CPM and HTAC	Within 5 days of receipt	As required	BIOLOGIST	Submittal 020 Submittal 030					Verified Monthly in MCR's in sections 2.04 and 2.06				Stephen L. Erickson
CONS	BIO-5c	Any changes to the approved BRMIMP must also be approved by the CPM and submitted to the HTAC to ensure no conflicts exist.	Notify the CPM before implementing any modifications to the approved BRMIMP	Within 5 days	As required	BIOLOGIST						Verified Monthly in MCR's in sections 2.04 and 2.06				Stephen L. Erickson
CONS	BIO-5d	Implementation of BRMIMP measures will be reported in the MCR by the DB.	Provide report for inclusion in MCR.	Monthly	Include in MCR	BIOLOGIST					Monthly 10th Business day of each month	Currently No noted issues with any Monthly report				Dawn Owens
CONS	BIO-5e	Prepare a written construction closure report identifying which items of the BRMIMP have been completed, a summary of all modifications to mitigation measures made during the project's site mobilization, ground disturbance, grading, and construction phases, and which mitigation and monitoring items are still outstanding.	Provide construction closure report to the CPM for review and approval.	Within 30 days after completion of construction	1/28/12	BIOLOGIST			Submittal #172		8/14/2013					Stephen L. Erickson
CONS	BIO-6a	Implement measures set forth in condition in a manner to avoid or minimize impacts to the local biological resources.	Provide report for inclusion in MCR.	Monthly	Include in MCR	BIOLOGIST					Monthly 10th Business day of each month	Currently No noted issues with any Monthly report				Stephen L. Erickson
CONS	BIO-6b	Submit a written construction termination report identifying how bio mitigation measures have been completed.	Provide construction termination report to the CPM for review and approval. Provide additional copies to the CDFG and USFWS.	Within 30 days after completion of construction	1/28/12	BIOLOGIST			Submittal #172		8/14/2013					Stephen L. Erickson
PC-2	BIO-7	Conduct migratory bird pre-construction nest surveys as required by condition. If active nests are detected during the survey, the report shall include a map or aerial photo identifying the location of the nest and shall depict the boundaries of the no-disturbance buffer zone around the nest.	Provide the CPM a letter-report describing the findings of the pre-construction nest surveys, including the time, date, and duration of the survey; identity and qualifications of the surveyor(s); and a list of species observed. Additional copies shall be provided to CDFG.	At least 10 days prior to site or related facilities mobilization	2/5/11	BIOLOGIST	3/8/2011 Submission 038 3/13/2012 Submission 041 5/21/2013 Submittal 105 7/13/12 Submittal 112		Approved, but ongoing review required. Request to remove hawk nest submitted 3/13/2012	3/8/2011	3/8/2011	3/28/2011				Stephen L. Erickson
OPS	BIO-8	Provide an annual Payment to Friends of San Pablo Bay. The First Annual Payment shall be at least equal to \$2,693.00 + \$20,000 payment of good faith	Provide written verification to the CPM, USFWS, and CDFG that first annual payment was made. Thereafter within 30 days of the each commencement anniversary date provide written verification of payment to parties above	30 days after the start of project operation	1/22/12	NRG	9/10/12 Submittal 124 Submittal 138			9/10/2012		Proof of payment submitted 9/10/2012 - No acceptance is required Email verification to C.sora on 9/18/12				Dan Leach

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OPS	BIO-8 2013	Provide an annual Payment to Friends of San Pablo Bay. The First Annual Payment shall be at least equal to \$2,693.00 + \$20,000 payment of good faith	Provide written verification to the CPM, USFWS, and CDFG that first annual payment was made. Thereafter within 30 days of the each commencement anniversary date provide written verification of payment to parties above	30 days after the COD anniversary	1/22/12	NRG						Proof of payment submitted 5/29/2014 - via Email to C. Remy-Obad on 7/15/13.					Dan Leach
OPS	BIO-8 2014	Provide an annual Payment to Friends of San Pablo Bay. The First Annual Payment shall be at least equal to \$2,693.00 + \$20,000 payment of good faith	Provide written verification to the CPM, USFWS, and CDFG that first annual payment was made. Thereafter within 30 days of the each commencement anniversary date provide written verification of payment to parties above	30 days after the COD anniversary	5/31/14	NRG						Proof of payment submitted 5/30/2014 - via Email to C. Remy-Obad on 9/16/16.					Dan Leach
OPS	BIO-8 2015	Provide an annual Payment to Friends of San Pablo Bay. The First Annual Payment shall be at least equal to \$2,693.00 + \$20,000 payment of good faith	Provide written verification to the CPM, USFWS, and CDFG that first annual payment was made. Thereafter within 30 days of the each commencement anniversary date provide written verification of payment to parties above	30 days after the COD anniversary	5/31/15	NRG						Proof of payment submitted 5/29/2015 - via Email to C. Remy-Obad on 9/16/16.					Dan Leach
OPS	BIO-8 2016	Provide an annual Payment to Friends of San Pablo Bay. The First Annual Payment shall be at least equal to \$3,036 + \$20,000 payment of good faith	Provide written verification to the CPM, USFWS, and CDFG that first annual payment was made. Thereafter within 30 days of the each commencement anniversary date provide written verification of payment to parties above	30 days after the COD anniversary	5/31/16	NRG						Proof of payment submitted 5/31/2016 - via Email to C. Remy-Obad on 8/11/16.					Dan Leach
OPS	BIO-8 2017	Provide an annual Payment to Friends of San Pablo Bay. The First Annual Payment shall be at least equal to \$3,115 + \$20,000 payment of good faith	Provide written verification to the CPM, USFWS, and CDFG that first annual payment was made. Thereafter within 30 days of the each commencement anniversary date provide written verification of payment to parties above	30 days after the COD anniversary	5/31/17	NRG											Dan Leach
OPS	BIO-8 2018	Provide an annual Payment to Friends of San Pablo Bay. The First Annual Payment shall be at least equal to \$3,218 + \$20,000 payment of good faith	Provide written verification to the CPM, USFWS, and CDFG that first annual payment was made. Thereafter within 30 days of the each commencement anniversary date provide written verification of payment to parties above	30 days after the COD anniversary	5/31/18	NRG											Dan Leach
OPS	BIO-8 2019	Provide an annual Payment to Friends of San Pablo Bay. The Annual Payment shall be at least equal to \$3,311.00 (inflation adjusted)+ \$20,000 payment of good faith.	Provide written verification to the CPM, USFWS, and CDFG that first annual payment was made. Thereafter within 30 days of the each commencement anniversary date provide written verification of payment to parties above	30 days after the COD anniversary	5/31/19	NRG											Dan Leach
OPS	BIO-8 2020	Provide an annual Payment to Friends of San Pablo Bay. The Annual Payment shall be at least equal to \$3,311.00 (inflation adjusted)+ \$20,000 payment of good faith.	Provide written verification to the CPM, USFWS, and CDFG that first annual payment was made. Thereafter within 30 days of the each commencement anniversary date provide written verification of payment to parties above	30 days after the COD anniversary	5/31/20	NRG											Dan Leach
OPS	BIO-8 2021	Provide an annual Payment to Friends of San Pablo Bay. The Annual Payment shall be at least equal to \$3,311.007 (inflation adjusted)+ \$20,000 payment of good faith.	Provide written verification to the CPM, USFWS, and CDFG that first annual payment was made. Thereafter within 30 days of the each commencement anniversary date provide written verification of payment to parties above	30 days after the COD anniversary	5/31/21	NRG											Dan Leach
PC-2	CIV-1a	Submit design of the proposed drainage structures and the grading plan.	Submit documents to the CBO for review and approval.	At least 30 days prior to the start of site grading	2/23/11	KIEWIT	2/19/2011 to CEC and CBO Submittal 37		CBO comments 3/10/11 Approved 3/29/2011	2/19/2011	To the CBO 2/18/11	3/29/2011 Verified MCR No.7 4/16/2011					Kyle Stuckenholz
PC-2	CIV-1b	Submit the erosion and sedimentation control plan.	Submit documents to the CBO for review and approval.	At least 30 days prior to the start of site grading	2/23/11	KIEWIT	2/19/2011 to CEC and CBO Submittal 37		Approved 3/28/2011	2/19/2011	To the CBO 2/18/11	3/28/2011 Verified MCR No.7 4/16/2011					Kyle Stuckenholz
PC-2	CIV-1c	Submit the storm water pollution prevention plan (SWPPP).	Submit documents to the CBO for review and approval.	At least 30 days prior to the start of site grading	3/20/11	KIEWIT	2/19/2011 to CEC and CBO Submittal 37		CBO comments 3/10/11 Approved 3/28/2011	2/19/2011	To the CBO 3/2/11	3/28/2011 Verified MCR No.7 4/16/2011					Kyle Stuckenholz
PC-2	CIV-1d	Submit related calculations and specifications, signed and stamped by the responsible civil engineer.	Submit documents to the CBO for review and approval.	At least 30 days prior to the start of site grading	2/23/11	KIEWIT	2/19/2011 to CEC and CBO Submittal 37		CBO comments 3/10/11 Approved 3/28/2011	2/19/2011	To the CBO 2/21/11	3/28/2011 Verified MCR No.7 4/16/2011					Kyle Stuckenholz
PC-2	CIV-1e	Submit the soils, geotechnical, or foundation investigations reports required by the 2007 CBC.	Submit documents to the CBO for review and approval.	At least 30 days prior to the start of site grading	2/23/11	KIEWIT	2/19/2011 to CEC and CBO Submittal 037 Submittal 038		CBO comments 3/10/11 Approved 3/28/2011	2/19/2011	To the CBO 2/18/11	3/28/2011 Verified MCR No.7 4/16/2011					Reid Strain

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CONS	CIV-2	RE shall stop all earthwork and construction in the affected areas when the responsible soils, geotechnical, or civil engineer experienced and knowledgeable in the practice of soils engineering identifies unforeseen adverse soil or geologic conditions. Submit modified plans, specifications and calculations to the CBO based on these new conditions. Obtain approval from the CBO before resuming earthwork and construction in affected area.	Notify the CPM within 24 hours when earthwork and construction are stopped as a result of unforeseen adverse geological conditions. Within 24 hours of the CBO's approval to resume earthwork and construction in the affected areas, provide to the CPM a copy of the CBO's approval.	Within 24 hours of construction halt due to geologic conditions	As required	KIEWIT										Gene Amrhein
CONS	CIV-3	Perform inspections in accordance with this condition (see codes referenced). If work is not being performed in accordance with approved plans, the discrepancies shall be reported immediately to the RE, CBO and CPM. EPC must prepare a written report detailing all discrepancies, non-compliance items, and proposed corrective action to the CBO/CPM.	RE shall transport to the CBO and CPM a NCR and the proposed corrective action for review and approval. Within 5 days of resolution, EPC must submit details of correction action to the CBO and CPM.	Within 5 days of discovery of any discrepancies	As required	KIEWIT	9/2/2011 Submittal 059 9/13/2011 Submittal 060 9/13/2011 Submittal 061 9/23/2011 Submittal 063 10/14/2011 Submittal 070 10/17/2011 Submittal 071 10/24/2011 Submittal 073 2/10/2012 Submittal 089a 2/17/12 Submittal 092		9/2/2011 Submitted NCT-001, 9/13/2011 Submitted NCR-2,3,4 9/23/2011 Submitted NCR-5 Submitted additional information for NCR 3&4 10/14/2011 Submitted additional information for NCR 2 10/17/2011 Additional information for NCR 5 10/24/2011						Gene Amrhein	
CONS	CIV-4	After completion of finished grading and erosion and sedimentation control and drainage facilities, the Project Owner shall obtain the CBO's approval of the final "as-graded" grading plans and final "as-built" plans for the erosion and sedimentation control facilities.	Submit to the CBO for review and approval the final grading plans (including final changes) and the responsible civil engineer's signed statement that the installation of the facilities and all erosion control measures were completed in accordance with final approved plans.	Within 30 days of completion of work	1/28/12	KIEWIT			Submittal # 175		10/23/013					Kyle Stuckenholz
