DOCKETED	
Docket Number:	08-AFC-03C
Project Title:	Marsh Landing Generating Station Compliance
TN #:	242515-10
Document Title:	2021 CEC Annual Compliance Report Part 8
Description:	Annual Compliance Operations Report
Filer:	David Frandsen
Organization:	NRG
Submitter Role:	Applicant
Submission Date:	3/31/2022 12:36:45 PM
Docketed Date:	4/1/2022

Industrial User Report Checklist And Certification Statement Form

Violations (if applicable)

☐ All wastewater discharge violations are reported during this period:

☐ The District was contacted within 24- hours of becoming aware of the violation.
Date: _____

☐ A follow-up resample was completed. Date: _____

☐ Corrective actions implemented to resolve violation (Please explain in writing)

☐ Significant Non-Compliance (SNC) Status Review
Please circle the review period *: **January – June** and **July -December**.

The SIU shall conduct a SNC review for the previous completed period * prior to the Self-monitoring Report (SMR) due date. Examples: A October SMR due date, the SNC review period is **January – June** or an April SMR due date, the SNC review period is **July – December.**

The SNC definition can be found in 40 CFR 403.8.

a) Chronic SNC= >66% of a regulated parameter in violation during six-month Period *.

b) Technical Review Criteria (TRC) SNC = >33% of a regulated pollutant during a six-month period* equals or exceeds the product of the daily maximum limit or the average limit multiplied by the applicable TRC factor (1.4 for BOD, TSS and Oil/Grease and 1.2 for all other regulated pollutants except pH).

☐ Is the SIU in SNC (as defined in a and/or b) for this period*? Yes ☐, No ☐; If yes, for what period? _____. Please report the SNC status to the District in the SMR and include corrective actions to resolve the SNC classification.

☐ Other violations – i.e., reporting, spills to sewer, or prohibited discharges

All violations will be discussed in the cover letter of the Self-Monitoring Report.

☐ Significant Changes

Anticipated changes that may alter the nature, quality, or volume of the wastewater discharged. Planned changes shall be submitted at least 90 days prior to implementation, and shall include a detailed description of this change.

Delta Diablo

Industrial User Report Checklist And Certification Statement Form

Certification Statement

Industrial User Facility Name	**Marsh Landing LLC**
Industrial User Facility Address	**3201-C Wilbur Avenue, Antioch, CA 94509**
Duly Authorized Representative Phone	**925-779-6685**
Indicate Period Covered by This Report	**October 1-December 31, 2021**

Certification Statement:

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations (40 CFR 403.6).

Duly Authorized Representative Signature	Joe Moura
Duly Authorized Representative Print	**Joe Moura**
Date	1/6/2022

Marsh Landing LLC
Marsh Landing Generating Station
3201-C Wilbur Avenue (shipping)
PO Box 1687 (mailing)
Antioch, CA 94509

January 6, 2022

Mr. Jason Yun
Delta Diablo
2500 Pittsburg-Antioch Highway
Antioch, CA 94509-1373

Subject: **2021 Fourth Quarterly (October 1-December 31) Self-Monitoring Report**
NRG Marsh Landing, LLC, Marsh Landing Generating Station,
Industrial Wastewater Discharge Permit 0311963-S

This letter documents the transmittal of the 2021 Fourth Quarterly Self-Monitoring Report (SMR).

Compliance Statement (choose one):

☑ There were no violations of waste discharge requirements during the reporting period.

☐ The following violation(s) of waste discharge requirements occurred during the reporting period, as described below:

Discussion:

This report is the SMR filed for the station and covers the period from October 1 through December 31, 2021. This report includes monthly flow data and quarterly analytical data required to be collected in 2021. Data are summarized in the attached tables.

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

If you have any questions, please contact Mr. David Frandsen, Environmental Specialist at david.frandsen@nrg.com or call 925.779.6695.

Sincerely,

Joe Moura
Plant Manager
NRG Marsh Landing, LLC
Marsh Landing Generating Station

Attachments

Table 1:	Quarterly Results for Combined Wastewater (FAC Combined)
Table 2:	October 2021 Monthly Flow Data
Table 3:	November 2021 Monthly Flow Data
Table 4:	December 2021 Monthly Flow Data

Attachment 1:	pH COC
Attachment 2:	Analytical Reports

Marsh Landing LLC
Marsh Landing Generating Station
Permit 0311963-S

Table 1 - Quarterly Analytical Results

Quarterly Results for Combined Wastewater (FAC Combined)

Industrial User Name	Marsh Landing LLC
Location	Marsh Landing Generating Station
Permit Number	0311963-S
SIC	4911
Address	3201-C Wilbur Avenue
	Antioch CA 94509

Sample Station Location	FAC Combined
Sample Station Description	Local Limits FAC Combined Wastewater
Reporting Period	October - December 2021
Report Type	Quarterly

Constituent	Sample Date	Permit Limit	Result	Units
Field pH	11/2/2021	6-10	7.5	S.U.
BOD	11/2/2021	-	ND	mg/L
COD	11/2/2021	-	13	mg/L
Arsenic	11/2/2021	0.15	0.00082	mg/L
Cadmium	11/2/2021	0.1	ND	mg/L
Chromium	11/2/2021	0.5	0.00098	mg/L
Copper	11/2/2021	0.5	0.0040	mg/L
Iron	11/2/2021	-	0.083 J	mg/L
Lead	11/2/2021	0.5	ND	mg/L
Mercury	11/2/2021	0.003	ND	mg/L
Molybdenum	11/2/2021	-	0.0016	mg/L
Nickel	11/2/2021	0.5	0.0022	mg/L
Selenium	11/2/2021	0.25	0.00019 J	mg/L
Silver	11/2/2021	0.2	ND	mg/L
Zinc	11/2/2021	1.0	0.110	mg/L
TDS	11/2/2021	-	294	mg/L
TSS	11/2/2021	-	3.00	mg/L

J = Result is less than the RL/ML but greater than the MDL. The reported concentration is an estima

mg/L = Milligrams per liter

ND = Not detected at or above the laboratory Method Detection Limit or Reporting Limit.

Table 2
October Flow Data

Industrial User Name	Marsh Landing LLC
Location	Marsh Landing Generating Station
Permit Number	0311963-S
SIC	4911
Address	3201-C Wilbur Avenue
	Antioch CA 94509
Sample Station Location	Outfall #4
Sample Station Description	Flow Monitoring Structure
Reporting Period	October, 2021
Report Type	Quarterly
Constituent	Flow
Sample Type	Continuously Measured (Rosemount 8705 Flanged Magnetic Flow Meter)
Sample Date	10/1/2021 - 10/31/2021
Permit Limits (s.u.)	NTE 30,240 gpd. NTE 21 gpm +10% (23.1 gpm) for 15 consecutive minutes or 30 minutes in a 24-hour period

Day	Total Flow (gpd)	Instantaneous Max (gpm)	Minutes per Day of Flow exceeding 55 GPM
1	0	0.00	
2	0	0.00	
3	0	0.00	
4	5,974	16.55	
5	27,442	49.29	
6	2,858	15.58	
7	566	17.28	
8	987	41.63	
9	13,591	48.08	
10	0	0.00	
11	6,827	47.31	
12	6,283	25.79	
13	10,281	48.72	
14	11,620	48.72	
15	12,088	16.80	
16	0	0.00	
17	451	17.47	
18	13,592	46.87	
19	1,639	36.47	
20	12,479	47.28	
21	9,228	47.32	
22	5,987	33.96	
23	0	0.00	
24	3,213	22.76	
25	27,935	35.69	
26	0	0.00	
27	19,788	48.16	
28	856	36.95	
29	0	0.00	
30	743	17.85	
31	0	0.00	

* - Permit Flows from in July 1 - Oct. 31 were increased with a Special Discharge Permit (#SDP-0701-1207) to 55 GPM with a maximum total daily flow of 79,200 gallons per day.

Total Monthly Flow (gal)	194,429	Did flow exceed limits?	NO
Daily Max Flow (gpd)	27,935	Flow above daily max (30,240 gpd)?	NO
Average Monthly Flow (gpd)	6,272		

Table 3
November Flow Data

Industrial User Name	Marsh Landing LLC
Location	Marsh Landing Generating Station
Permit Number	0311963-S
SIC	4911
Address	3201-C Wilbur Avenue
	Antioch CA 94509
Sample Station Location	Outfall #4
Sample Station Description	Flow Monitoring Structure
Reporting Period	November, 2021
Report Type	Quarterly
Constituent	Flow
Sample Type	Continuously Measured (Rosemount 8705 Flanged Magnetic Flow Meter)
Sample Date	11/1/2021 - 11/30/2021
Permit Limits (s.u.)	NTE 30,240 gpd. NTE 21 gpm +10% (23.1 gpm) for 15 consecutive minutes or 30 minutes in a 24-hour period

Day	Total Flow (gpd)	Instantaneous Max (gpm)	Minutes per Day of Flow exceeding 23.1 gpm
1	11,224	19.91	
2	28,074	21.22	
3*	12,861	19.69	
4	4,626	19.60	
5	1,899	19.59	
6	9,167	19.89	
7	0	0.00	
8	3,908	21.08	
9	5,216	19.61	
10	4,944	19.59	
11	6,630	19.58	
12	0	0.00	
13	0	0.00	
14	0	0.00	
15	6,965	20.95	
16	6,982	20.15	
17	6,775	19.64	
18	6,951	19.64	
19	5,389	19.64	
20	5,520	19.60	
21	0	0.00	
22	0	0.00	
23	476	17.08	
24	0	0.00	
25	0	0.00	
26	0	0.00	
27	0	0.00	
28	0	0.00	
29	453	15.33	
30	10,795	19.66	

* - Nov 3rd Includes 25 hours of flow data -- Time Change

Total Monthly Flow (gal)	138,855	Did flow exceed limits?	NO
Daily Max Flow (gpd)	28,074	Flow above daily max (30,240 gpd)?	NO
Average Monthly Flow (gpd)	4,629		

Table 4
December Flow Data

Industrial User Name	Marsh Landing LLC
Location	Marsh Landing Generating Station
Permit Number	0311963-S
SIC	4911
Address	3201-C Wilbur Avenue
	Antioch CA 94509
Sample Station Location	Outfall #4
Sample Station Description	Flow Monitoring Structure
Reporting Period	December, 2021
Report Type	Quarterly
Constituent	Flow
Sample Type	Continuously Measured (Rosemount 8705 Flanged Magnetic Flow Meter)
Sample Date	12/1/2021 - 12/31/2021
Permit Limits (s.u.)	NTE 30,240 gpd. NTE 21 gpm +10% (23.1 gpm) for 15 consecutive minutes or 30 minutes in a 24-hour period

Day	Total Flow (gpd)	Instantaneous Max (gpm)	Minutes per Day of Flow exceeding 23.1 gpm
1	28,080	19.61	
2	28,079	19.60	
3	22,713	19.87	
4	9,894	19.65	
5	0	0.00	
6	16,372	19.58	
7	0	0.00	
8	406	17.17	
9	10,490	20.64	
10	0	0.00	
11	0	0.00	
12	0	0.00	
13	4,485	19.70	
14	9,286	19.58	
15	5,257	19.60	
16	20,986	19.80	
17	0	0.00	
18	0	0.00	
19	0	0.00	
20	402	17.41	
21	0	0.00	
22	3,720	17.61	
23	16,535	20.53	
24	5,276	19.85	
25	4,019	19.58	
26	0	0.00	
27	5,043	19.78	
28	23,999	19.59	
29	2,223	19.57	
30	9,198	34.20	1
31	3,905	20.32	

Total Monthly Flow (gal)	230,368	Did flow exceed limits?	NO
Daily Max Flow (gpd)	28,080	Flow above daily max (30,240 gpd)?	NO
Average Monthly Flow (gpd)	7,431		

Marsh Landing Generating Station

Reported to:
Environmental Engineer

NPDES
Monthly Analytical Report

Sample Point	Sample Number	Sample Date (m/d/y)	Sample Collection Time	Date Analyzed (m/d/y)	pH Analysis Time	Sample Medium	Sample Type (Grab)	pH
							Method:	SM 4500-H+B
							Unit:	standard
							Reporting Limit:	0.18
							Method Detection Limit:	0.06
FAC **Combined Waste Water**	ML-21-112	11/2/21	1500	11/2/21	1500	Wastewater	Grab	7.5

SM = Standard Method; ppm = parts per million; mg/L = milligrams per liter; N/A = not applicable

Environmental Engineer David Frandsen

Signature: David Frandsen

Date: Nov 8, '21

Sampling Technologist: James E Robinson

Signature: James E Robinson

Date: 2-Nov-21

McCampbell Analytical, Inc.

"When Quality Counts"

Analytical Report

WorkOrder: 2111155

Report Created for: NRG Energy, LLC

3201 Wilbur Avenue
Antioch, CA 94509

Project Contact: David Frandsen
Project P.O.: 4501905749
Project: Marsh Landing DDSD Quarterly

Project Received: 11/02/2021

Analytical Report reviewed & approved for release on 11/09/2021 by:

Yen Cao
Project Manager

1534 Willow Pass Rd. Pittsburg, CA 94565 ♦ TEL: (877) 252-9262 ♦ FAX: (925) 252-9269 ♦ www.mccampbell.com
CA ELAP 1644 ♦ NELAP 4033 ORELAP

McCampbell Analytical, Inc.
"When Quality Counts"
1534 Willow Pass Road, Pittsburg, CA 94565-1701
Toll Free Telephone: (877) 252-9262 / Fax: (925) 252-9269
http://www.mccampbell.com / E-mail: main@mccampbell.com

Glossary of Terms & Qualifier Definitions

Client: NRG Energy, LLC
Project: Marsh Landing DDSD Quarterly
WorkOrder: 2111155

Glossary Abbreviation

%D	Serial Dilution Percent Difference
95% Interval	95% Confident Interval
CPT	Consumer Product Testing not NELAP Accredited
DF	Dilution Factor
DI WET	(DISTLC) Waste Extraction Test using DI water
DISS	Dissolved (direct analysis of 0.45 µm filtered and acidified water sample)
DLT	Dilution Test (Serial Dilution)
DUP	Duplicate
EDL	Estimated Detection Limit
ERS	External reference sample. Second source calibration verification.
ITEF	International Toxicity Equivalence Factor
LCS	Laboratory Control Sample
LQL	Lowest Quantitation Level
MB	Method Blank
MB % Rec	% Recovery of Surrogate in Method Blank, if applicable
MDL	Method Detection Limit
ML	Minimum Level of Quantitation
MS	Matrix Spike
MSD	Matrix Spike Duplicate
N/A	Not Applicable
ND	Not detected at or above the indicated MDL or RL
NR	Data Not Reported due to matrix interference or insufficient sample amount.
PDS	Post Digestion Spike
PDSD	Post Digestion Spike Duplicate
PF	Prep Factor
RD	Relative Difference
RL	Reporting Limit (The RL is the lowest calibration standard in a multipoint calibration.)
RPD	Relative Percent Deviation
RRT	Relative Retention Time
SPK Val	Spike Value
SPKRef Val	Spike Reference Value
SPLP	Synthetic Precipitation Leachate Procedure
ST	Sorbent Tube
TCLP	Toxicity Characteristic Leachate Procedure
TEQ	Toxicity Equivalents
TZA	TimeZone Net Adjustment for sample collected outside of MAI's UTC.
WET (STLC)	Waste Extraction Test (Soluble Threshold Limit Concentration)

McCampbell Analytical, Inc.
"When Quality Counts"
1534 Willow Pass Road, Pittsburg, CA 94565-1701
Toll Free Telephone: (877) 252-9262 / Fax: (925) 252-9269
http://www.mccampbell.com / E-mail: main@mccampbell.com

Glossary of Terms & Qualifier Definitions

Client: NRG Energy, LLC
Project: Marsh Landing DDSD Quarterly
WorkOrder: 2111155

Analytical Qualifiers

J	Result is less than the RL/ML but greater than the MDL. The reported concentration is an estimated value.

McCampbell Analytical, Inc.
"When Quality Counts"

1534 Willow Pass Road, Pittsburg, CA 94565-1701
Toll Free Telephone: (877) 252-9262 / Fax: (925) 252-9269
http://www.mccampbell.com / E-mail: main@mccampbell.com

Analytical Report

Client:	NRG Energy, LLC	**WorkOrder:**	2111155
Date Received:	11/02/2021 17:50	**Extraction Method:**	SM5210B
Date Prepared:	11/03/2021	**Analytical Method:**	SM5210 B
Project:	Marsh Landing DDSD Quarterly	**Unit:**	mg/L

Biochemical Oxygen Demand (BOD)

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
FAC Combined Wastewater	2111155-001B	Water	11/02/2021 15:00	WetChem	232923

Analytes	Result	MDL	RL	DF	Date Analyzed
BOD	ND	4.1	4.1	1.02	11/08/2021 15:45

Analyst(s): MGO

McCampbell Analytical, Inc.
"When Quality Counts"

1534 Willow Pass Road, Pittsburg, CA 94565-1701
Toll Free Telephone: (877) 252-9262 / Fax: (925) 252-9269
http://www.mccampbell.com / E-mail: main@mccampbell.com

Analytical Report

Client:	NRG Energy, LLC	**WorkOrder:**	2111155
Date Received:	11/02/2021 17:50	**Extraction Method:**	SM5220 D-1997
Date Prepared:	11/05/2021	**Analytical Method:**	SM5220 D-1997
Project:	Marsh Landing DDSD Quarterly	**Unit:**	mg/L

Chemical Oxygen Demand (COD) as mg O2 /L

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
FAC Combined Wastewater	2111155-001A	Water	11/02/2021 15:00	SPECTROPHOTOMETER	233125

Analytes	Result	MDL	RL	DF	Date Analyzed
COD	13	7.2	10	1	11/05/2021 12:42

Analyst(s): NYG

McCampbell Analytical, Inc.
"When Quality Counts"
1534 Willow Pass Road, Pittsburg, CA 94565-1701
Toll Free Telephone: (877) 252-9262 / Fax: (925) 252-9269
http://www.mccampbell.com / E-mail: main@mccampbell.com

Analytical Report

Client:	NRG Energy, LLC	**WorkOrder:**	2111155
Date Received:	11/02/2021 17:50	**Extraction Method:**	E200.8
Date Prepared:	11/03/2021	**Analytical Method:**	E200.8
Project:	Marsh Landing DDSD Quarterly	**Unit:**	mg/L

Metals

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
FAC Combined Wastewater	2111155-001E	Water	11/02/2021 15:00	ICP-MS3 058SMPL.D	232927

Analytes	Result	Qualifiers	MDL	RL	DF	Date Analyzed
Arsenic	**0.00082**		0.00010	0.00050	1	11/04/2021 15:20
Cadmium	ND		0.00024	0.00050	1	11/04/2021 15:20
Chromium	**0.00098**		0.00035	0.00050	1	11/04/2021 15:20
Copper	**0.0040**		0.00066	0.0015	1	11/04/2021 15:20
Iron	**0.083**	J	0.037	0.10	1	11/04/2021 15:20
Lead	ND		0.00027	0.00050	1	11/04/2021 15:20
Mercury	ND		0.000047	0.000050	1	11/04/2021 15:20
Molybdenum	**0.0016**		0.00018	0.00050	1	11/04/2021 15:20
Nickel	**0.0022**		0.00027	0.00050	1	11/04/2021 15:20
Selenium	**0.00019**	J	0.00017	0.00050	1	11/04/2021 15:20
Silver	ND		0.00026	0.00050	1	11/04/2021 15:20
Zinc	**0.11**		0.014	0.020	1	11/04/2021 15:20