PC-1	CUL-3a	Obtain the services of a Cultural Resources Specialist (CRS), and one or more alternate CRSs, if alternates are needed	Submit resumes to the CEC CPM for review and approval.	At least 30 days prior to start of ground disturbance	2/23/11	GenOn	9/29/2010 Submittal 003	2010-1261 returned 10/4/10	Approved 10/4/2010 Approved Karin Beck as ACSR 2/24/12		9/29/2010	CEC Acceptance resumes on 10/5/2010 verified by email from J Caswell (On File) Additionally verified by implied acceptance of section 4.0 of MCR's No.2 No. 14 & MCR No.18				Stephen L. Erickson
CONS	CUL-3b	Submit the resume of the proposed new CRS to the CPM for review and approval. Also provide the new CRS with copies of the AFC, data responses, confidential reports, and maps and drawings showing the footprint of the power plant and all linear facilities.	Provide the required written documentation to the CPM.	At least 10 days prior to a termination or release of the CRS or within 10 days after the resignation of a CRS	As required	GenOn	9/20/12 Submittal 129		10/4/2010 Approval 10/12/2011 Approval of Ms. Karin Beck as an Alternate 2/14/2012		Revision submitted 9/20/2012	CEC Acceptance resumes on 10/5/2010 verified by email from J Caswell (On File) Additionally verified by implied acceptance of section 4.0 of MCR's No.2 No. 14 & MCR No.19				Stephen L. Erickson
PC-1	CUL-3c	Provide a letter naming anticipated CRMs for the project and stating that the identified CRMs meet the minimum qualifications for cultural resources monitoring required by this Condition.	Provide the required written documentation to the CPM.	At least 20 days prior to ground disturbance	3/5/11	GenOn	10/7/2010 Submittal 004 3/30/2012 Submittal 042 8/31/11 9/13/2011 11/14/2100 Submittal 075 11/30/2011 Submittal 079 2/8/12 Submittal 089 2/10/12 Submittal 090	10/12/2010	Approved 10/12/2010 Submitted Ms. Kathleen Kubal 8/31/2011 Submitted Mr. Jay Baker 9/13/2011 Submitted Alexandra Greenwald 11/14/2011, Submitted Joseph Bek 11/30/2011 Approval 10/12/2011		10/7/2010	CEC Acceptance resumes on 10/5/2010 verified by email from J Caswell (On File) Additionally verified by implied acceptance of section 4.0 of MCR's No.2 No. 14 & MCR No.20				Stephen L. Erickson
CONS	CUL-3d	Submit the resumes of the technical specialists to the CPM for review and approval.	Provide the required written documentation to the CPM.	At least 10 days prior to technical specialists beginning new tasks	As required	CULTURAL SPECIALIST	9/13/2011 Submittal 061 Approved by CEC 10/7/2011 Additional submittal 10/11/2011					CEC Acceptance resumes on 10/5/2010 verified by email from J Caswell (On File) Additionally verified by implied acceptance of section 4.0 of MCR's No.5 2/11/2011				Stephen L. Erickson
PC-1	CUL-3e	Confirm in writing to the CPM that the approved CRS will be available for onsite work and is prepared to implement cultural resources conditions.	Provide the required written documentation to the CPM.	At least 10 days prior to the start of ground disturbance	3/15/11	GenOn	10/7/2010 Submittal 004	2010-1261	Approved (No Date Given)		10/7/10	CEC Acceptance resumes on 10/5/2010 verified by email from J Caswell (On File) Additionally verified by implied acceptance of section 4.0 of MCR's No.5 2/11/2011				Stephen L. Erickson
PC-1	CUL-3a	Provide to the CRS, if the CRS has not previously worked on the project, copies of the AFC, data responses, confidential cultural resources reports, all supplements and the SA for the project. Also provide site maps and drawings for cultural resource planning activities.	Provide requested info to the CRS.	At least 30 days prior to the start of ground disturbance	2/23/11	GenOn	12/10/2010 Submittal 21	2010-1831	Approved (No Date Given)		12/10/10	2/4/2011 Verified MCR No.4				Stephen L. Erickson

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CONS	CUL-2b	Provide to the CRS and CPM a schedule of project activities for the following week, including the identification of area(s) where ground disturbance will occur during that week.	On a weekly basis during ground disturbance, a current schedule of anticipated project activity shall be provided to the CRS and CPM by letter, e-mail, or fax.	Weekly during construction	Weekly	KIEWIT			Current as of MCR 25			Verified by weekly Email notices				Raja Ponniah
PC-1	CUL-3a	Submit the Cultural Resources Monitoring and Mitigation Plan (CRMMP), as prepared by the CRS. (See condition for specific requirements.)	Submit the entire CRMMP to the CEC CPM for review and approval.	At least 30 days prior to ground disturbance	2/23/11	CULTURAL SPECIALIST	10/26/2010 Submittal 010 Revised 11/2/2010 Submittal 030	2010-1485 2010-1566	Approved 1/11/2011	10/26/10	1/11/2011 Verified MCR No.5 2/11/2011					Stephen L. Erickson
PC-1	CUL-3b	Agree to pay curation fees for any materials collected as a result of the archaeological investigations (survey, testing, data recovery)	Provide the required written documentation to the CPM.	At least 30 days prior to ground disturbance	2/23/11	GenOn	10/26/2010 Submittal 007	2010-1485	Approved 1/11/2011	10/26/10	1/11/2011 Verified MCR No.5 2/11/2011					Stephen L. Erickson
CONS	CUL-4a	If any archaeological monitoring or data recovery activities are conducted during project construction, submit a final Cultural Resources Report (CRR).	Provide the required written documentation to the CPM for review and approval.	Within 90 days after completion of landscaping	3/28/12	CULTURAL SPECIALIST			Submittal # 173	9/4/2013						Stephen L. Erickson
CONS	CUL-4b	If cultural materials requiring curation were collected, provide to the CPM a copy of an agreement or other written commitment form.	Provide the required written documentation to the CPM.	Within 90 days after completion of landscaping	3/28/12	CULTURAL SPECIALIST			Confirmation email	9/4/2013						Stephen L. Erickson
CONS	CUL-4c	Provide documentation to the CPM confirming that copies of the final CRR have been provided to the SHPO, the CHRIS, the curating institution, if archaeological materials were collected, and to the Tribal Chairpersons of any Native American groups requesting copies of project-related reports.	Provide the required written documentation to the CPM.	Within 10 days after CPM approval of CRR	CEC Dependent	CULTURAL SPECIALIST										Stephen L. Erickson
CONS	CUL-4d	If the project is suspended, submit a draft CRR to the CPM for review and approval.	Provide the required written documentation to the CPM for review and approval.	Within 30 days after requesting a suspension	As required	CULTURAL SPECIALIST			Project is not suspended			Nothing required at this time				Stephen L. Erickson
PC-1	CUL-5a	The CRS shall prepare a WEAP that addresses all issues specified in Condition and provided training to all new workers within their first week of employment at the project site, laydown areas, and along the linear facilities routes.	Provide the draft text and graphics for the training program to the CPM for review and approval.	At least 30 days prior to ground disturbance	2/23/11	CULTURAL SPECIALIST	10/26/2010 Submittal 007 Submittal 023 Submittal 029 Submittal 032 1/26/2011	2010-1362	Approved 12/10/2010 Submitted WEAP training Video 1/26/2010 Final version sent with the word DRAFT removed 1/28/2011	10/26/2010	12/10/2010 Approved by Email (on file) from J Caswell CEC					Stephen L. Erickson
CONS	CUL-5b	Provide the WEAP Training Acknowledgement forms of workers who have completed the training in the prior month and a running total of all persons who have completed training to date.	Include a running total in MCR.	Monthly	Include in MCR	KIEWIT				Monthly 10th Business day of each month	Currently No noted issues with any Monthly report					Raja Ponniah
CONS	CUL-6a	Ensure that CRS, alternate CRS or CRMs monitor full time all ground disturbances at project site along the linear facilities routes, and laydown areas, roads, and other ancillary areas. And Ensure that the CRMs keep a daily log of any monitoring	As long as no cultural resources are found. Provide daily a statement that "no cultural resources over 50 years of age were discovered" to the CPM as an e-mail	Daily	Daily	CULTURAL SPECIALIST					Verified in Monthly reports in section 2.12. Requirement complete with suspension Approval received per teleconference and verified by email 9.14.12					Stephen L. Erickson
CONS	CUL-6b	Submit monthly monitoring summary reports of cultural resources related monitoring, created by the CRS as required by the condition.	Include in each MCR a copy of the monthly summary report of cultural resources-related monitoring prepared by the CRS and attach any new DPR 523 A forms completed	Monthly	Include in MCR	CULTURAL SPECIALIST				Monthly 10th Business day of each month	Currently No noted issues with any Monthly report					Dawn Owens
CONS	CUL-6c	Notify CEC prior to changing or eliminating monitoring.	Provide letter or email to CPM for review and approval detailing justification for changing or eliminating monitoring.	At least 24 hours prior to changing level	As required	CULTURAL SPECIALIST	9/10/12 Submittal 123		Notice given Submittal 123		Requirement complete with suspension Approval received per teleconference and verified by email 9.14.12					Stephen L. Erickson
CONS	CUL-6d	A Native American monitor shall be obtained to monitor ground disturbance in areas and at depths, if any, where the CUL-1 geoarchaeological study identified the potential for buried prehistoric archaeological deposits and anywhere else that if Native American artifacts are encountered during ground disturbance.	Provide the required written documentation to the CPM.	No later than 30 days after discovery	As required	CULTURAL SPECIALIST			As Required in Monthly Reports included in section 2.12	As Required in Monthly Reports included in section 2.12	Requirement complete with suspension Approval received per teleconference and verified by email 9.14.12					Stephen L. Erickson
CONS	CUL-6e	Submit any comments or information provided by Native Americans in response to the project owner's transmittals of information.	Provide the required written documentation to the CPM.	Within 15 days of receipt	As required	GenOn			As Required in Monthly Reports included in section 2.12	As Required in Monthly Reports included in section 2.12	Requirement complete with suspension Approval received per teleconference and verified by email 9.14.12					Stephen L. Erickson
PC-1	CUL-7a	Grant authority to halt construction to the CRS, alternate CRS and the CRMs in the event previously unknown cultural resource sites or materials are encountered, or if known resources may be impacted in a previously unanticipated manner (discovery).	Provide the CPM and CRS with a letter confirming that the CRS, alternate CRS and CRMs have the authority to halt construction activities in the vicinity of a cultural resource discovery, and that the project owner shall ensure that the CRS notifies the CPM within 24 hours of a discovery, or by Monday morning if the cultural resources discovery occurs between 8:00 AM on Friday and 8:00 AM on Sunday morning.	At least 30 days prior to ground disturbance	2/23/11	GenOn	10/26/2010 Submittal 007	2010-1487	Approved 1/11/2011	10/26/10	1/11/11					Stephen L. Erickson
CONS	CUL-7b	Ensure the CRS notifies all Native American groups that expressed a desire to be notified in the event of a discovery and complete a DPR 523 forms as specified in the condition	Unless discovery is treated precipitously, Submit completed DPR 523 forms to CPM for review and approval	Within 24 hours of discovery (48 to notify Native American groups)	As required	CULTURAL SPECIALIST			Nothing required at this time			Verified in Monthly reports in section 2.12. Requirement complete with suspension Approval received per teleconference and verified by email 9.14.12				Stephen L. Erickson

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CONS	CUL-8	If soils must be acquired from a non commercial borrow site, the CRS shall survey the borrow site for cultural resources and record on DPR 523 forms and that are identified and convey the results and recommendation for further action to the CPM	Notify the CRS and CPM as soon as it is known that non commercial borrow site will be used and provide documentation of previous archaeological surveys. If none available site must be surveyed 30 days before any soil borrow activities and submit the survey and recommendation to the CPM.	At least 30 days prior to start of construction of each increment of borrow activities	As required	CULTURAL SPECIALIST			Nothing required at this time			Verified in Monthly reports in section 2.12. Requirement complete with suspension Approval received per teleconference and verified by email 9.14.12				Stephen L. Erickson