Surrogates	REC (%)	Limits	
Terbium	109	70-130	11/04/2021 15:20

Analyst(s): AL

McCampbell Analytical, Inc.
"When Quality Counts"

1534 Willow Pass Road, Pittsburg, CA 94565-1701
Toll Free Telephone: (877) 252-9262 / Fax: (925) 252-9269
http://www.mccampbell.com / E-mail: main@mccampbell.com

Analytical Report

Client:	NRG Energy, LLC	**WorkOrder:**	2111155
Date Received:	11/02/2021 17:50	**Extraction Method:**	SM2540 C-1997
Date Prepared:	11/08/2021	**Analytical Method:**	SM2540 C-1997
Project:	Marsh Landing DDSD Quarterly	**Unit:**	mg/L

Total Dissolved Solids

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
FAC Combined Wastewater	2111155-001C	Water	11/02/2021 15:00	WetChem	233273

Analytes	Result	MDL	RL	DF	Date Analyzed
Total Dissolved Solids	**294**	10.0	10.0	1	11/09/2021 17:25

Analyst(s): HAD

McCampbell Analytical, Inc.
"When Quality Counts"

1534 Willow Pass Road, Pittsburg, CA 94565-1701
Toll Free Telephone: (877) 252-9262 / Fax: (925) 252-9269
http://www.mccampbell.com / E-mail: main@mccampbell.com

Analytical Report

Client:	NRG Energy, LLC	**WorkOrder:**	2111155
Date Received:	11/02/2021 17:50	**Extraction Method:**	SM2540 D-1997
Date Prepared:	11/09/2021	**Analytical Method:**	SM2540 D-1997
Project:	Marsh Landing DDSD Quarterly	**Unit:**	mg/L

Total Suspended Solids

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
FAC Combined Wastewater	2111155-001D	Water	11/02/2021 15:00	WetChem	233112

Analytes	Result	MDL	RL	DF	Date Analyzed
Total Suspended Solids	**3.00**	1.00	1.00	1	11/09/2021 14:20

Analyst(s): MGO

McCampbell Analytical, Inc.
"When Quality Counts"
1534 Willow Pass Road, Pittsburg, CA 94565-1701
Toll Free Telephone: (877) 252-9262 / Fax: (925) 252-9269
http://www.mccampbell.com / E-mail: main@mccampbell.com

Quality Control Report

Client:	NRG Energy, LLC	**WorkOrder:**	2111155
Date Prepared:	11/03/2021	**BatchID:**	232923
Date Analyzed:	11/08/2021	**Extraction Method:**	SM5210B
Instrument:	WetChem	**Analytical Method:**	SM5210 B
Matrix:	Water	**Unit:**	mg/L
Project:	Marsh Landing DDSD Quarterly	**Sample ID:**	MB/LCS/LCSD-232923

QC Summary Report for BOD

Analyte	MB Result	MDL	RL			
BOD	ND	4.00	4.00	-	-	-

Analyte	LCS Result	LCSD Result	SPK Val	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Limit
BOD	196	220	198	99	111	80-120	11.5	16

McCampbell Analytical, Inc.
"When Quality Counts"
1534 Willow Pass Road, Pittsburg, CA 94565-1701
Toll Free Telephone: (877) 252-9262 / Fax: (925) 252-9269
http://www.mccampbell.com / E-mail: main@mccampbell.com

Quality Control Report

Client:	NRG Energy, LLC	**WorkOrder:**	2111155
Date Prepared:	11/05/2021	**BatchID:**	233125
Date Analyzed:	11/05/2021	**Extraction Method:**	SM5220 D-1997
Instrument:	SPECTROPHOTOMETER	**Analytical Method:**	SM5220 D-1997
Matrix:	Water	**Unit:**	mg/L
Project:	Marsh Landing DDSD Quarterly	**Sample ID:**	MB/LCS/LCSD-233125 2111155-001AMS/MSD

QC Summary Report for COD

Analyte	MB Result	MDL	RL			
COD	ND	7.20	10.0	-	-	-

Analyte	LCS Result	LCSD Result	SPK Val	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Limit
COD	102	99.0	100	102	99	90-110	2.99	20

Analyte	MS DF	MS Result	MSD Result	SPK Val	SPKRef Val	MS %REC	MSD %REC	MS/MSD Limits	RPD	RPD Limit
COD	1	118	115	100	13.00	105	102	80-120	2.58	20

McCampbell Analytical, Inc.
"When Quality Counts"
1534 Willow Pass Road, Pittsburg, CA 94565-1701
Toll Free Telephone: (877) 252-9262 / Fax: (925) 252-9269
http://www.mccampbell.com / E-mail: main@mccampbell.com

Quality Control Report

Client:	NRG Energy, LLC	**WorkOrder:**	2111155
Date Prepared:	11/03/2021	**BatchID:**	232927
Date Analyzed:	11/03/2021	**Extraction Method:**	E200.8
Instrument:	ICP-MS2	**Analytical Method:**	E200.8
Matrix:	Water	**Unit:**	µg/L
Project:	Marsh Landing DDSD Quarterly	**Sample ID:**	MB/LCS/LCSD-232927

QC Summary Report for Metals

Analyte	MB Result	MDL	RL	SPK Val	MB SS %REC	MB SS Limits
Arsenic	ND	0.100	0.500	-	-	-
Cadmium	ND	0.240	0.500	-	-	-
Chromium	ND	0.350	0.500	-	-	-
Copper	ND	0.660	1.50	-	-	-
Iron	ND	37.0	100	-	-	-
Lead	ND	0.270	0.500	-	-	-
Mercury	ND	0.0470	0.0500	-	-	-
Molybdenum	ND	0.180	0.500	-	-	-
Nickel	ND	0.270	0.500	-	-	-
Selenium	ND	0.170	0.500	-	-	-
Silver	ND	0.260	0.500	-	-	-
Zinc	ND	14.0	20.0	-	-	-
Surrogate Recovery						
Terbium	518			500	103	70-130

Analyte	LCS Result	LCSD Result	SPK Val	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Limit
Arsenic	51.5	51.9	50	103	104	85-115	0.754	20
Cadmium	49.5	49.6	50	99	99	85-115	0.161	20
Chromium	48.2	48.8	50	96	98	85-115	1.09	20
Copper	50.2	50.8	50	100	102	85-115	1.19	20
Iron	4790	4780	5000	96	96	85-115	0.167	20
Lead	48.7	49.4	50	97	99	85-115	1.37	20
Mercury	1.21	1.22	1.25	97	98	85-115	0.903	20
Molybdenum	49.2	48.9	50	98	98	85-115	0.551	20
Nickel	50.0	50.3	50	100	101	85-115	0.558	20
Selenium	52.5	52.8	50	105	106	85-115	0.532	20
Silver	50.0	49.6	50	100	99	85-115	0.702	20
Zinc	523	521	500	105	104	85-115	0.383	20
Surrogate Recovery								
Terbium	519	522	500	104	104	70-130	0.480	20

McCampbell Analytical, Inc.
"When Quality Counts"
1534 Willow Pass Road, Pittsburg, CA 94565-1701
Toll Free Telephone: (877) 252-9262 / Fax: (925) 252-9269
http://www.mccampbell.com / E-mail: main@mccampbell.com

Quality Control Report

Client:	NRG Energy, LLC	**WorkOrder:**	2111155
Date Prepared:	11/08/2021	**BatchID:**	233273
Date Analyzed:	11/09/2021	**Extraction Method:**	SM2540 C-1997
Instrument:	WetChem	**Analytical Method:**	SM2540 C-1997
Matrix:	Water	**Unit:**	mg/L
Project:	Marsh Landing DDSD Quarterly	**Sample ID:**	MB/LCS/LCSD-233273

QC Summary Report for Total Dissolved Solids

Analyte	MB Result	MDL	RL			
Total Dissolved Solids	ND	10.0	10.0	-	-	-

Analyte	LCS Result	LCSD Result	SPK Val	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Limit
Total Dissolved Solids	958	1050	1000	96	105	80-120	9.16	10

McCampbell Analytical, Inc.
"When Quality Counts"
1534 Willow Pass Road, Pittsburg, CA 94565-1701
Toll Free Telephone: (877) 252-9262 / Fax: (925) 252-9269
http://www-mccampbell-com / E-mail: main@mccampbell.com

Quality Control Report

Client:	NRG Energy, LLC	**WorkOrder:**	2111155
Date Prepared:	11/07/2021	**BatchID:**	233112
Date Analyzed:	11/07/2021	**Extraction Method:**	SM2540 D-1997
Instrument:	WetChem	**Analytical Method:**	SM2540 D-1997
Matrix:	Water	**Unit:**	mg/L
Project:	Marsh Landing DDSD Quarterly	**Sample ID:**	MB/LCS/LCSD-233112

QC Summary Report for Total Suspended Solids

Analyte	MB Result	MDL	RL			
Total Suspended Solids	ND	1.00	1.00	-	-	-

Analyte	LCS Result	LCSD Result	SPK Val	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Limit
Total Suspended Solids	105	99.0	100	105	99	80-120	5.88	10

McCampbell Analytical, Inc.
1534 Willow Pass Rd
Pittsburg, CA 94565-1701
(925) 252-9262

CHAIN-OF-CUSTODY RECORD

WorkOrder: 2111155 **ClientCode: GOA**

☐ WaterTrax ☐ CLIP ☐ EDF ☑ EQuIS ☐ Dry-Weight ☑ Email ☐ HardCopy ☐ ThirdParty ☑ J-flag
☐ Detection Summary ☐ Excel

Report to:
David Frandsen
NRG Energy, LLC
3201 Wilbur Avenue
Antioch, CA 94509
(925) 427-3479 FAX: (925) 779-6679

Email: David.Frandsen@nrg.com
cc/3rd Party: joe.moura@nrg.com; james.robinson@nrg.
PO: 4501905749
Project: Marsh Landing DDSD Quarterly

Bill to:
Accounts Payable
NRG
4900 N. Scottsdale Road, Ste. 5000
Scottsdale, AZ 85251
invoices@clearwayenergy.coupahost.co

Requested TATs: 5 days; 7 days;

Date Received: **11/02/2021**
Date Logged: **11/02/2021**

Lab ID	Client ID	Matrix	Collection Date	Hold	Requested Tests (See legend below)											
					1	2	3	4	5	6	7	8	9	10	11	12
2111155-001	FAC Combined Wastewater	Water	11/2/2021 15:00	☐	B	A	E	A	C	D						

Test Legend:

1	BOD_W	2	COD_W	3	METALSMS_TTLC_W	4	PRDisposal Fee
5	TDS_W	6	TSS_W	7		8	
9		10		11		12	

Project Manager: Susan Thompson

Prepared by: Lilly Ortiz

Comments: Use QUOTE 212372 for any Marsh Landing projects to get correct analyte list. Always report in mg/L.

NOTE: Soil samples are discarded 60 days after receipt unless other arrangements are made (Water samples are 30 days).
Hazardous samples will be returned to client or disposed of at client expense.

McCampbell Analytical, Inc.
"When Quality Counts"

1534 Willow Pass Road, Pittsburg, CA 94565-1701
Toll Free Telephone: (877) 252-9262 / Fax: (925) 252-9269
http://www.mccampbell.com / E-mail: main@mccampbell.com

WORK ORDER SUMMARY

Client Name: NRG ENERGY, LLC
Client Contact: David Frandsen
Contact's Email: David.Frandsen@nrg.com

Project: Marsh Landing DDSD Quarterly

Comments Use QUOTE 212372 for any Marsh Landing projects to get correct analyte list. Always report in mg/L.

Work Order: 2111155
QC Level: LEVEL 2
Date Logged: 11/2/2021

☐ WaterTrax ☐ WriteOn ☐ EDF ☐ Excel ☐ EQuIS ☑ Email ☐ HardCopy ☐ ThirdParty ☑ J-flag

LabID	ClientSampID	Matrix	Test Name	Containers /Composites	Bottle & Preservative	Head Space	Dry-Weight	Collection Date & Time	TAT	Test Due Date	Sediment Content	Hold	SubOut
001A	FAC Combined Wastewater	Water	SM5220D (COD)	2	aVOA w/ H2SO4	☐	☐	11/2/2021 15:00	5 days	11/9/2021	None	☐	
001B	FAC Combined Wastewater	Water	SM5210B (BOD)	1	500mL HDPE, unprsv.	☐	☐	11/2/2021 15:00	7 days	11/11/2021	None	☐	
001C	FAC Combined Wastewater	Water	SM2540C (TDS)	1	500mL HDPE, unprsv.	☐	☐	11/2/2021 15:00	5 days	11/9/2021	None	☐	
001D	FAC Combined Wastewater	Water	SM2540D (TSS)	1	1L HDPE, unprsv.	☐	☐	11/2/2021 15:00	5 days	11/9/2021	None	☐	
001E	FAC Combined Wastewater	Water	E200.8 (Metals) <Arsenic, Cadmium, Chromium, Copper, Iron, Lead, Mercury, Molybdenum, Nickel, Selenium, Silver, Zinc>	1	250mL HDPE w/ HNO3	☐	☐	11/2/2021 15:00	5 days	11/9/2021	None	☐	

NOTES: * STLC and TCLP extractions require 2 days to complete; therefore, all TATs begin after the extraction is completed (i.e., One-day TAT yields results in 3 days from sample submission).

- MAI assumes that all material present in the provided sampling container is considered part of the sample - MAI does not exclude any material from the sample prior to sample preparation unless requested in writing by the client.

211155

Chain of Custody

Page 1 of 2-Quaterly

Marsh Landing Generating Station
3201 Wilbur Avenue, P.O. Box 1687, Antioch, CA 94509
Phone: (925) 779-6500 Fax: (925) 779-6509

SAMPLES SUBMITTED TO		SEND INVOICE TO		PROJECT	
Laboratory:	McCampbell Analytical, Inc.	Company:	Marsh Landing LLC	Plant:	Marsh Landing
ELAP Cert. No	1644	Attention:	Accounts Payable	Title:	DDSD
Address:	1534 Willow Pass Road, Pittsburg, CA 94565-1701	Address:	[redacted]	Phase:	Quarterly
Phone/Fax:	925.252.9262/ 925.252.9269	P.O. No.:	4501005749	Manager:	David Frandsen

SAMPLE INFORMATION								CONTAINER INFORMATION				ANALYSIS REQUEST			
Sample Number	Sample Date	Sample Collection Time	Regulatory Driver	Regulatory Frequency	Sample Medium	Sample Type	Sample Description	Number	Type	Volume (each, mL)	Preserv.	COD (SM5220D)	BOD (SM 5210B)	TDS (SM 2540B)	TSS (SM 2540D)
ML-21-106	2-Nov-21	1500	DDSD	Quarterly	Wastewater	C-24	FAC Combined Wastewater	2	Amber VOAs	43	H_2SO_4 (pH<2, 4°C)	X			
ML-21-107	2-Nov-21	1500	DDSD	Quarterly	Wastewater	C-24	FAC Combined Wastewater	1	HDPE Bottle	1,000	None (ZHS, 4°C)		X		
ML-21-108	2-Nov-21	1500	DDSD	Quarterly	Wastewater	C-24	FAC Combined Wastewater	1	HDPE Bottle	500	None (4°C)			X	
ML-21-109	2-Nov-21	1500	DDSD	Quarterly	Wastewater	C-24	FAC Combined Wastewater	1	Poly	1,000	None				X
											HOLDING TIME:	28 days	48 hours	7 days	7 days

REPORTING		LABORATORY NOTES RE: SAMPLE RECEIPT/CONDITION	DIRECTIONS FOR LABORATORY
Original to:	David Frandsen		**STANDARDTAT(5-day).** Establish calibration standards so Minimum Level (ML) value is the lowest calibration standard the lowest quantifiable concentration or Reporting Limit (RL) Report "Detected, but Not Quantified" (DNQ) with estimated J-flagged concentrations below the RL and include method detection limits (MDLs) in report.
Title:	Environmental Specialist/Engineer		
Address	P.O. Box 1687		**RESULTS AND PRICING PER QUOTE ID: 212372**
	Antioch, CA 94509		
Phone/Fax:	925 324-3533/6509		**"Include sample description with client sample ID. Unit of measure to be mg/L**
E-mail:	david.frandsen@nrg.com		
E-mail CC:	james.robinson@nrg.com		
E-mail CC:	joe.moura@nrg.com		

	PRINTED NAME	SIGNATURE	COMPANY	DATE	TIME
Sampled by	James E Robinson	James E. Robinson	NRG	2-Nov-21	1500
Relinquished by	James E Robinson	James E. Robinson	NRG	2-Nov-21	1750
Received by	Lilly Ortiz	Lilly Ortiz	MMI	2-Nov-21	1755
Relinquished by					0:8
Received by					
Relinquished by					
Received by					

211155

Chain of Custody

Page 2 of 2-Quarterly

Marsh Landing Generating Station
3201 Wilbur Avenue, P.O. Box 1687, Antioch, CA 94509
Phone: (925) 779-6500 Fax: (925) 779-6509

SAMPLES SUBMITTED TO		SEND INVOICE TO		PROJECT		ANALYSIS REQUEST
Laboratory:	McCampbell Analytical, Inc.	Company:	Marsh Landing LLC	Plant:	Marsh Landing	
ELAP Cert. No.	1644	Attention:	Accounts Payable	Title:	DDSD	
Address:	1534 Willow Pass Road, Pittsburg, CA 94565-1701	Address:	[redacted]	Phase:	Quarterly	
Phone/Fax:	925.252.9262/ 925.252.9269	P.O. No.:	4501905749	Manager:	David Frandsen	

SAMPLE INFORMATION								CONTAINER INFORMATION				ANALYSIS REQUEST			
Sample Number	Sample Date	Sample Collection Time	Regulatory Driver	Regulatory Frequency	Sample Medium	Sample Type	Sample Description	Number	Type	Volume (each, mL)	Preserv.	Total Metals[1] (EPA Method 200.8)			
ML-21-110	2-Nov-21	1500	DDSD	Quarterly	Wastewater	C-24	FAC Combined Wastewater	1	HDPE Bottle	250	HNO3 (pH<2)	X			
											HOLDING TIME:	28 days			

REPORTING		LABORATORY NOTES RE: SAMPLE RECEIPT/CONDITION	DIRECTIONS FOR LABORATORY
Original to	David Frandsen		**STANDARD TAT (5-day).** Establish calibration standards so Minimum Level (ML) value is the lowest calibration standard, the lowest quantifiable concentration or Reporting Limit (RL). Report "Detected, but Not Quantified" (DNQ) with estimated J-flagged concentrations below the RL and include method detection limits (MDLs) in report.
Title	Environmental Specialist/Engineer		[1] Arsenic, Cadmium, Chromium, Copper, Iron, Lead, Mercury, Nickel, Molybdenum, Selenium (reaction mode), Silver, Zinc
Address	P.O. Box 1687 Antioch, CA 94509		**RESULTS AND PRICING PER QUOTE ID: 212372.**
Phone/Fax:	925 324-3533/6509		***Include sample description with client sample ID. Unit of measure to be mg/L**
E-mail	david.frandsen@nrg.com		
E-mail CC	james.robinson@nrg.com		
E-mail CC	joe.moura@nrg.com		

	PRINTED NAME	SIGNATURE	COMPANY	DATE	TIME
Sampled by:	James E Robinson	James E. Robinson.	NRG	2-Nov-21	1500
Relinquished by	James E Robinson	James E. Robinson.	NRG	2-Nov-21	1750
Received by:	[illegible]	[illegible]	MH	2-Nov-21	1755
Relinquished by					
Received by:					
Relinquished by					
Received by					

McCampbell Analytical, Inc.
"When Quality Counts"