CONS	ELEC-1	Prior to the start of any increment of electrical construction for electrical equipment and systems 480 volts and higher, with the exception of underground duct work and any physical layout drawings and drawings not related to code compliance and life safety, submit for CBO design review and approval the proposed final design, specifications and calculations.	Submit to the CBO for design review and approval the items listed in this condition	At least 30 days prior to start of construction of each increment of electrical construction	As required	KIEWIT			Nothing required at this time			Verified in Monthly reports in section 2.13.				Tharu Nadarajah
CONS	GEN-1	Design, construct, and inspect the project in accordance with the codes listed in the condition.	The project owner shall submit to the CPM and the CBO a statement of verification, signed by the responsible design engineer, attesting that all designs, construction, installation, and inspection requirements of the applicable LORS and the Energy Commission's decision have been met in the area of facility design. The project owner shall provide the CPM a copy of the certificate of occupancy within 30 days of receipt from the CBO.	Five (5) days prior to requesting the issuance of the certificate of occupancy	2/24/13	KIEWIT										Mike Rinehart
PC-2	GEN-2a	Furnish the CPM and the CBO with a schedule of facility design submittals, and master drawings and master specifications list. The master drawings and master specifications list shall contain a list of proposed submittal packages of designs, calculations, and specifications for major structures, systems, and equipment. The schedule shall contain the planned date of each submittal to the CBO. Provide specific packages to the CPM upon request. Also plans and calculations for all construction work shall be submitted to the CBO for approval.	Submit to the CBO and to the CPM the schedule, and the master drawings and master specifications list of documents to be submitted to the CBO for review and approval.	At least 60 days prior to the start of rough grading	1/24/11	KIEWIT	11/19/2010 Submittal 016 1/4/11 to the CBO	2010-1726	Approved 12/15/2010	11/18/2010	11/19/2010	CEC Acceptance Per email from J Caswell on 12/15/10 (FN2010-1726) Additionally Verified on MCR No. 4	Approved			Sarah Copeland
CONS	GEN-2b	Furnish the CPM and the CBO with an updated schedule of facility design submittals	Provide schedule updates in the monthly compliance report	Monthly	Include in MCR	KIEWIT					Monthly 10th Business day of each month	Currently No noted issues with any Monthly report				Sarah Copeland
CONS	GEN-3	Make payments to the CBO for design review, plan check and construction inspections based upon a reasonable fee schedule to be negotiated between NCPA and the CBO.	Send copy of CBO's receipt of payment to CPM in next MCR indicating applicable fees have been paid.	Monthly	Include in MCR	GenOn					Monthly 10th Business day of each month	Currently No noted issues with any Monthly report				Chuck Hicklin
PC-2	GEN-4	Assign a California registered architect, or a structural or civil engineer as the resident engineer (RE) in charge of the project.	Submit to the CBO for review and approval, the resume and registration number of the RE and any other delegated engineers assigned to the project. Notify the CPM of the CBO's approvals of the RE and other delegated engineer(s) within five days of the approval.	At least 30 days prior to start of rough grading	2/23/11	KIEWIT	12/3/2010; To CBO 1-26-11 Submittal 019 Submittal 036	2010-1785	Approved (No Date Given)	11/19/10	12/3/10	2/4/2011. Verified on MCR No. 5 2/11/2011			2/4/2011	Gene Amrhein
PC-2	GEN-5	Assign at least one of each of the following California registered engineers to the project: a civil engineer; a soils, geotechnical, or civil engineer experienced and knowledgeable in the practice of soils engineering; and an engineering geologist, a design engineer who is either a structural engineer or a civil engineer fully competent and proficient in the design of power plant structures and equipment supports, a mechanical engineer, and an electrical engineer.	Submit to the CBO for review and approval, resumes and registration numbers of the responsible engineers. Notify the CPM of the CBO's approvals of the responsible engineers within five days of the approval.	At least 30 days prior to start of rough grading	2/23/11	KIEWIT	To CBO 1/17/11 To CEC 2/16/2011 Submittal 036 6/28/2011 addnl Submittal 052 Submittal 057		CBO Approved 2-16-11 CEC Approved 3/16/2011 Submitted Tharu Nadaraj (Electrical) and Chad Enders (Civil) for approval 6/28/2011 Mr. Nadaraj and Mr. Enders resumes approved 8/12/11 Submitted Gen Amrhein, Chad Enders and Sheng Liu for Design Engineer 8/15/2011	11/30/10	1/17/11	2/16/2011 Verified through CBO Returns and MCR No.7 4/16/2011			2/16/2011	Jake Albers
CONS	GEN-6	Assign to the project, qualified and certified special inspector(s) who shall be responsible for the special inspections required by the 2007 CBC.	Submit to the CBO for review and approval, with a copy to the CPM, the name(s) and qualifications of the certified weld inspector(s), or other certified special inspector(s) assigned to the project	At least 15 days prior to start of an activity requiring special inspection	As required	KIEWIT	To CBO 2/2/11 Sent to CE 9/23/2011 Submittal 064 Submittal 065		CBO Approved 2-24-11 9/23/2011 Sent Qualls to CEC for Jay Locatelli, Micah Ek, Jeffrey Brooks, Jason Burris, Ryan Doyel, and Laura Johnson. Also sent CBO approvals for John Sasser, Stanley Silva, and Anselmo De Haro. CEC approval 10/5/11.		2/2/11	2/24/2011 Verified MCR No.7 4/16/2011			2/24/2011	Dennis Chambers
CONS	GEN-7	If any discrepancy in design and/or construction is discovered in any engineering work that has undergone CBO design review and approval, the project owner shall document the discrepancy and recommend required corrective actions.	Transmit a copy of the CBO's approval of any corrective action taken to resolve a discrepancy to the CPM in the next monthly compliance report. If any corrective action is disapproved, the project owner shall advise the CPM, within five days, of the reason for disapproval and the revised corrective action to obtain CBO's approval.	Monthly	Include in MCR	KIEWIT					Monthly 10th Business day of each month	Currently No noted issues with any Monthly report				Gene Amrhein to communicate any CBO issues back to KC.
CONS	GEN-8	Obtain the CBO's final approval of all completed work that has undergone CBO design review and approval. Request the CBO to inspect the completed structure and review the submitted documents. Notify the CPM after obtaining the CBO's final approval. Retain one set of approved engineering plans, specifications, and calculations (including all approved changes) at the project site or at another accessible location during the operating life of the project. Electronic copies of the approved plans, specifications, calculations, and marked-up as-builts shall be provided to the CBO for retention by the CPM.	Submit to the CBO, with a copy to the CPM, in the next monthly compliance report, (a) a written notice that the completed work is ready for final inspection, and (b) a signed statement that the work conforms to the final approved plans.	Within 15 days of completion of any work	As required Include in MCR	KIEWIT			Submittal as available in Monthly reports in Section 2.20			Currently No noted issues with any Monthly report				Raja Ponniah
PC-2	GEQ-1	Specifically include in the Soils and Engineering Report, laboratory test data, associated geotechnical engineering analyses, and a thorough discussion of the potential for liquefaction and associated lateral spread, and dynamic compaction. The report should also include recommendations for ground improvement and/or foundation systems necessary to mitigate these potential geologic hazards, if present.	Include in the application for a grading permit a copy of the Soils Engineering Report which address the potential for liquefaction and associated lateral spread, settlement due to compressible soils, dynamic compaction, and the possible presence of expansive clay soils, and a summary of how the results of the analysis were incorporated into the project foundation and grading plan design of review and comment by the Chief Building Official (CBO)	At least 30 days prior to the start of grading	2/23/11	KIEWIT	2/19/2011 to CEC and CBO Submittal 037		Approved 3/28/2011	2/18/11	2/19/11	3/29/2011 CEC agrees that all HAZ submittals made to date have been approved excepting HAZ-8 per email verification 8/24/12				Raja Ponniah Randy Dixon

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OPS	HAZ-1	Do not use any hazardous material in any quantity or strength not listed in Appendix B unless approved in advance by the CEC CPM.	Provide to the CPM, in the Annual Compliance Report, a list of hazardous materials contained at the facility.	Annually	Include in the ACR	NRG	6/25/13 Submittal 165 O&M HMBP to the CEC										David Frandsen
CONS	HAZ-2	Concurrently provide and updated Business Plan, and updated Spill Prevention Control, and Countermeasure Plan, and an updated Risk Management Plan to CCHSD-HMP) and the CPM for review. Reflect all changes in doc and provide copies to CCHSD-HMP, CCECFD and the CPM	Provide a copy of the final updated Business Plan and Updated SPOC plan to CPM for approval. Provide the final RMP to CCHSD-HMP and the CCFPD for information and to the CPM for approval	At least 30 days prior to receiving any hazardous material on site	10/14/12	GenOn	7/11/12 Submittal 111 8/17/12 Submittal 118 9/17/12 Submittal 126		Draft RMP sent to the CEC on 7/11/2012 Updated construction SPOC and HMBP plans submitted to the CEC. 8/17/2012	9/17/12					CCHSD-HMP and CCECFD	Diane Griffin	
CONS	HAZ-3	Develop and implement a Safety Management Plan (SMP) for the delivery of aqueous ammonia and other liquid hazmat by tanker truck.	Submit the plan to the CPM for review and approval.	At least 30 days prior to delivery of any hazardous material to the facility	9/30/12	GenOn	10/9/2012 Submittal 131										Tom Bertolini
CONS	HAZ-4	Design ammonia storage facility to either ASME Pressure Vessel Code and ANSI K61.6 or to API 620. Tanks shall be protected by a secondary containment basin capable of holding 125% of the storage volume	Submit final design drawings and specifications for the ammonia storage tank and secondary containment basin to the CPM for review and approval	At least 60 days prior to delivery of aqueous ammonia	8/31/11	GenOn - Tank Kiewit Secondary containment	6/19/2012 Submittal 108 110										Jake Albers Dave Hammond
CONS	HAZ-5	Direct all vendors delivering aqueous ammonia to the site to use only tanker truck transport vehicles that meet or exceed the specifications of DOT Code MC-307.	Submit copies of notification letter to supply vendors indicating the transport vehicle specs to the CPM for review and approval.	At least 30 days prior to receipt of aqueous ammonia on site	10/1/12	GenOn	8/3/2012 Submittal 113										Tom Bertolini
CONS	HAZ-6	Direct all vendors delivering any hazardous material to the site to use only the route approved by the CPM. Obtain approval of the CPM if an alternate route is desired.	Submit copies of the required transportation route limitation direction to the CPM for review and approval.	At least 60 days prior to receipt of any hazardous material on site	9/1/13	GenOn	8/3/2012 Submittal 113										Tom Bertolini
PC-2	HAZ-7	Prepare a site-specific construction security plan for the construction phase which addresses the items in the Condition.	Notify the CPM that a site-specific construction security plan is available for review and approval.	At least 30 days prior to start of construction	4/1/13	KIEWIT	11/24/2010 Submittal 017	2010-1731	Approved (No Date Given)	11/30/10	11/24/10						Raja Ponniah