1534 Willow Pass Road, Pittsburg, CA 94565-1701
Toll Free Telephone: (877) 252-9262 / Fax: (925) 252-9269
http://www.mccampbell.com / E-mail: main@mccampbell.com

Sample Receipt Checklist

Client Name:	**NRG Energy, LLC**	Date and Time Received:	**11/2/2021 17:50**
Project:	**Marsh Landing DDSD Quarterly**	Date Logged:	**11/2/2021**
		Received by:	Lilly Ortiz
WorkOrder №:	**2111155** Matrix: Water	Logged by:	Lilly Ortiz
Carrier:	Client Drop-In		

Chain of Custody (COC) Information

Chain of custody present?	Yes ☑	No ☐	
Chain of custody signed when relinquished and received?	Yes ☑	No ☐	
Chain of custody agrees with sample labels?	Yes ☑	No ☐	
Sample IDs noted by Client on COC?	Yes ☑	No ☐	
Date and Time of collection noted by Client on COC?	Yes ☑	No ☐	
Sampler's name noted on COC?	Yes ☑	No ☐	
COC agrees with Quote?	Yes ☐	No ☐	NA ☑

Sample Receipt Information

Custody seals intact on shipping container/cooler?	Yes ☐	No ☐	NA ☑
Custody seals intact on sample bottles?	Yes ☐	No ☐	NA ☑
Shipping container/cooler in good condition?	Yes ☑	No ☐	
Samples in proper containers/bottles?	Yes ☑	No ☐	
Sample containers intact?	Yes ☑	No ☐	
Sufficient sample volume for indicated test?	Yes ☑	No ☐	

Sample Preservation and Hold Time (HT) Information

All samples received within holding time?	Yes ☑	No ☐	NA ☐
Samples Received on Ice?	Yes ☑	No ☐	
	(Ice Type: WET ICE)		
Sample/Temp Blank temperature	Temp: 0.8°C		NA ☐
ZHS conditional analyses: VOA meets zero headspace requirement (VOCs, TPHg/BTEX, RSK)?	Yes ☐	No ☐	NA ☑
Sample labels checked for correct preservation?	Yes ☑	No ☐	
pH acceptable upon receipt (Metal: <2; Nitrate 353.2/4500NO3: <2; 522: <4; 218.7: >8)?	Yes ☑	No ☐	NA ☐
UCMR Samples:			
pH tested and acceptable upon receipt (200.7: ≤2; 533: 6 - 8; 537.1: 6 - 8)?	Yes ☐	No ☐	NA ☑
Free Chlorine tested and acceptable upon receipt (<0.1mg/L) [not applicable to 200.7]?	Yes ☐	No ☐	NA ☑

Comments:

3.5 SOIL & WATER-6

- Water flow meters have been installed in three locations.
    - Potable water flow FT400001
    - Potable water flow to the Raw Water Tank FT360004
    - Discharge flow of Waste Water/Sanitary Drains to DDSD FT950002
- Calibration activities were completed in January. See attached calibration sheets.

The range of annual water usage is a minimum of 7.1 acre feet in 2019 to 23.1 acre feet in 2020.

The average annual water usage is 11.6 acre feet. See attached Summary spreadsheet.

Payments to the City of Antioch are as follows:

- $8,500 for the year 2013 paid in May 2014.
- $8,200 for the year 2014 paid in May 2015.
- $8,200 for the year 2015 paid in May 2016.
- $9,000 for the year 2016 paid in May 2017.
- $11,200 for the year 2017 paid in May 2018.
- $9,700 for the year 2018 paid in May 2019.
- $7,100 for the year 2019 paid in May 2020.
- $23,100 for the year 2020 to be paid in May 2021.
- $19,800 for the year 2021 to be paid in May 2022.

CALTROL INC.
1385 PAMA LANE #111
LAS VEGAS, NV. 89119
PHONE: (877) 827-8131

Instrument Calibration Report

Attn: David Frandsen
3201-C Wilbur Ave
Antioch, Ca 94509

Magnetic Flow Meter

Tag/Instrument ID	**FT-400001**	Calibrated Range	**0 TO 500 Gal/m**
Description	**Mag-Meter**	Serial Number	**0338199**
Manufacturer	**Rosemount**	Model Number	**8732E**
Plant / Unit	**NRG**	Calibration Type	**SCHEDULED**
System		Calibrated	**07-Jan-21**
Location	**Out behind Amonia tank**	Scheduled	**07-Jan-22**

MagMeter Calibration

Stated Accuracy: % of Analog Output Required Accuracy(1): 0.50%

In Val	In Units	Out Val	Out Units	As Found	Error %	As Left	Error %
0.00	Gal/m	4.00	mA	3.99	-0.06%	3.99	-0.06%
3.00	Gal/m	5.60	mA	5.55	-0.31%	5.60	0.00%
10.00	Gal/m	9.33	mA	9.28	-0.31%	9.33	0.00%
30.00	Gal/m	20.00	mA	19.94	-0.37%	19.99	-0.06%
10.00	Gal/m	9.33	mA	9.28	-0.31%	9.33	0.00%
3.00	Gal/m	5.60	mA	5.55	-0.31%	5.60	0.00%
0.00	Gal/m	4.00	mA	3.99	-0.06%	3.99	-0.06%

Calibration Parameter Changes

	Customer Settings	Calibration Settings
Meter Tube Cal #:	984705909605005	1000015010000000
Units of Measure:	Gal/M	Ft/S
Lower Range Value:	0	0
Upper Range Value:	500	30
Coil Pulse Mode:	37 Hz	5 Hz

[X] All Settings returned to customer's Configuration

Test Instruments Used During Calibration

Description	Manufacturer	Model Number	Serial Number	NIST Cert. Number
Hart Communicator	Emerson	TREX		
Flow Simulator	Rosemount	8714D		

Notes about this calibration

1) CALIBRATED AND RECHECKS GOOD.

QC Checklist:

N/A	Isolation valves
N/A	Filled legs
X	All wires relanded (If removed)
X	Verify data (model, tag, serial, mfg)

Calibration Result: **PASS**

Calibrated by: *Matt Nixon*

Checkout By:

CALIBRATION DUE: **07-Jan-22**

FT-400001

CALTROL INC.
1385 PAMA LANE #111
LAS VEGAS, NV. 89119
PHONE: (877) 827-8131

Instrument Calibration Report

Attn: David Frandsen
3201-C Wilbur Ave
Antioch, Ca 94509

Magnetic Flow Meter

Tag/Instrument ID	**FT-360004**	Calibrated Range	**0 TO 500 Gal/m**
Description	**Mag-Meter**	Serial Number	**378997**
Manufacturer	**Rosemount**	Model Number	**8732E**
Plant / Unit	**NRG**	Calibration Type	**SCHEDULED**
System		Calibrated	**07-Jan-21**
Location	**out behind amonia tank**	Scheduled	**07-Jan-22**

MagMeter Calibration

Stated Accuracy: % of Analog Output Required Accuracy(1): 0.50%

In Val	In Units	Out Val	Out Units	As Found	Error %	As Left	Error %
0.00	Gal/m	4.00	mA	3.99	-0.06%	4.00	0.00%
3.00	Gal/m	5.60	mA	5.55	-0.31%	5.60	0.00%
10.00	Gal/m	9.33	mA	9.28	-0.31%	9.33	0.00%
30.00	Gal/m	20.00	mA	19.94	-0.37%	19.99	-0.06%
10.00	Gal/m	9.33	mA	9.28	-0.31%	9.33	0.00%
3.00	Gal/m	5.60	mA	5.55	-0.31%	5.60	0.00%
0.00	Gal/m	4.00	mA	3.99	-0.06%	4.00	0.00%

Calibration Parameter Changes

	Customer Settings	Calibration Settings
Meter Tube Cal #:	838305208252005	1000015010000000
Units of Measure:	Gal/M	Ft/S
Lower Range Value:	0	0
Upper Range Value:	500	30
Coil Pulse Mode:	37 Hz	5 Hz

[X] All Settings returned to customer's Configuration

Test Instruments Used During Calibration

Description	Manufacturer	Model Number	Serial Number	NIST Cert. Number
Hart Communicator	Emerson	TREX		
Flow Simulator	Rosemount	8714D		

Notes about this calibration

1) CALIBRATED AND RECHECKS GOOD.

QC Checklist:

N/A	Isolation valves
N/A	Filled legs
X	All wires relanded (If removed)
X	Verify data (model, tag, serial, mfg)

Calibration Result: **PASS**

Calibrated by: *Matt Nixon*

Checkout By:

CALIBRATION DUE: **07-Jan-22**

FT-360004

CALTROL INC.
1385 PAMA LANE #111
LAS VEGAS, NV. 89119
PHONE: (877) 827-8131

Instrument Calibration Report

Attn: David Frandsen
3201-C Wilbur Ave
Antioch, Ca 94509

Magnetic Flow Meter

Tag/Instrument ID	**FT-950002**	Calibrated Range	**0 TO 80 Gal/m**
Description	**Mag-Meter**	Serial Number	**0337659**
Manufacturer	**Rosemount**	Model Number	**8732E**
Plant / Unit	**NRG**	Calibration Type	**SCHEDULED**
System		Calibrated	**07-Jan-21**
Location	**Nest to admin building**	Scheduled	**07-Jan-22**

MagMeter Calibration

Stated Accuracy: % of Analog Output Required Accuracy(1): 0.50%

In Val	In Units	Out Val	Out Units	As Found	Error %	As Left	Error %
0.00	Gal/m	4.00	mA	3.99	-0.06%	4.00	0.00%
3.00	Gal/m	5.60	mA	5.55	-0.31%	5.60	0.00%
10.00	Gal/m	9.33	mA	9.28	-0.31%	9.33	0.00%
30.00	Gal/m	20.00	mA	19.94	-0.37%	19.99	-0.06%
10.00	Gal/m	9.33	mA	9.28	-0.31%	9.33	0.00%
3.00	Gal/m	5.60	mA	5.55	-0.31%	5.60	0.00%
0.00	Gal/m	4.00	mA	3.99	-0.06%	4.00	0.00%

Calibration Parameter Changes

	Customer Settings	Calibration Settings
Meter Tube Cal #:	926105209236005	1000015010000000
Units of Measure:	Gal/M	Ft/S
Lower Range Value:	0	0
Upper Range Value:	80	30
Coil Pulse Mode:	37 Hz	5 Hz

[X] All Settings returned to customer's Configuration

Test Instruments Used During Calibration

Description	Manufacturer	Model Number	Serial Number	NIST Cert. Number
Hart Communicator	Emerson	TREX		
Flow Simulator	Rosemount	8714D		

Notes about this calibration

1) CALIBRATED AND RECHECKS GOOD.

QC Checklist:

N/A	Isolation valves
N/A	Filled legs
X	All wires relanded (If removed)
X	Verify data (model, tag, serial, mfg)

Calibration Result: **PASS**

Calibrated by: *Matt Nixon*

Checkout By:

CALIBRATION DUE: 07-Jan-22

FT-950002

Marsh Landing Generating Station
Annual City Water Usage

ANNUAL

Min	Max	Avg
7.1	23.1	11.6

		MONTHLY Acre Feet		
Year	Acre Feet	Min	Max	Avg
2013 - May - Dec	8.5	0.13	2.09	0.58
2014	8.2	0.13	1.51	0.43
2015	8.2	0.13	1.47	0.45
2016	9.0	0.33	1.39	0.75
2017	11.2	0.39	2.17	0.93
2018	9.7	0.03	2.95	0.81
2019	7.1	0.19	1.11	0.60
2020	23.1	0.25	6.51	1.00
2021	19.8	0.28	5.64	1.65

3.6 VIS-1

Current Condition:

The surface treatments of all structures and buildings remain in very good condition.

Maintenance Activities During the Year:

- Painting of some additional vertical surface of concrete pads to make them more obvious to prevent Slips, Trips, and Falls.
- Corrosion prevention measures of areas identified within the Structural Survey under NRG's OPO-217.
- Coated the Unit 1 generator enclosure roof to prevent potential leakage.

Anticipated Maintenance and Activities for 2022:

- Some minor painting activities are anticipated for 2022 in the areas of Safety, Slips Trips and Falls.
- Corrosion preventitive maintenance and painting in areas identified within the Structural Survey under NRG's OPO-217.
- Complete installation of a Black Start – Battery Energy Storage System.

3.7 VIS-2

Landscaping Maintenance is performed by a contractor on an as needed basis.

In 2021 we continued periodic weed abatement activities. There were no plantings and there were no removals of previously approved CEC plants.

3.8 WASTE-7

The Operation Waste Management Plan has been revised and is included. (See Plan Review and Change Log for a description of changes.)

The actual volume of wastes generated during the report period of 2021was 29.5 tons. (Based on Hazardous Waste Manifests for 2021.) The majority of the waste was used oil from a scheduled turbine oil replacement. 91.1% of the hazardous waste generated in 2021 was ultimately utilized in some form of recycling process.

Marsh Landing LLC

Operation Waste Management Plan

Marsh Landing Generating Station

Antioch, California

Revision 7

January 2021

SITE MANAGER REVIEW

The Operation Waste Management Plan for Marsh Landing Generating Station has been reviewed by the Plant Manager.

Signature	
Name	Joseph Moura
Title	Plant Manager
Date	1/14/2021

ENVIRONMENTAL PERSONNEL REVIEW

The Operation Waste Management Plan for Marsh Landing Generating Station has been reviewed by the Facility Environmental Specialist/Engineer.

Signature	
Name	David Frandsen
Title	Environmental Specialist/Engineer
Date	Jan. 6, 2021

Table of Contents

List of Figures

List of Tables

Appendix

Appendix 1 EPA ID Numbers for Marsh Landing

PLAN REVIEW AND CHANGE LOG

Revision No.	Revision Date	Reviewed/ Revised By	Description of Change	Revised Pages
0	March 2013	D. Griffin	Original Plan	NA
1	March 2016	D. Frandsen	Reviewed and revised the Plan as follows: • Revised cover page and added a Review and Change Log. • Revised text to indicate plant being in the operational phase including text revisions to the present tense in lieu of future tense.	Throughout
2	November 2016	D. Frandsen	Reviewed and revised the Plan as follows: • Updated excerpts from the NRG Energy, Inc. Environmental Policy and Procedures Manual, links in Section 3.2, and on-site wastewater treatment description in Section 4.1. • Updated Tables 1 and 3 with typical wastes generated and made consistent. • Added Regional Environmental Manager/Director review, site vicinity map, and List of Tables.	Throughout
3	January 2017	D. Frandsen	Reviewed and revised the Plan as follows: • Combined Section 2.1 and 2.2, describing the facility and location. • Updated on-site wastewater treatment description in Section 4.1. • Revised Section 6.5 to reference the Compliance Conditions for Facility Closure Plan for closure requirements. • Minor formatting.	Throughout
4	January 2018	D. Frandsen	Reviewed and revised the Plan as follows: • Updated Plant Management. • Remove reference to the Industrial General Permit for storm water discharges. • Added waste ethylene and propylene glycol solutions to wastes generated. • Updated Table 1 with 2017 waste generation.	Throughout

Revision No.	Revision Date	Reviewed/ Revised By	Description of Change	Revised Pages
5	January 2019	D. Frandsen	Reviewed and revised the Plan as follows: • Updated Plant Management. • Administrative Corrections	Throughout
6	January 2020	D. Frandsen	Reviewed and revised the Plan as Follows: • Added Final Destination for Ramos Environemntal Services oi and water pickups • Added Appendix 1 EPA ID numbers	11 Appendix 1
7	January 2021	D. Frandsen	Reviewed and revised the Plan as follows: • Updated excerpts from Condition of Certification WASTE-7 and the NRG Energy, Inc. Environmental Manual to be consistent with current policies including Plan review frequency • Removed Regional Environmental Manager/Director review no longer required by the Environmental Manual • Removed acids from the list of water treatment chemicals no longer on-site • Added Environmental Logistics, Inc. and Hazmat TSDF, Inc. for the transportation and disposal of natural gas filters • Updated years remaining in original planned operational life of the facility	Throughout

1.0 INTRODUCTION

This Operation Waste Management Plan (OWMP) provides guidance for the identification and management of wastes which are likely to be generated during the operational phase of the Marsh Landing Generating Station (MLGS) in Antioch, California (Figure 1). This plan complies with Condition of Certification WASTE-7 issued by the California Energy Commission in Commission Decision 08-AFC-03 for MLGS, which states the following:

> *The project owner shall prepare an Operation Waste Management Plan for all wastes generated during operation of the facility and shall submit the plan to the CPM for review and approval. The plan shall contain, at a minimum, the following:*
>
> *1. A detailed description of all operation and maintenance waste streams, including projections of amounts to be generated, frequency of generation, and waste hazard classifications;*
>
> *2. Management methods to be used for each waste stream, including temporary on-site storage, housekeeping and best management practices to be employed, treatment methods and companies providing treatment services, waste testing methods to assure correct classification, methods of transportation, disposal requirements and sites, and recycling and waste minimization/source reduction plans;*
>
> *3. Information and summary records of conversations with the Contra Costa County Health Services Department (the local Certified Unified Program Agency) and DTSC regarding any waste management requirements necessary for project activities. Copies of all required waste management permits, notices, and/or authorizations shall be included in the plan and updated as necessary;*
>
> *4. A detailed description of how facility wastes will be managed, and any contingency plans to be employed, in the event of an unplanned closure or planned temporary facility closure; and*
>
> *5. A detailed description of how facility wastes will be managed and disposed of upon closure of the facility.*

The document is intended to satisfy this requirement; the requirements in the NRG Energy, Inc. Environmental Manual for Waste Minimization/Pollution Prevention Plan; and to serve as a guide to facility personnel. The OWMP identifies but does not address in detail wastes which are discharged in accordance with a federal, state or local permit or authorization on either an intermittent or ongoing basis. These include air emissions, wastewater discharged under a site-specific permit, water produced from dewatering, or other wastes discharged in accordance with state- or locally-issued Waste Discharge Requirements.

In accordance with the NRG Energy, Inc. policy provided in the Environmental Manual, this Plan will be reviewed, updated as necessary, and approved at least every other year by the Facility Manager or his/her designee. In accordance with the Condition of Certification WASTE-7, Plant management will document in each Annual Compliance Report 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 OWMP; and update the OWMP as necessary to address current waste generation and management practices

2.0 SITE DESCRIPTION

2.1 Site Location and Description

The Marsh Landing Generating Station (MLGS) is an electrical generating facility located at 3201C Wilbur Avenue, Antioch, California (Figure 1). MLGS was substantially completed in April 2013, with commercial operations commencing May 1, 2013.

MLGS is located adjacent to the Contra Costa Generating Station (CCGS), a retired steam electric generating plant. The site is bordered by industrial uses, including Pacific Gas and Electric Company (PG&E) operational areas and a PG&E switchyard. The main industrial process consists of four natural gas-fired, simple-cycle ("peaker") electric generating units with a combined generating capacity of 760 megawatts.

2.2 Waste Generation Overview

Typical of electrical generating facilities, MLGS uses a variety of hazardous materials, including natural gas, diesel fuel, batteries, thinners, paints, oils (lubricating oil, dielectric, mineral, hydraulic), aqueous ammonia, cleaners and detergents, ethylene and propylene glycols, transmission fluid, and water treatment chemicals (sodium hypochlorite, polymers, sodium bisulfite, etc.) among others, in a variety of processes and equipment. Buildings and structures may also contain materials such as lead-based paint. No asbestos or PCBs wastes are expected to occur at the site.

The following sections summarize the individual waste streams associated with plant operations and procedures for waste characterization, handling and disposal.

3.0 WASTE STREAM DESCRIPTION AND CHARACTERIZATION

3.1 Waste Generation

Typical wastes generated during ongoing operations of power generation are summarized in Table 1 below. Other wastes not listed may be generated from time to time. Projected amounts are estimates and will vary from year to year.