CONS	HAZ-8a	Prepare a site-specific security plan for the commissioning and operational phases which addresses all the items in the Condition.	Notify the CPM that a site-specific operations site security plan is available for review and approval.	At least 30 days prior to receipt of hazardous materials on site	10/1/12	GenOn	8/23/2012 Submittal 121 9/17/12 Submittal 126		Letter only due to security needs and FOI requests.		8/22/12						Kirk Emmons
OPS	HAZ-8b	Include a statement that all current project employee and appropriate contractor background investigations have been performed, and that updated certification statements have been appended to the operations security plan. Also include a statement that the operations security plan includes all current hazardous materials transport vendor certifications for security plans and employee background investigations.	Provide information for inclusion in annual compliance report.	Annually	Include in the ACR	NRG			Reports submitted annually.								Dan Leach
CONS	MECH-1a	MAJOR PIPING & PLUMBING SYSTEMS: Submit for CBO design review and approval the proposed final design, specifications and calculations for each plant major piping and plumbing system listed in the CBO approved master drawing and master specification list.	Submit to the CBO for design review and approval the final plans, specs, and calcs for each major plant piping and plumbing system listed in Facility Design Table 2, including a copy of the signed and stamped statement from the responsible mechanical engineer certifying compliance with LORS	At least 30 days prior to the start of any piping or plumbing construction	As required	KIEWIT					MCR	Approved in monthly installments included in Monthly reports under section 2.21					Jake Albers
CONS	MECH-1b	Upon completion of construction of any such major piping or plumbing system, the project owner shall request the CBO's inspection approval of that construction.	Provide the required written documentation to the CPM.	Monthly	Include in MCR	KIEWIT				Monthly 10th Business day of each month		Currently No noted issues with any Monthly report					Raja Ponniah
CONS	MECH-2a	PRESSURE VESSELS: Submit for CBO design review and approval the proposed final design, specifications and calculations for each plant pressure vessel listed in the CBO approved master drawing and master specification list.	Submit to the CBO for design review and approval the final plans, specs, and calcs, including a copy of the signed and stamped statement from the responsible mechanical engineer certifying compliance with LORS	At least 30 days prior to start of onsite fabrication or installation of any pressure vessel	As required	KIEWIT					MCR	Approved in monthly installments included in Monthly reports under section 2.22			Cal-OSHA	Jake Albers	
CONS	MECH-2b	Upon completion of construction of pressure vessels, the project owner shall request the CBO's inspection approval of that construction.	Provide the required written documentation to the CPM.	Monthly	Include in MCR	KIEWIT				Monthly 10th Business day of each month		Currently No noted issues with any Monthly report					Raja Ponniah
CONS	MECH-3	HVAC SYSTEMS: Submit for CBO design review and approval the proposed final design, specifications and calculations for each HVAC system listed in the CBO approved master drawing and master specification list.	Submit the calcs, plans, and specs to the CBO, including a copy of the signed and stamped statement from the responsible mech engr certifying compliance with CBC and other applicable codes, with a copy of transmittal to CPM.	At least 30 days prior to start of construction of any HVAC or refig system	As required	KIEWIT					MCR	Approved in monthly installments included in Monthly reports under section 2.22					Jake Albers

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PC-1	NOISE-1	Notify all residents within one mile of the site and one-half mile of the linear facilities, by mail or other effective means, of the commencement of project construction. Establish a telephone number for use by the public to report any undesirable noise conditions associated with the construction and operation of the project and include that telephone number in the above notice. The telephone number shall be posted at the project site during construction in a manner visible to passersby and maintained until project has been operational for one year.	Transmit to the CPM a statement, signed by the project owner's project manager, stating that the above notification has been performed and describing the method of that notification, verifying that the telephone number has been established and posted at the site, and giving that telephone number.	At least 15 days prior to the start of ground disturbance	3/10/11	GenOn	12/14/2010 Submittal 22	2010-1903	Approved (No Date Given)		12/14/10	2/4/2011 Verified as accepted in MCR No.4 MCR 17 MCR No. 21				Stephen L. Erickson
CONS	NOISE-2	Throughout the construction and operation of the project, document, investigate, evaluate, and attempt to resolve all project-related noise complaints. Noise Complaint Resolution process will be used.	File a Noise Complaint Resolution Form with the City and the CPM documenting resolution of the complaint.	Within 5 days of receiving a noise complaint	As required	K&G	2/4/2011 Submittal 034		Received noise complaint 1/31/2011. Submitted form to the CEC 2/4/2011							Raja Ponniah
PC-1	NOISE-3	Submit a noise control program and statement signed by project manager verifying that noise control program will be implemented throughout construction of the project. The noise control program must comply with applicable OSHA and Cal-OSHA standards.	Submit a noise control program and project manager's verification letter to the CEC CPM for review and approval.	At least 30 days prior to ground disturbance	2/23/11	KIEWIT	11/19/2010 Submittal 016 1/4/11 to the CBO	2010-1727	Approved 12/15/2010		11/19/2010	CEC acceptance per email (TN2010-1727) 12/15/2010 Also verified as accepted MCR No.4				Raja Ponniah
COMM	NOISE-4a	Project design will include noise mitigation measures to ensure that noise levels due to operation of the project alone will not exceed an hourly average of 54 dBA at or near LT-1 and 45 dBA at or near LT-2. No single piece of equipment shall be allowed to stand out as a source of noise that draws legitimate complaints.	Conduct a community noise survey at monitoring location LT-1, LT-2, or at a closer location acceptable to the CPM. This survey during the power plant's full-load operation shall also include measurement of one-third octave band sound pressure levels. Conduct a survey of noise at monitoring locations.	Within 30 days of project's first achieving a sustained output of 85% or greater of rated capacity	1/22/12	KIEWIT	7/8/13 CEC Submittal 167									Jake Albers Jason Lockwood
COMM	NOISE-4b	Submit a summary report of the survey to the CPM. Included in the survey report shall be a description of any additional mitigation measures necessary to achieve compliance with the above listed noise limit, and a schedule, subject to CPM approval, for implementing these measures. When these measures are in place, the project owner shall repeat the noise survey.	Submit required info to the CPM.	Within 15 days after completing noise survey	2/6/12	KIEWIT	7/8/13 CEC Submittal 167									Jake Albers Jason Lockwood
COMM	NOISE-5	Conduct an occupational noise survey to identify the noise hazardous areas in the facility when plant reaches 85% of rated capacity or greater	Prepare a report of the survey results and, if necessary, identify proposed mitigation measures that will be employed to comply with the applicable California and federal regulations.	Within 30 days after completing survey	2/21/12	KIEWIT	7/8/13 CEC Submittal 168									Doug King
PC-1	NOISE-6	Heavy equipment operation and noisy construction work relating to any project features, including pile driving, shall be restricted to the times delineated below, unless a waiver has been issued by the City of Antioch for alternative construction hour limitations (specified to be Monday through Saturday 6:00 a.m. to 7:00 p.m., and Sundays and holidays 9:00 a.m. to 5:00 p.m.); Mondays through Fridays: 7:00 a.m. to 6:00 p.m. Weekends and holidays: 9:00 a.m. to 5:00 p.m. Haul trucks and other engine-powered equipment shall be equipped with adequate mufflers. Haul trucks shall be operated in accordance with posted speed limits. Truck engine exhaust brake use shall be limited to emergencies.	Transmit to the CPM a statement, signed by the project owner's project manager, acknowledging that the above restriction will be observed throughout the construction of the project. If waiver is issued by the city it should be provided to the CPM for review and approval, also verified MCR No.4 MCR 17 MCR No. 21	Prior to Ground Disturbance	2/23/11	KIEWIT	11/19/2010 Submittal 016 5/5/2011 Submittal 047 5/19/2011 Submittal 049 12/29/2011 Submittal 083 April 27, 2012 Submittal 099	2010-1728	Approved 12/15/2010 4/22/2011 Submitted request for Waiver for well drilling and foundation pours. 5/19/2011 Submitted request for waiver for well drilling in July and Aug 12/29/2011 Approved 1/9/12. Submitted Addnt work hour request 4/27/2011. Approved 5/4/2012.		11/19/2010	Approved by CEC 12/15/10 by email from J Caswell (TN2010-1728) also 5/4/2012 with suspension Approval received per teleconference and verified by email 9.14.12 Also verified MCR No.4 MCR 17 MCR No. 21				Raja Ponniah
PC-1	PAL-1a	Provide the CPM with the resume and qualifications of the Paleontological Resource Specialist (PRS) for review and approval.	Submit the resume, references, and statement of availability to the CPM for review and approval.	At least 60 days prior to ground disturbance	1/24/11	GenOn	9/29/2010 Submittal 003 4/22/2011	2010-1260 10/5/2010	Approved 9/30/2010 New Monitor Annette Connelis 8/12/2011 submitted resume for Teresa Butler.		9/29/2010	11/29/2010 Email acceptance from CEC (On File) Also Verified as accepted per Section 4.0 in MCR No.2 with suspension Approval received per teleconference and verified by email 9.14.12				Stephen L. Erickson
PC-1	PAL-1b	Provide a letter with resumes naming anticipated monitors stating they meet minimum quals for monitoring.	Submit the requested info to the CPM .	At least 20 days prior to ground disturbance	3/5/11	GenOn	11/2/2010 Submittal 003 Submittal 010 Submittal 045 Submittal 056	2010-1565	Approved (No Date Given)		11/2/2010	11/29/2010 email acceptance from CEC (On File) also per section 4.0 MCR No.5 on 2/4/2011 & 2/11/2011 with suspension Approval received per teleconference and verified by email 9.14.12				Stephen L. Erickson
PC-1	PAL-2	Provide to the PRS and the CPM, for approval, maps and drawings showing the footprint of the power plant, construction laydown areas and all related facilities.	Provide maps and drawings to the PRS and CEC CPM	At least 30 days prior to ground disturbance	2/23/11	GenOn	12/2/2010 Submittal 21		Approved (No Date Given)		12/2/2010	2/4/2011 Verified as accepted MCR No.5 2/11/2011 with suspension Approval received per teleconference and verified by email 9.14.12				Stephen L. Erickson
PC-1	PAL-3	The PRS shall prepare and submit a Paleontological Resources Monitoring and Mitigation Plan (PRMMP) to identify general and specific measures to minimize potential impacts to significant paleontological resources.	Provide the PRMMP to the CEC CPM, including an affidavit of authorship by the PRS and acceptance of the PRMMP by the project owner evidenced by a signature.	At least 30 days prior to ground disturbance	2/23/11	PRS	11/4/2010 Submittal 011 Final 12/14/2010 Submittal 022	2010-1577	Ammended 7/26/10 Affidavit not required. Approved 12/21/2010		11/4/2010	CEC Acceptance by Email from J Caswell 11/29/2010 (On File) Additional Verifications of section 4.0 of MCR No. 3 with suspension Approval received per teleconference and verified by email 9.14.12				Stephen L. Erickson