Table 1
Waste Stream Summary
Marsh Landing Generating Station

Waste	Frequency	Projected Average Amount	Hazards/Classification
Uncontaminated concrete or asphalt	Infrequently	None expected	None/ non-hazardous inert debris
Contaminated concrete or asphalt	Infrequently	None expected	Oils, metals/ hazardous, non-RCRA hazardous, or non-hazardous
Miscellaneous uncontaminated structural and building materials (e.g., brick, stone, glass, non-asbestos insulation, gypsum wallboard)	Infrequently	None expected	None/ non-hazardous inert debris
Scrap metal (e.g., equipment, machinery, piping, potable or service water tanks and piping)	Infrequently	Only as needed	Minor amounts of oil and grease/excluded scrap metal
Vegetative material	Regularly	As needed from landscaping activities	None/non-hazardous green waste
Uncontaminated soil	Infrequently	None expected	None/ non-hazardous inert debris
Contaminated soil or debris	Infrequently	None expected	Oils, metals, organics, etc./hazardous, non-RCRA hazardous, or non-hazardous
Oily water and oil-water separator sludge	Continuously	2,000 gallons / year	Oil, metals/hazardous or non-RCRA hazardous
Waste paint, adhesives, and paint-related debris	Continuously	25 pounds / quarter	Metals, flammable VOCs/hazardous
Waste fuel (diesel, gasoline)	Infrequently	None expected	Hydrocarbons, flammable VOCs/hazardous
Waste oil (e.g., lubricating fuel, dielectric, mineral, hydraulic, etc.) and oily debris	Continuously, with larger amounts infrequently	450 pounds / month	Oil/ non-RCRA hazardous
Universal wastes (fluorescent light tubes, Compact fluorescent light bulbs, HID lamps, batteries, mercury-containing devices,	Continuously	200 pounds / year	Mercury, metals/hazardous (universal waste)

Table 1 Waste Stream Summary Marsh Landing Generating Station			
Waste	**Frequency**	**Projected Average Amount**	**Hazards/Classification**
electronic wastes, aerosol cans)			
Waste maintenance chemicals (oils, greases, paints, solvents, glycols, etc.)	Infrequently	200 pounds / year	Metals, flammable VOCs, hydrocarbons, corrosives/hazardous
Empty containers < 5 gallons	Infrequently	30 pounds / year	Residual chemicals /empty container (see "Managing Empty Containers" by DTSC)
Empty containers > 5 gallons	Infrequently	30 pounds / year	Residual chemicals/ empty container (see "Managing Empty Containers" by DTSC)
Waste/spent corrosives	Infrequently	Minimal	Corrosive/hazardous
Ammonia waste	Infrequently	None expected	Corrosive/hazardous
Laboratory waste	Frequently	40 gallons / year	Metals, acids, corrosives/hazardous
Waste natural gas liquids	Continuously	Minimal	Flammable VOCs/hazardous
Lead-acid batteries	Infrequently	4 batteries / year	Lead, corrosive/excluded or hazardous
Drained used oil filters	Frequently	As needed, <100 filters / year	Metals, oil/excluded or hazardous
Wood waste	Infrequently	None expected, as needed	None/ non-hazardous wood waste
Municipal refuse and garbage	Continuously	Continuous generation and disposal as needed	None/ non-hazardous municipal refuse
Sanitary wastewater	Continuously	<21 gallons / minute	Fecal coliform, nitrates, BOD/sanitary waste
Industrial wastewater	Continuously	<21 gallons / minute	Oil, metals/non-hazardous
Turbine cleaning wash water	Infrequently	Twice yearly, 2,000 gallons per event	Oil, detergents/non-hazardous
Decontamination wastewater (e.g., tank and sump emptying and cleaning)	Infrequently	None expected	Oil/non-RCRA hazardous or non-hazardous
Water from groundwater intrusion/dewatering	Infrequently	None expected	None/non-hazardous
CO and NOx catalyst	Very infrequently	18 to 19 tons every 10 to 15 years	Metals/hazardous
Waste CFCs	Infrequently	None expected	Ozone depleting/hazardous
Used natural gas filters	Infrequently	4,000 pounds / event	Organics/ non-RCRA hazardous

Note: Storm water is not a waste.

3.2 Waste Characterization

Waste characterization is performed on each waste stream to determine the appropriate management method. Wastes generally fall into one of the following categories:

- Inert soil or debris for disposal
- Inert soil or debris for on-site re-use
- Municipal refuse
- Green waste and wood waste
- Non-hazardous industrial waste
- Non-RCRA (i.e., California-only) hazardous waste, including universal wastes
- RCRA hazardous waste, including universal wastes

Waste classification will be performed in accordance with the following guidance:

- California Code of Regulations (CCR) Title 22, Division 4.5, Chapter 11 - Identification and Listing of Hazardous Waste.
- *Defining Hazardous Waste*, guidance from California Environmental Protection Agency, Department of Toxic Substances Control available at https://www.dtsc.ca.gov/HazardousWaste/.
- *Test Methods for Evaluating Solid Waste, Physical/Chemical Methods (SW-846)* published by the USEPA Office of Solid Waste and available at https://www.epa.gov/hw-sw846.

The waste characterization process will begin with compiling generator knowledge regarding the waste. This can include information from the operational history of the site and waste production area; waste process knowledge; Safety Data Sheet (SDS) information; results of previous waste characterization and testing; and general knowledge regarding the nature of power generation facility waste streams. For most wastes, sufficient generator knowledge is expected to be available to allow appropriate waste classification.

Where generator knowledge is insufficient to adequately characterize the waste, physical or chemical testing of a waste may be needed. If testing is necessary, an appropriate number of samples will be collected using the appropriate sampling method in accordance with the guidance materials referenced above. Testing will be performed in accordance with the appropriate method specified in Table 2. These methods are consistent with the guidance documents above. All waste analyses will be performed by analytical laboratories certified through the California Department of Health Services Environmental Laboratory Accreditation Program.

In some cases, additional testing may be performed on wastes in order to satisfy profiling requirements for specific potential off-site disposal facilities, depending on their individual operating permit requirements, local ordinances, and internal policies and procedures.

Liquid wastes which will be discharged under a site-specific permit or authorization, or state-wide or region-wide general permit, will be characterized as required under that permit. In most cases, monitoring and sampling is performed at the discharge point and is subject to both specified discharge limitations and periodic reporting requirements.

Table 2
Waste Characterization Method Summary
Marsh Landing Generating Station

Analyte/Characteristic	Analytical Method
Title 22 Metals	EPA Method 6010, 6020, 7471A/7471B
PCBs	EPA Method 8082
Chromium (VI)	EPA Method 7196A/7199
pH	EPA Method 9045C
TPH-diesel, motor oil, lube oil	EPA Method 8015B
TPH-gasoline	EPA Method 8015B
VOCs	EPA Method 8260B
SVOCs	EPA Method 8270C or 8310
Cyanide (total)	EPA Method 335.2 or 9012A
Flash Point	EPA Method 1010
Corrosivity	EPA Method 9040
Toxicity versus federal RL criteria listed at 22 CCR 66261.24(a)(1)	EPA Test Method 1311 (Toxicity Characteristic Leaching Procedure)
Toxicity versus California STLC criteria listed at 22 CCR 66261.24(a)(2)	Waste Extraction Test, Appendix II, Title 22, Division 4.5, Chapter 11
Acute Aquatic Toxicity versus California criteria 22 CCR 66261.24(a)(6)	Static Acute Bioassay Procedures for Hazardous Waste Samples," California Department of Fish and Game, Water Pollution Control Laboratory, revised November 1988

4.0 ON-SITE WASTE MANAGEMENT

4.1 Waste Containment and Storage

Once a waste is generated, a specific on-site management method will be followed in accordance with the waste's known and suspected hazards. Table 3 provides information on waste containment and storage for most of the identified waste streams. See Figure 2 for hazardous waste storage and accumulation areas. The sections following provide specific information on several of the waste streams.

Table 3
Waste Containment and Storage Summary
Marsh Landing Generating Station

Waste	Storage and Containment	Storage Time Limits
Uncontaminated concrete or asphalt	Pile storage, roll off bins, site-wide	None
Contaminated concrete or asphalt	Covered roll-off bins, site-wide	90 Days
Miscellaneous uncontaminated structural and building materials	Pile storage, roll off bins, site-wide	None
Scrap metal	Roll-off bins, site-wide	None
Vegetative material	Roll-off bins, site wide	None
Uncontaminated soil	Pile storage, site wide	None
Contaminated soil or debris	Covered roll-off bins, site-wide; 55-gallon drums, designated hazardous waste storage areas	90 days
Oily water and oil-water separator sludge	Temporary tanks with secondary containment if not collected directly into transport vehicle (e.g., vacuum truck), 55-gallon drums, designated hazardous waste storage areas	90 days
Waste paint, adhesives, and paint-related debris	55-gallon drums, designated hazardous waste storage areas	90 days
Lead-based paint debris	Double (4-mil) or single (6-mil) bagged and placed in 55-gallon drums, designated hazardous waste storage areas	90 days
Waste fuel (diesel, gasoline)	55-gallon drums, designated hazardous waste storage areas	90 days
Waste oil and oily debris	55-gallon drums, designated hazardous waste storage areas	90 days
Universal wastes	Boxes, fiber containers, buckets, and 55-gallon drums, designated hazardous waste storage areas	One year
Waste maintenance chemicals	55-gallon drums, designated hazardous waste storage areas	90 days
Empty containers < 5 gallons	Roll-off bins, site wide	None
Empty containers > 5 gallons	Designated empty drum storage areas, drums will be labeled "Empty"	One year