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PC-1	PAL-4	If deemed needed, the PRS shall prepare and conduct weekly CPM-approved training for all project managers, construction supervisors and workers who are involved with or operate ground disturbing equipment or tools.	Provide the WEAP materials to the CPM including: brochure, reporting procedures, script, and final video.	At least 30 days prior to ground disturbance	2/23/11	PRS	10/26/2010 Submittal 008 10/26/2010 Submittal 023 10/26/2010 Submittal 029 1/26/2011	2010-1489	APPROVED ON GOING 11/29/2010 Submitted WEAP training video 1/26/2011 Unapproved with combination of all 3 logy sections into one booklet. 2/1/2011 Returned for uniformity reasons and a request to include section on local laws and ordinances. Approved 2/8/2011		10/26/2010	CEC Acceptance by Email from J Caswell 11/29/2010 (On File) Additional Verification per acceptances of section 4.0 of MCR No. 3 with suspension Approval received per teleconference and verified by email 9.14.12				Stephen L. Erickson
CONS	PAL-5	Ensure that the PRS and PRMs) monitor consistently with the PRMMP, all construction-related grading, excavation, trenching, and auguring in areas where potentially fossil-bearing materials have been identified.	Paleo monitors shall provide monthly summaries for inclusion in MCR.	Monthly	Include in MCR	PRS	8/9/12 Submittal 117		Letter Submitted 8/15/2012 requesting closure to monitoring due to age of fossils already recovered.		Monthly 10th Business day of each month	Currently no noted issues with any Monthly report				Dawn Owens
CONS	PAL-6	Through the designated PRS, ensure that all components of the PRMMP are adequately performed (see list of activities included in Condition).	Maintain in compliance file copies of signed contracts or agreements with the designated PRS and other qualified research specialists. Maintain these files for a period of three years after completion and approval of the CPM-approved PRR required by PAL-07.	As required	As required	PRS						Verified as accepted per Email notice from CEC MS, C Stora on 9/4/2012				Stephen L. Erickson
CONS	PAL-7	Ensure preparation of a Paleontological Resources Report (PRR) by the designated PRS to be completed following completion of ground disturbing activities.	Submit the PRR under confidential cover to the CPM.	Within 90 days after completion of ground disturbing activities	3/28/12	PRS			Submittal # 174		9/4/2013					Stephen L. Erickson
PC-2	SOIO-1	Pay the one-time statutory school development fee to the Antioch Unified School District as required by Education Code Section 17620	Provide the CPM proof of payment of the fee	At least 30 days prior to start of project construction	4/1/13	GenOn	2/4/2011 Submittal 034 2/2/2012 Submittal 087		Approved (No Paperwork Given) Submitted additional payment 2/2/2012	2/4/2011	2/4/2011	2/9/2011 Verified MCR No.6 3/14/2011				Dawn Owens
PC-1	Soil & Water-1a	Coordinate with the Water Board as necessary develop and implement a construction SWPPP	Submit to the CPM copies of all correspondence with the Water Control Board regarding the SWPPP within 10 days of receipt.	No later than 30 days prior to start of site mobilization	1/16/11	KIEWIT	1/5/2011 Submittal 025		Approved (No Date Given)		1/5/2011	2/4/2011 Verified MCR No.6 3/14/2011			RWQCB	Raja Ponniah
PC-1	Soil & Water-1b	Develop and implement a Storm Water Pollution Prevention Plan (construction SWPPP) for the LEC site, laydown areas, and on-site linear facilities. Submit to the CPM a copy of the construction SWPPP. Info should include a copy of the Notice of Intent for Compliance with the General NPDES permit	Submit to the CPM a copy of the NOTICE OF INTENT FOR COMPLIANCE with the General NPDES permit.	No later than 60 days prior to site mobilization	12/17/10	KIEWIT	1/5/11		Approved (No Date Given)	12/1/2010	1/5/2011	2/4/2011 Verified MCR No.6 3/14/2011				Raja Ponniah
PC-1	Soil & Water-2a	Obtain CPM approval for a site- specific Drainage, Erosion, and Sedimentation Control Plan (DESCP)	Submit a copy of the DESCOP to the CPM along with evidence from Contra Costa County that the DESCOP meets the requirements of Contra Costa Clean Water Program.	No later than 30 days prior to the start of site mobilization	1/16/11	KIEWIT	1/24/2011 Submittal 028	2011-0158	Approved (No Paperwork Given)	12/1/2010	1/24/2011	2/4/2011 Verified MCR No.6 3/14/2011			Contra Costa County	Raja Ponniah
PC-2	Soil & Water-2b	Coordinate with Contra Costa County to ensure that the DESCOP meets local requirements for a post-construction Storm Water Control Plan.	The DESCOP shall meet local requirements for a post-construction Storm Water Control Plan.	No later than 30 days prior to the start of construction.	3/20/11	KIEWIT	2/19/2011 Submittal 37		Approved 3/28/2011	11/29/2010	2/19/2011	3/28/2011 Verified MCR No.7 4/16/2011			Contra Costa County	Raja Ponniah
CONS	Soil & Water-2c	Monitor and Maintain effective drainage, erosion and sediment control measures during construction	Provide Analysis of effectiveness of drainage, erosion and sediment control measures and the results of monitoring and maintain activities in MCR	Monthly	Include in MCR	KIEWIT					Monthly 10th Business day of each month	Currently no noted issues with any Monthly report				Raja Ponniah
CONS	Soil & Water-3	If groundwater is encountered during construction or operation: comply with the requirements of the CVRWQCB Order NO. R5-2008-0081 for Waste Discharge Requirements for Dewatering and Other Low threat Discharges to Surface Waters.	Submit a complete Notice of Intent (NOI) to obtain coverage under CVRWQCB Order No. R5-2008-0081. Submit copies to the CPM of all correspondence between the project owner and the CVRWQCB regarding Order No. R5-2008-0081 within 10 days of its receipt or submittal.	Prior to any groundwater discharge or dewatering activities	As required	KIEWIT	11/9/2011 Submittal 074 11/23/2011 Submittal 077 1/5/2012 Submittal 084 5/10/12 Submittal 101		Provided NOI from RWB 11/9/2011. Addnl 11/23/2011		11/9/11, 11/23/11, 5/10/12	Verified as accepted per Email notice from CEC MS, C Stora on 9/4/2012			RWQCB	Raja Ponniah
CONS	Soil & Water-4	Comply with the requirements of the General National Pollutant Discharge Elimination System (NPDES) Permit for Discharges of Storm Water Associated with Industrial Activity (WQO 97-03-DWQ).	Develop and submit an Industrial SWPPP for the operation of the MLGS. Submit copies to the CPM of all correspondence between the project owner and the Central Valley Regional Water Quality Control Board regarding the industrial SWPPP within 10 days of its receipt or submittal.	Prior to commercial ops	12/23/11	GenOn	4/25/2013 Submittal 161								RWQCB	Diane Griffin Raja Ponniah
CONS	Soil & Water-5a	Provide 2 copies of the executed Waste Water Discharge Agreement with DDSD for the long term discharge of all wastewater streams for the MLGS to DDSD wastewater treatment facilities. Shall specify Peak discharge rate of 118 gpm. Do not connect to City of Antioch's wastewater pipeline along Wibur Ave w/o the final agreement in place and submitted to CPM	Submit 2 copies of the of the executed agreement for the discharge of wastewater form the MLGS	No later than 60 days prior to connection the DDSD wastewater pipeline	9/1/11	GenOn	3/12/2012 Submittal 094 3/20/2013 Submittal 154		Approved by CEC per email response	3/12/2012	3/12/2012	Verified as accepted per Email notice from CEC MS, C Stora on 9/4/2012				Dawn Owens

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OPS	Soil & Water 3b	During operation an monitoring reports provided to DDSD shall also be provided to the CPM.	Submit any wastewater quality monitoring reports required by DDSD, and a full explanation of corrective actions taken if a violation occurs to the CPM in the annual compliance report.	Annually	Include in the ACR	NRG			Reports submitted annually.							David Frandsen
OPS	Soil & Water 3c	Notify the CPM of any violations of discharge limits	Submit any notice of violations from DDSD to the CPM and fully explain the corrective actions taken in the annual compliance report	Within 10 days of receipt of violation	As required	NRG										David Frandsen
CONS	Soil & Water 6a	Install and Maintain metering devices as part of the water supply and distribution system to monitor and record in gallons per the volume of ground water and potable water supplied to the MLGS.	Submit Evidence to the CPM that metering devices have been installed and are operational on groundwater wells, potable water and recycled water (if applicable) pipelines serving the project.	At least 60 days prior to use of any water source for operation	9/30/11	KIEWIT	9/21/12 Submittal 130					Submittal evidentiary only no approval required				Raja Ponniah
OPS	Soil & Water 3b	Monitor and track the water use by operating the water metering devices for the life of the project. Differentiate between groundwater, potable water, and recycled water. Water use should not exceed 50 AFY from any source	Provide (1)a report on the service testing and calibration of the metering devices, (2)a water use summary report which is based on and distinguished between groundwater, potable water and recycled water, (3) Copies of meter records for the City of Antioch documented the volume of potable water supplied over the previous year as specified (4) Brackish groundwater sample laboratory test results (in years where ground water is used) (5) data or info describing the water conservation program w/ estimates of the annual water saved in the ACR	Annually	Include in the ACR	NRG			Reports submitted annually.							Dan Leach
CONS	Soil & Water 6c	Provide evidence to the CPM that the City has agreed to supply emergency backup water to the project in sufficient quantities to meet the projects needs at a flow rate comparable with the flow rate provide by one on site well	Submit to the CPM evidence that city water meters are installed and are operational. And proof that the City can deliver alternative water the site in the event of an emergency interruption at a flow rate of 420gpm	No later than 30 days prior to installing a connection to the City of Antioch potable water main	9/1/11	GenOn	9/29/2011 Submittal 067 Additional submittal 10/11/2011 Submittal 069		Provided copies of correspondence regarding supply of city water.			Verified as accepted per Email notice from CEC MS, C Stora on 9/4/2012				Dawn Owens
CONS	Soil & Water 6d	If Primary Alternative water source is approved by CPM to be City of Antioch Fresh Water Supply: (1)Pay fee equal to no more than \$1,000/ AF of City of Antioch Water consumed annually. (2) A payment of \$15,000 shall be made to the city to offset water used during construction.	Provide evidence that brackish groundwater is environmentally undesirable or economical unsound. Provide proof that the initial water conservation fee of \$15,000 was paid to the city of Antioch.	Prior to site operations	4/1/13	GenOn	9/29/2011 Submittal 067		Provided evidence of \$15,000 payment to the city.	9/18/2012	Sent by Email to CEC PM C Stora 9/18	9/19/12 Email confirmation to Dawn				Dawn Owens
OPS	Soil & Water 6e	If Primary Alternative water source (City of Antioch Water) is being used in operation, Pay an annual fee of \$1,000/ AF of City of Antioch Water consumed annually	Calculate the annual use payment at the rate of \$1,000/ AF of fresh water reported annual in in the ACR. Pay the amount confirmed by the CPM	No later than 60 days following the approval of the ACR	As required	NRG			Paid annually in May.							Dan Leach
CONS	STRUC-1a	Prior to the start of any increment of construction, submit to the CBO for design review and approval the proposed lateral force procedures for project structures and equipment identified in the CBO-approved master drawing and master specification list. Must include items within this condition	Construction of any structure or component shall not begin until the CBO has approved the lateral force procedures to be employed in designing that structure or component. Submit to the CBO the final design plans, specs and calcs with a copy of the transmittal letter to the CPM.	At least 60 days prior to start of any structure or component listed in Facility Design Table 2 of GEN-2	As required	KIEWIT						Verified as accepted per Email notice from CEC MS, C Stora on 9/4/2012				Reid Strain
CONS	STRUC-1b	Submit to the CPM a copy of a statement from the CBO that the proposed structural plans, specifications, and calculations have been approved and comply with the requirements set forth in applicable engineering LORS.	Submit required info to the CPM.	Monthly	Include in MCR	KIEWIT				Monthly 10th Business day of each month		Currently No noted issues with any Monthly report				Reid Strain
CONS	STRUC-2	Submit to the CBO the required number of sets of the documents related to work that has undergone CBO design review and approval related to concrete cylinder strength tests reports and pour sign-off sheets, bolt torque and field weld inspection reports, and other reports covering structural activities requiring special inspections in accordance with CBC.	If discrepancies are found, within 5 days the Project Owner shall prepare and submit an NCR to the CBO with a copy of the transmittal letter to the CPM. Within 5 days of resolution, the Project Owner shall submit a copy of the correction action to the CBO and CPM. The CBO's approval or disapproval shall be submitted to the CPM within 15 delays.	As required	As required	KIEWIT						Verified by CBO approvals and documented in Monthly reports section 2.26				Dennis Chambers
CONS	STRUC-3	Submit to the CBO design changes to the final plans required by the CBC, including the revised drawings, specifications, calculations, and a complete description of, and supporting rationale for, the proposed changes, and shall give to the CBO prior notice of the intended filing.	Notify the CBO of the intended filing of design changes, and notify the CPM in the MCR of the CBO's approval of the revised plans.	Monthly	Include in MCR	KIEWIT			No impending changes	Monthly 10th Business day of each month		Currently No noted issues with any Monthly report				Sarah Copeland
CONS	STRUC-4	Tanks and vessels containing quantities of toxic or hazardous materials exceeding amounts specified in the 2007 CBC shall, at a minimum, be designed to comply with the requirements of that chapter.	Submit to the CBO for design review and approval the final plans, specs, and calcs, including a copy of the signed and stamped statement from the responsible engineer certifying compliance with LORS	At least 30 days prior to the start of installation of the tanks or vessels	As required	GenOn - Ammonia Tank KIEWIT - All Other						Verified by CBO approvals and documented in Monthly reports section 2.28				Jake Albers Dave Hammond
CONS	TLN-1	Construct the proposed transmission line according to the requirements of California Public Utility Commission's GO-95, GO-52, GO-131-D, Title 8, and Group 2, High Voltage Electrical Safety Orders, Sections 2700 through 2974 of the California Code of Regulations, and Pacific Gas and Electric's EMF-reduction guidelines.	Submit to the CPM a letter signed by a CA registered EE affirming that the line will be constructed according to the requirements set forth in the Condition.	At least 30 days prior to starting construction of proposed new lines	4/1/12	KIEWIT	4/13/12 Submittal 097			4/13/2012		Verified as accepted per Email notice from CEC MS, C Stora on 9/4/2012				Luke Goss
CONS	TLN-2	Every reasonable effort will be made to identify and correct, on a case-specific basis, any complaints of interference with radio or TV signals from operation of the proposed line and associated switchyard.	Submit to the CPM a letter signed by a CA registered EE affirming the project owners intention to comply with this requirement.	At least 30 days before starting operation of either line option	8/22/12	KIEWIT	8/21/2012 Submittal 120			8/21/2012		Verified as accepted per Email notice from CEC MS, C Stora on 9/4/2012				Luke Goss
CONS	TLN-3	Use a qualified individual to measure the strengths of the electric and magnetic fields from the line at the points of maximum intensity along the proposed route. The measurements shall be made before and after energization according to ANSI/IEEE standard procedures. These measurements shall be completed not later than six months after the start of operations.	File copies of the pre-and post-energization measurements with the CPM.	Within 60 days after completion of measurements	11/12/12	KIEWIT	7/12/13 CEC Submittal 169									Doug King
CONS	TLN-4	Ensure that the rights-of-way of the proposed transmission line are kept free of combustible material, as required under the provisions of Section 4292 of the Public Resources Code and Section 1250 of Title 14 of the California Code of Regulations.	Transmit to the CPM a letter affirming the intention to comply with this condition.	At least 30 days before the start of operations	8/24/2012 Submittal	GenOn	8/22/2012 Submittal 122			8/22/2012		Verified as accepted per Email notice from CEC MS, C Stora on 9/4/2012				Randy Dixon

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CONS	TLSN-5	Ensure that all permanent metallic objects within the right-of-way of the project-related lines are grounded according to industry standards regardless of ownership.	Transmit to the CPM a letter confirming compliance with this condition.	At least 30 days before lines are energized	8/22/12	KIEWIT	8/20/2012 Submittal 119				8/21/2012	Verified as accepted per Email notice from CEC MS, C Stora on 9/4/2012				Luke Goss
PC-1	TRANS-1	In coordination with Contra Costa County Public Works Department, develop and implement a construction traffic control plan to include the items specified within the condition	Provide CCCPW and the city of Antioch Engineering Department for review and comment the construction traffic control plan. Provide to the CPM the construction control plan and the CCPW and the City of Antioch Engineering Departments comments for review and approval.	At least 60 days prior to the start of site mobilization	12/17/10	KIEWIT	11/19/2010 Submittal 015 1/5/2011 Submittal 024 1/31/2011 Submittal 033	2010-1685-2011-0219	Returned for additional information 12/13/2010. Resubmitted 1/5/2011. Resubmitted additional information 1/31/2011. Resubmitted the plan in the CEC suggested format 2/1/2011	11/18/2010	11/18/2010	2/8/2011 Verified by Email from C Stora on 9/18/2012			Contra Costa County Public Works Department and City of Antioch Engineering Department	Raja Ponniah
PC-1	TRANS-2a	Prepare a mitigation plan for Wilbur Ave should it be damaged by project construction. Should ensure that if damaged to original condition. The plan include the condition specified items (Photographic/videtape evidence of pre construction condition is req)	Submit a mitigation plan focused on restoring the local identified roads to its pre-project condition to the City of Antioch for review and comment and to the CPM for Review and approval.	At least 90 days prior to the start of site mobilization	11/17/10	KIEWIT	11/18/2010 Submittal 015	2010-1686	Approved 2/4/2011 No Paperwork Given		11/18/2010	2/4/2011 Verified MCR No.6 3/14/2011			City of Antioch Engineering Department	Raja Ponniah
CONS	TRANS-2b	Restore any area of Wilbur Ave that were damaged during construction to their original condition.	Provide photo/ videotape documentation to the CCCPW and the City of Antioch Engineering Department and the CPM that any damaged areas have been restored.	Within 90 days following the completion of construction	3/28/12	KIEWIT	3/15/2013 Submittal 176								Contra Costa County Public Works Department and City of Antioch Engineering Department	Raja Ponniah
CONS	TSE-1	Provide the CPM and CBO with a schedule of transmission facility design submittals, a master drawing list, a master specifications list, and a major equipment and structure list as indicated in the condition.	Provide info to CBO and CPM.	At least 60 days prior to start of transmission line construction.	3/2/12	KIEWIT	10/21/2011 Submittal 082					Submittal requirement only no approvals requested, updates for schedule are provided in Monthly reports				Luke Goss
PC-2	TSE-2	Assign an electrical engineer and at least one of each of the following: a civil engineer, geotechnical engineer or a civil engineer experienced and knowledgeable in the practice of soils engineering, a design engineer who is either a structural engineer or a civil engineer and fully competent and proficient in the design of power plant structures and equipment supports, or a mechanical engineer.	Prior to the start of rough grading, the project owner shall submit to the CBO for review and approval, the names, qualifications, and registration numbers of all the responsible engineers assigned to the project. The project owner shall notify the CPM of the CBO's approvals of the engineers within five days of the approval. If the designated responsible engineer is subsequently reassigned or replaced, the project owner has five days in which to submit the name, qualifications, and registration number of the newly assigned engineer to the CBO for review and approval. The project owner shall notify the CPM of the CBO's approval of the new engineer within five days of the approval	Prior to start of rough grading	2/23/11	KIEWIT	To CBO 1-27-11 To CEC 2/16/2011 Submittal 036 8/15/2011 Submittal 057 9/29/2011 Submittal 066	Verbally approved (C.H.)	CBO Approved 2-16-11 CEC Approved 3/16/2011 Submitted Reid Strain for Design Engineer and Richard Jacober for Electrical Engineer 8/16/2011 9/29/2011 submitted Daren Phelps as EE. CEC Approved 10/5/11.	11/30/10	1/27/2011	3/16/11		2/16/2011	Jake Albers	
CONS	TSE-3	If any discrepancy in design and/or construction is discovered in any engineering work that has undergone CBO design review and approval, the project owner shall document the discrepancy and recommend corrective action. The discrepancy documentation shall become a controlled document and shall be submitted to the CBO for review and approval and refer to this condition of certification.	Submit a copy of the CBO's approval or disapproval of any corrective action taken to resolve a discrepancy to the CPM.	Within 15 days of receipt	As required	KIEWIT	3/2/12 Submittal 093				3/2/2012	Verified as accepted per Email notice from CEC MS, C Stora on 9/4/2012				Luke Goss
CONS	TSE-4	For the power plant switchyard, outlet line and termination, construction shall not begin until plans for that increment of construction have been approved by the CBO. These plans, together with design changes and design change notices, shall remain on the site for one year after completion of construction.	Submit to the CBO for review and approval the final design plans, specifications and calculations	Before the start of each increment of construction	As required	K&G	9/20/12 Submittal 127			9/20/2012	9/20/2002	Verified as accepted per Email notice from CEC MS, C Stora on 9/4/2012				Luke Goss
CONS	TSE-5a	Design, construct, and operate the proposed transmission facilities in conformance with all applicable LORS, and the requirements listed in the condition.	Submit to the CBO: a) Design drawings, specifications, and calculations conforming with CPUC General Order 95 or National Electric Safety Code (NESC); Title 8 of the California Code and Regulations (Title 8); Articles 35, 36 and 37 of the High Voltage Electric Safety Orders, CA ISO standards, National Electric Code (NEC) and related industry standards, for the poles/towers, foundations, anchor bolts, conductors, grounding systems, and major switchyard equipment;	Prior to start of construction of the transmission facilities	5/1/12	KIEWIT	3/12/12				3/12/2012	Verified as accepted per Email notice from CEC MS, C Stora on 9/4/2012				Luke Goss
CONS	TSE-5b	Provide electrical one-line diagrams signed and sealed by the registered professional electrical engineer in charge, a route map, and an engineering description of the equipment and configurations covered by requirements TSE-5 a) through j).	b) For each element of the transmission facilities identified above, the submittal package to the CBO shall contain the design criteria, a discussion of the calculation method(s), a sample calculation based on "worst case conditions" and a statement signed and sealed by the registered engineer in responsible charge, or other acceptable alternative verification, that the transmission element(s) will conform with CPUC General Order 95 or National Electric Safety Code (NESC); Title 8 of the California Code and Regulations (Title 8); Articles 35, 36 and 37 of the High Voltage Electric Safety Orders, California ISO standards, National Electric Code (NEC), and related industry standards;	Prior to start of construction of the transmission facilities	5/1/12	KIEWIT	9/20/12 Submittal 128			3/12/2012 9/20/2012	3/12/2012 9/20/2012	Verified as accepted per Email notice from CEC MS, C Stora on 9/4/2012				Luke Goss
CONS	TSE-5c	Provide the final Detailed Facility Study (DFS) including a description of facility upgrades, operational mitigation measures, and/or special protection system sequencing and timing if applicable.	c) Electrical one-line diagrams signed and sealed by the registered professional electrical engineer in charge, a route map, and an engineering description of the equipment and configurations covered by requirements TSE-5 a) through i);	Prior to start of construction of the transmission facilities	5/1/12	KIEWIT	3/12/12				3/12/2012	Verified by email from CEC C Stora on 9/4/12				Luke Goss
CONS	TSE-5d	Provide the executed project owner and California ISO facility interconnection agreement.	d) The Special Protection System (SPS) sequencing and timing if applicable shall be provided concurrently to the CPM.	Prior to start of construction of the transmission facilities	5/1/12	GerOn	10/1/13		See email from CEC C Stora							Ashis Sengupta
CONS	TSE-5e	Provide evidence showing coordination with the affected agencies and utilities including but not limited to Western Area Power Administration and Lodi Electric Utility.	e) A letter stating that the mitigation measures or projects selected by the transmission owners for each reliability criteria violation, for which the project is responsible, are acceptable.	Prior to start of construction of the transmission facilities	5/1/12	GerOn	10/1/13		See email from CEC C Stora							Ashis Sengupta

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CONS	TSE-5f	Inform the CPM and CBO of any impending changes which may not conform to the requirements of TSE-05 and request approval to implement such changes.	f) The final Phase II Interconnection Study, including a description of facility upgrades, operational mitigation measures, and/or special protection system sequencing and timing if applicable, and.	Prior to start of construction of the transmission facilities	5/1/12	GenOn	3/2/12			3/2/2012	3/2/2012	Verified as accepted per Email notice from CEC MS. C Stora on 9/4/2012				Chuck Hicklin
CONS	TSE-5g	Provide a copy of the executed LGIA signed by the California ISO and the Project Owner.	g) A copy of the executed LGIA signed by the California ISO and the project owner. Prior to the start of construction of or modification of transmission facilities, the project owner shall inform the CBO and the CPM of any anticipated changes to the design that are different from the design previously submitted and approved and shall submit a detailed description of the proposed change and complete engineering, environmental, and economic rationale for the change to the CPM and CBO for review and approval.	Prior to start of construction of the transmission facilities	5/1/12	GenOn	3/2/12			3/2/2012	3/2/2012	Verified as accepted per Email notice from CEC MS. C Stora on 9/4/2012				Chuck Hicklin
CONS	TSE-5h	Inform the CPM and CBO of any impending changes which may not conform to the requirements of TSE-05 and request approval to implement such changes.	Inform the CBO and CPM of any impending changes.	Prior to start of construction of the transmission facilities	As required	KIEWIT			No impending changes							Sarah Copeland
CONS	TSE-6	Provide notice to the Cal-ISO prior to synchronizing the facility with the California transmission system:	Provide notice to the Cal-ISO prior to synchronizing the facility with the California transmission system:	One week prior to initial synchronization w/ the grid	11/1/12	GenOn									Cal-ISO	Randy Willard
CONS	TSE-7	Inspect the transmission facilities during and after project construction, and for any subsequent CPM- and CBO-approved changes, to ensure conformance with CPUC General Order 95 or National Electric Safety Code (NESC); Title 8 of the California Code and Regulations (Title 8); Articles 35, 36 and 37 of the High Voltage Electric Safety Orders, California ISO standards, National Electric Code (NEC) and related industry standards.	Transmit to the CPM and CBO: "As built" engineering description(s) and one-line drawings of the electrical portion of the facilities signed and sealed by the registered electrical engineer in charge; a statement verifying conformity with the standards set forth in Condition; "as built" engineering description of the mechanical, structural, and civil portion of the transmission facilities signed and sealed by the registered engineer in charge or an acceptable alternative verification; and a summary of inspections of the completed transmission facilities, and identification of any nonconforming work and corrective actions taken, signed and sealed by the registered engineer in charge.	Within 60 days after first synchronization to the grid	1/20/13	KIEWIT			Submitted to Steve Erickson January 2013							Luke Goss / Raja Ponniah (inspection summary only)
CONS	VIS-1a	Develop a treatment plan for the surfaces of all project structures and buildings visible to the public as specified in the condition.	Submit the proposed treatment plan to the CPM for review and approval and simultaneously to the CCC or responsible jurisdiction for review and comment. Any modifications must be sent to the CPM for approval	At least 90 days prior to specifying the vendor the colors and finishes of the first structures or building that are surface treated during manufacturing	12/1/10	K&M	5/19/2011 Submittal 049 6/6/2011 Submittal 050		Submitted plan per Condition on 5/19/2011 Submitted Hard Copies to Dawn Owens for submission to the City and County on 5/19/2011. Based on comments from the CEC resubmitted on 6/6/2011. Verbal approval received on Vis-1 approval around 6/15/2011.					Contra Costa County	Jake Albers	
CONS	VIS-1b	Treat the surfaces of all project structures and buildings visible to the public as specified in the condition.	Notify the CPM that the surface treatment of all listed structures and buildings has been completed and is ready for inspection and submit electronic color photographs taken from the same KOPs.	Prior to start of commercial operation	12/23/11	KIEWIT	Email from Christine Stora of the CEC dated 3/15/13 conditionally accepting the surface treatments.									Raja Ponniah
OPS	VIS-1c	Ensure proper treatment maintenance for the life of the project.	Provide a status report regarding surface treatment maintenance in the ACR which specifies the items in the condition	Annually	Include in the ACR	NRG			Reports submitted annually.							Dan Leach
CONS	VIS-2a	Develop a landscaping plan which would Provide landscaping that reduces the visibility of the power plant structures and complies with local policies and ordinances	Submit landscaping plan to the CPM for review and approval and simultaneously to CCC for review and comment.	At least 90 days prior to installation	12/1/12	GenOn	2/25/13 Submittal 150								Contra Costa County	Stephen L. Erickson
CONS	VIS-2b	Provide landscaping that reduces the visibility of the power plant structures and complies with local policies and ordinances.	Simultaneously notify the CPM and CCC after the completion of the landscaping that the site is ready for inspection.	Within 7 days after completing landscaping	3/1/13	GenOn			3/12/2014: DJH contacting Zion to make repairs prior to scheduling an inspection.						Contra Costa County	Stephen L. Erickson
OPS	VIS-2c	Maintain landscaping, including any needed irrigation and annual or semi annual debris removal for the life of the project	Report landscaping maintenance activities, including replacement of dead or dying vegetation for the previous year of operation in the ACR	Annually	Include in the ACR	NRG			Reports submitted annually.							Dan Leach
CONS	VIS-3a	Design and install all permanent exterior lighting such that (a) lamps and reflectors are not visible from beyond the project site, including any off-site security buffer areas; (b) lighting does not cause excessive reflected glare; (c) direct lighting does not illuminate the nighttime sky; (d) illumination of the project and its immediate vicinity is minimized, and (e) the plan complies with local policies and ordinances.	Contact the CPM to discuss the documentation required in the lighting mitigation plan. The project owner shall not order any exterior lighting until receiving CPM approval of the lighting mitigation plan.	At least 90 days prior to ordering any permanent exterior lighting	2/1/13	KIEWIT	3/26/2012 Submittal 096		The following participated on the call on 3/7/12: Scott Kennedy, Tharu Nadarajah, Greg Zullig, Kelly Zullig (all PKSI), David Frandsen (GenOn), David Flores and Christine Stora (CEC) Drawing documentation to follow.		3/7/2012	3/7/2012 Verified in MCR No. 21				Tharu Nadarajah
CONS	VIS-3b	Prepare a lighting mitigation plan that includes the specific info set forth in the condition.	Submit to the CPM for review and approval and simultaneously to the Contra Costa County for review and comment a lighting mitigation plan.	At least 60 days prior to ordering any permanent exterior lighting	3/1/13	KIEWIT	3/26/2012 Submittal 096 4/16/12 Submittal 098			4/16/2012	5/3/2012 Verified in MCR No. 21				Contra Costa County	Tharu Nadarajah
CONS	VIS-3c	Notify the CPM that the permanent exterior lighting has been completed and is ready for inspection.	Set up an inspection appointment.	Prior to start of commercial operation	12/29/11	KIEWIT	David Flores of the CEC performed the inspection with Raja on 4/2/13									Raja Ponniah

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CONS	WASTE-3d	Notify the CPM of any complaints re: lighting.	Submit a complaint resolution form to the CPM record each lighting complaint and document resolution of that complaint.	Within 48 hours after receiving a complaint.	As required	KIEWIT - During Construction			No Complaints							Raja Ponniah Randy Dixon
PC-1	WASTE-1a	Comply with BAAQMD Regulation 11, rule 2 req for management and disposal of asbestos contain material removed during project demolition.	Provide to the CPM copies of the BAAQMD notification materials, acknowledgment letter and job number assigned by the BAAQMD for review and approval	No less than 10 day prior to commencement of project related demolition	1/7/11	K&G	1/24/2011 Submittal 028		Approved 1/31/2011 No Paperwork	1/24/2011	1/31/2011 Verified MCR No. 5 2/11/2011				BAAQMD	Raja Ponniah
CONS	WASTE-1b	Manage asbestos waste during demolition to comply with BAAQMD regulation 11, rule 2	Provide summary report(s) to the CPM on asbestos waste management via MCR to include items specified w/in the condition	Monthly	Include in MCR	K&G				Monthly 10th Business day of each month	Currently No noted issues with any Monthly report				BAAQMD	Raja Ponniah
PC-1	WASTE-2	Complete a lead-based paint survey of all structures to be demolished and ensure that project related demolition debris contain lead based paint is properly managed and disposed of in accordance with all applicable LORS	Verification: At least 30 days prior to the start of project-related demolition, the project owner shall submit to the CPM for review and approval a copy of the lead-based paint survey conducted for the project site. The project manager shall also provide to the CPM a description of the procedures to be employed during demolition to ensure that lead-based paint debris and wastes are managed in accordance with all applicable LORS.	At least 30 days prior to the start of project-related demolition	1/16/11	GenOn	1/5/2011 Submittal 025	2011-0137	Approved 1/31/2011 No Paperwork	1/5/2011	1/31/2011 Verified in MCR No. 21					Kirk Emmons
PC-1	WASTE-3	Provide the resume of a Registered PE or Geologist, who shall be available for consultation during site characterization (if needed), excavation and grading activities.	Submit resume to CPM for approval. Provide to the CPM a copy of the contract with the approved professional Engineer/Geologist prior to start of project related demolition	At least 30 days prior to site mobilization	1/16/11	KIEWIT	11/24/2010 Submittal 017	2010-1730	Approved 1/18/2011	12/1/2010	11/24/2010	1/18/2011 Verified in MCR No. 21				Raja Ponniah
CONS	WASTE-4	If potentially contaminated soil is identified during site characterization, excavation, or grading at either the proposed site or linear facilities, as evidenced by discoloration, odor, detection by handheld instruments, or other signs, the Professional Engineer or Professional Geologist shall inspect the site, determine the need for sampling to confirm the nature and extent of contamination, and provide a written report to the project owner, representatives of DTSC, and the CPM stating the recommended course of action.	Submit any final reports filed by the Professional Engineer or Professional Geologist to the CPM. Project owner must notify the CPM within 24 hours of any orders issued to halt construction.	Within 5 days of their receipt	As required	KIEWIT	4/15/2011 Submittal 046 4/26/2011 10/14/2011 11/23/2011 Submittal 078 12/14/2011 Submittal 081 4/27/12 Submittal 100 5/18/2012 Submittal 104 5/23/12 Submittal 106 5/25/12 Submittal 107 6/05/2012		Oily dirt - East side Oily dirt- Middle of Power Block, 11/23/2011 addn oil on East Side. Dec. 14 DTSC correspondence	4/15/11, 4/26/11, 10/14/11, 11/23/11, 12/14/11, 5/1/12, 5/18/12, 6/5/2012	4/15/11, 4/26/11, 10/14/11, 11/23/11, 12/14/11, 5/1/12, 5/18/12, 6/5/2012	Verified as accepted per Email notice from CEC MS. C Stora on 9/4/2012				Gene Amrhein
PC-1	WASTE-5a	Comply with all applicable provisions of the city of Antioch's Construction and Demolition Debris Recycling Ordinance No. 1018-C-S, including preparation of a Construction and Demolition Debris Recycling Ordinance Waste Management Plan for all wastes generated during project demolition and construction activities.	At least 45 days prior to the start of project-related demolition, the project owner shall submit to the city a draft Construction and Demolition Debris Recycling Ordinance Waste Management Plan for review and comment. Submit to the CPM for review and approval the draft Waste Management Plan and any comments on the plan provided by the city.	Not less than 15 days prior to the start of project-related demolition	4/16/13	KIEWIT	12/02/2010 Submittal 013 to CEC 12/03/2010 to CEC Resubmit to CEC 12/21/2010 Submittal 19 Submittal 023	2010-1784 2010-1927	Approved 1/31/2011 No Paperwork	11/18/2010	12/2/2010	1/31/2011 Verified MCR No.5 2/11/2011			City of Antioch Engineering Department	Raja Ponniah
CONS	WASTE-5b	Require all project contractors and subcontractors to adhere to the city's waste diversion requirements and provide to the project owner adequate documentation of the types and volumes of wastes generated, how the wastes were managed, and volumes of wastes diverted	Submit documentation to the city of Antioch, with copies to the CPM, demonstrating compliance with th diversion program requirements. The required documentation shall include a final completed Waste Management Plan (as set forth by the city ordinance) and all necessary receipts or records of measurement from entities receiving project wastes.	Not later than 30 days after completion of project construction	1/28/12	KIEWIT			Submitted # 171		8/21/2013				City of Antioch Engineering Department	Raja Ponniah
CONS	WASTE-5c	Comply with all applicable provisions of the city of Antioch's Construction and Demolition Debris Recycling Ordinance No. 1018-C-S	Provide documentation to the CPM that the project has satisfactorily complied with the city of Antioch Ordinance No. 1018-C-S	Prior to start of project Operation	12/23/11	KIEWIT	Submittal 186 sent to CEC on 6/26/2013		Submitted # 171		8/21/2013					Raja Ponniah
PC-1	WASTE-6a	Obtain a hazardous waste generator identification number from the United States Environmental Protection Agency prior to generating any hazardous waste during construction.	Keep a copy of the identification number on file at the project site and provide the number to the CPM.	Prior to start of construction	5/1/13	K&M	11/16/2010 Submittal 013 Submittal 054	2010-1665	Approved 7/22/2011	11/16/2010		CEC Acceptance 11/18/2010 by J Caswell Re- Verified By Email from C Stora on 9/18/12	Approved			Raja Ponniah
CONS	WASTE-6b	Obtain a hazardous waste generator identification number from the United States Environmental Protection Agency prior to generating any hazardous waste during operations.	Keep a copy of the identification number on file at the project site and provide the number to the CPM.	At least 30 days prior to commercial operation.	1/22/12	NRG	11/16/10		Approved 7/22/2011							Stephen L. Erickson Diane Griffin
COMM	WASTE-7a	Prepare an Operation Waste Management Plan for all wastes generated during operation of the facility	Submit the plan to the CPM for review and approval. The plan shall contain, at a minimum the items in the condition, submit any required revisions to the CPM within 20 days of notification from the CPM that revisions are necessary.	No less than 30 days prior to the start of project operation.	11/23/11	GenOn	Submittal 152 sent to the CEC on 3/2/13			3/2/2013						Diane Griffin
OPS	WASTE-7b	Update the Operation Waste Management Plan as necessary to address current waste generation and management practices.	Document in each ACR the actual volume of wastes generated and the waste management methods used during the year, provide a comparison of the actual waste generation and management methods used to those proposed in the original Operation Waste Management Plan	Annually	Includes in the ACR	NRG			Reports submitted annually.							David Frandsen
OPS	WASTE-8	Ensure that all spills or releases of hazardous substances, hazardous materials, or hazardous wastes are documented and cleaned up and that wastes generated from the release/spill are properly managed and disposed of, in accordance with all applicable federal, state, and local requirements. Document management of all unauthorized releases and spills of hazardous substances, hazardous materials, or hazardous wastes that occur on the project property or related linear facilities as specified in the condition	Provided to the CPM unauthorized release/spill documentation	Within 30 days of the date the release was discovered.	As required	NRG										David Frandsen

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OPS	WASTE-9	Notify the CPM of any impending waste management-related enforcement action by any local, state, or federal authority taken or proposed to be taken against the project itself, or against any waste hauler or disposal facility or treatment operator with which the owner contracts that may be related to management of project wastes	Notify the CPM in writing and provide a description and timeline for steps to be taken to address the action.	Within 10 days of becoming aware of an impending enforcement action	As required	NRG										David Frandsen
PC-1	WASTE-10	Ensure that the Marsh Landing Generating Station site is properly characterized so as to be able to identify hazardous wastes present at the project site. The project owner shall work closely with PG&E and ensure that PG&E follows any and all directives issued by the California EPA, Department of Toxic Substances Control (DTSC) to characterize, assess, and remediate the project site. No soil excavation or grading shall commence until the CPM gives approval	Provide the CPM for review and approval all project-related plans, results, and assessments provided by PG&E to DTSC and all obtainable project-related written correspondence between DTSC and PG&E	At least thirty (30) days prior to the start of any soil excavation or grading	2/23/11	GenOn	11/29/2010 Submittal 018 Submittal 024 Submittal 038 6/28/2011 Submittal 052 Submittal 053 Submittal 054	2010-1738 returned 12/3/2010 2011-0144	Pending DTSC approval of plan letter. Additional correspondence provided 1/5/2011 (Not plan letter.) Approved 2/7/2010 Adtnl sent 6/28/2011 Approved Corrective Measures Completion Report and Final Revision 7/27/2011		11/29/2010	2/7/2011 Verified MCR No.6 3/14/2011				Stephen L. Erickson
PC-2	WORKER SAFETY-1	Submit a copy of the Project Construction Safety and Health Program containing the following construction plans: PPE, Exposure Monitoring, IIPP, EAP, and FPP; provide a copy of a letter to the CPM from the CCC Fire Protection District stating the fire department's comments on the Construction Fire Prevention Plan and Emergency Action Plan.	The Safety Program, PPE, IIPP, and Exposure Monitoring Program shall be submitted to the CEC CPM for review and approval, the EAP and FPP shall be submitted to the CCC Fire Protection District for review and comment prior to submittal to the CPM for approval.	At least 30 days prior to start of construction	4/1/13	KIEWIT	1/11/2011 Submittal 026	2011-0111	Approved (No Paperwork Given)	11/19/2010	1/11/2011	2/7/2011 Verified MCR No.6 3/14/2011			Contra Costa County Fire Protection District	Raja Ponniah
COMM	WORKER SAFETY-2	Prepare and submit an OSM Safety & Health Plan containing: an IIPP, EAP, HMP, FPP, and PPE.	The Operations IIPP, EAP, PPE shall be submitted to the CEC CPM for review and comment; the EAP and FPP shall also be submitted to the CCC Fire Protection District for review and comment. Provide a copy of a letter to the CPM from the CCC Fire Protection District stating the fire department's comments on the Operations Fire Prevention Plan and Emergency Action Plan.	At least 30 days prior to first fire or commissioning	9/7/12	GenOn	10/9/12 Submittal 132 10/10/12 Submittal 133								Contra Costa County Fire Protection District	Margie Hansen Diane Griffin
PC-1	WORKER SAFETY-3a	Provide a site Construction Safety Supervisor (CSS) who, by way of training and/or experience, is knowledgeable of power plant construction activities and relevant laws, ordinances, regulations, and standards; is capable of identifying workplace hazards relating to the construction activities; and has authority to take appropriate action to assure compliance and mitigate hazard	Submit to the CPM the name and contact information for the Construction Safety Supervisor (CSS). The contact information of any replacement CSS shall be submitted to the CPM within one business day.	At least 30 days prior to the start of construction	3/20/11	KIEWIT	11/18/2010 Submittal 13 Kiewit Submittal 015		CEC approval per email from J Caswell on 11/16/10		11/18/2010	2/4/2011 Verified MCR No.6 3/14/2011				Raja Ponniah
CONS	WORKER SAFETY-3b	The CSS shall prepare and submit a monthly safety inspection that includes the info specified in the verification language of the condition.	Submit required info to the CPM.	Monthly	Include in MCR	KIEWIT			CEC approval per email from J Caswell on 11/16/10		Monthly 10th Business day of each month	Currently no noted issues with any Monthly report				Raja Ponniah
PC-2	WORKER SAFETY-4	Make payments to the CBO for the services of a Safety Monitor (in addition to the other services provided by the CBO). Safety monitor shall be responsible for verifying that the construction safety supervisor implements all required Cal/OSHA and CEC safety requirements.	Provide proof of agreement to fund the safety monitor services to the CPM for review and approval.	Prior to the start of construction	4/1/13	GenOn	1/31/2011 Submittal 031	2011-0220	Provided CBO letter confirming service were covered by GenOn 1/31/2011 Approved 4/2/2011	1/31/2011	1/21/2011	2/4/2011 Verified MCR No.6 3/14/2011				Chuck Hicklin
PC-1	WORKER SAFETY-5a	Ensure that a portable automatic external defibrillator (AED) is located on site during demolition & construction, and shall implement a program to ensure that workers are properly trained in its use and that the equipment is properly maintained and functioning at all times.	Submit to the CPM proof that a portable automatic external defibrillator (AED) exists on site and a copy of the training and maintenance program for review and approval.	At least 30 days prior to the start of construction	12/2/10	KIEWIT	11/24/2010 Submittal 013 and 017 Kiewit		CEC approval per email from J Caswell on 11/16/10	11/30/2010	11/24/2010	2/4/2011 Verified MCR No.6 3/14/2011				Raja Ponniah
CONS	WORKER SAFETY-8	The project owner shall submit the fire protection drawings and specifications for the Battery Energy Storage System (BESS) to the Contra Costa County Fire Protection District for review and comment, and to the Delegate Chief Building Official (DCBO) for plan check and inspection, and to the CPM for review and approval.	Verification: At least sixty (60) days prior to the start of construction of the BESS project, the project owner shall provide the complete set of BESS fire protection drawings and specifications to the Contra Costa County Fire Protection District for review and comment, and to the DCBO for plan check, approval and construction inspection, and to the CPM for review and approval.	Prior to the start of construction		KIEWIT									Amended February, 2016	