Table 3 Waste Containment and Storage Summary Marsh Landing Generating Station		
Waste	**Storage and Containment**	**Storage Time Limits**
Waste/spent corrosives, ammonia waste, laboratory waste	Poly drums, designated hazardous waste storage areas	90 days
Waste natural gas liquids	Temporary tanks with secondary containment if not collected directly into transport vehicle (e.g., vacuum truck), 55-gallon drums, designated hazardous waste storage areas	90 days
Lead-acid batteries	Plastic containers, pallets, designated hazardous waste storage areas	90 days
Drained used oil filters	55-gallon drums, designated hazardous waste storage areas	One year
Wood waste	Roll-off bins, site-wide	None
Municipal refuse and garbage	Covered roll-off bins, trash cans, and dumpsters, site-wide	None
Sanitary wastewater	Sanitary waste collection sump and temporary storage facilities (e.g., hand-wash and portable facilities)	NA
Industrial wastewater	On-site storage tanks	NA
Turbine cleaning wash water	Double-walled underground storage tanks until removed by vacuum truck, combustion turbine drain tanks	None
Decontamination wastewater	Temporary tanks with secondary containment if not collected directly into transport vehicle (e.g., vacuum truck), 55-gallon drums, designated haz waste storage areas	Depends on hazards/ classification
Water from groundwater intrusion/dewatering	Temporary storage tanks, site-wide	None
CO and NOx catalyst	Roll-off bins, site-wide	90 days
Waste CFCs	Approved recovery containers, designated hazardous waste storage areas if not collected and removed immediately from site	90 days
Used natural gas filters	Boxes, fiber containers, designated hazardous waste storage areas	90 days
Waste ethylene and propylene glycol solutions	Plastic containers, drums	90 days

In addition to the above, all waste activities will be in accordance with the following regulatory requirements:

- CCR Title 22, Division 4.5, Chapter 12 – Standards Applicable to Generators of Hazardous Waste.
- Industrial Wastewater Permit issued by Delta Diablo.
- Air emissions permit and regulations, including Bay Area Air Quality Management District (BAAQMD) regulations for Fugitive Dust, Particulate Matter, Volatile Organic Emissions from Decontamination of Soil and Asbestos Emissions from Demolition/Renovation Activities, as applicable.
- MLGS Spill Prevention, Control, and Countermeasures Plan.
- MLGS Hazardous Materials Business Plan.

Hazardous waste accumulation areas are established and operated in accordance with CCR Title 22, Division 4.5, Chapter 12. Only short-term or limited-quantity storage of hazardous waste containers may occur outside of these designated areas.

On-Site Waste Processing and Treatment

At this time the only on-site waste processing activities and treatment are described below:

On-Site Wastewater Treatment

Wastewater from the evaporative cooler operations, floor drains and equipment area drains with the potential to be contaminated by oil are collected and passed through an oil-water separator and pumped to a 200,000 gallon wastewater storage tank. Water treatment area wastes are also pumped to the wastewater storage tank. Stored wastewater is later discharged, along with sanitary wastes, in accordance with the facility's industrial wastewater discharge permit issued by Delta Diablo.

In addition, the facility has a bioretention facility that detains and treats storm water. Storm water is detained and treated in the surface reservoir, filtered through plants and a biologically active soil mix, and then it infiltrates into the ground. The bioretention facility contains underdrains as a preventive measure against poor drainage. Underdrains are routed to an outlet that is valved and connects to CCGS's discharge tunnel to the River. The valve is kept closed and discharges to the River will only occur if the infiltration is inadequate to keep appropriate freeboard in the reservoir.

5.0 OFF-SITE WASTE DISPOSAL

5.1 Waste Transportation and Disposal Facility Selection and Use

All wastes will be transported from the site to the disposal, recycling or processing facility by appropriately licensed transporters and disposed of at licensed facilities. In addition, MLGS is subject to the NRG Energy, Inc. Environmental Policy and Procedures. Section 1.3. of NRG's Environmental Policy and Procedures Manual states the following:

1.3.2. Waste Disposal Contracts

Written contracts/purchase orders must be used when procuring services from suppliers for disposal and/or treatment of Facility wastes.

1.3.3. Waste Disposal Supplier Review, Selection & Contracting/Purchasing Details

NRG may not use the services of a waste disposal contractor without confirming:

1) the vendor company and its facility(ies) are properly licensed;

2) waste documentation is available as required by the vendor and/or Regulator, including:

a. a current waste profile (characterization) for the Facility waste stream the vendor will handle and the destination of each such waste; and

b. a properly completed manifest that complies with applicable law.

3) for Hazardous, Universal, Industrial/Special Wastes or materials to be recycled such as electronic equipment, batteries, lamps and mercury containing devices, an NRG representative, contracted auditor or Regulator has visited and audited the disposal/recycling site specified within the previous five years, and the audit report has been reviewed and approved by Environmental Compliance. For Non-Hazardous waste (such as general trash) and general household recycling materials such as paper, plastic and aluminum, audit reports are not required.

a. This applies to transfer locations and final destination waste facilities.

b. The Environmental Group can assist with conducting and/or obtaining an audit of a waste vendor facility being considered for disposal of a particular waste stream.

c. No waste shall be sent to any third-party waste disposal facilities without approval from Environmental Compliance based on a review of the waste vendor audit reports.

Evaluation of commercially available audits of waste disposal facilities and companies (such as through the service provided by CHWMEG) where NRG waste materials are sent shall be acceptable documentation for satisfying the requirements above, provided that the audit report has been reviewed and the waste disposal facility approved by Environmental Compliance.

Copies of the approved contract/purchase order and information regarding the vendor shall be kept in the Facility Environmental Files.

Waste transporters and disposal facilities currently being used or planned for use are provided in Table 4. Each of these facilities has been selected and contracted in accordance with the above NRG Policy. Additional or alternate facilities and transporters may be used in the future, depending upon conditions. All transporters and facilities shall be licensed and have the appropriate permits. Vendors shall also meet NRG Policies and Procedures and other internal requirements.

Table 4
Waste Transportation and Disposal Vendors
Marsh Landing Generating Station Operations

Waste	Transporter/Destination Facility
Waste (Concrete)	ALB, Inc. Cemex USA
Waste (Demo Debris)	Veolia – Keller Landfill (Allied Waste)
Waste from Special Projects	Clean Harbors or Veolia or MP Environmental
Routine Waste	Allied Waste
Waste Flammable Liquid (Lab Pack)	Veolia - Azusa
Waste Aerosols, Waste Flammables, Lead Debris	Veolia - Azusa
Universal Waste (Batteries, Lamps, Mercury Switches, Electronic Wastes, etc.) Non RCRA Hazardous Waste (Soil, Oily Debris, Ash, Pipes Contaminated with Fuel Oil, Oily Water, Waste Oil, Lab Packs, Wood Waste, Asphalt, Non PCB Ballasts, Urea, Soil Mixed With Asphalt, Waste Ethylene and Propylene Glycol Solutions)	Veolia – Azusa or Richmond
Hazardous Waste (Oily Pipe and Contaminated Soil)	Veolia – Keller or Azusa
Scrap Metal	Aaron Metals
Oil/Water/Sludge	Safety-Kleen – Newark Veolia – Azusa Ramos Environmental Services / World Oil Compton

Table 4 Waste Transportation and Disposal Vendors Marsh Landing Generating Station Operations	
Waste	**Transporter/Destination Facility**
Non RCRA Hazardous Waste (Natural Gas Filters)	Environmental Logistics, Inc. Hazmat TSDF Inc.

6.0 WASTE MANAGEMENT SYSTEM

6.1 Waste Management Procedures and Best Management Practices

Waste management procedures and best management practices which will be implemented throughout the course of operations include the following:

- Assignment of responsibility for waste management to the Environmental Specialist and Environmental Technician.
- Training of personnel regarding waste management procedures.
- Recording specified data for each off-site waste transfer (inert, non-hazardous, and hazardous).
- Performing disposal facility audits, in accordance with NRG Policy.
- Performing on-site transporter checks.
- Performing inspections of waste storage areas and containers.

6.2 Recordkeeping

MLGS will maintain appropriate records for all disposal of waste. Records will include the following:

- Records of waste classification determinations, including documentation of generator knowledge and waste analyses.
- Disposal facility waste profiles.
- Disposal facility audit reports.
- Transporter audit reports.
- Waste storage inspection records/checklists.
- Bills of lading for non-hazardous waste and universal waste shipments.
- Hazardous waste manifests for each waste shipment, including Generator Initial Copy.

Additional or duplicate information for hazardous wastes may also be maintained in a tracking spreadsheet on the shared drive. This spreadsheet captures a variety of information about each waste shipment including Date Shipped Off Site, Waste Shipping Name and Description, Shipper/Receiving Facility, Profile Number, Manifest Tracking Number, Number of Containers, Type of Containers, Total Quantity (Volume/Weight), and Waste Codes.

6.3 Waste Minimization and Reduction

As previously indicated, MLGS is subject to the NRG Energy, Inc. Environmental Policy and Procedures. Section 1.3. of NRG's Environmental Policy and Procedures Manual states the following:

NRG seeks to reduce waste generation and, in accordance with Environmental Law, provide for the safe, cost-effective and responsible management of wastes that cannot otherwise be avoided.

1.3.1. Waste Minimization/Pollution Prevention Plan

Each Operations Facility will maintain and update a waste minimization/pollution prevention plan that describes an internal program for preventing, reducing, recycling, reusing and minimizing waste. The plan will determine best management practices for reducing wastes and the costs associated with lawfully handling them. The plan shall be reviewed, updated as necessary, and approved at least every other year by the Facility Manager or his/her designee.

As part of the waste minimization/pollution prevention plan, the following areas must be examined: (a) description of the primary waste materials produced (routinely generated wastes such as plant trash, cardboard, used/waste oil, coal combustion products, used lamps, spent solvents, oil impacted solids, aerosol cans, spent resins and process sludge); (b) steps already implemented to prevent, reduce, recycle, reuse or minimize waste materials; (c) potential additional steps to prevent, reduce, recycle, reuse or minimize waste materials; and (d) recommendations for purchasing alternative raw materials and/or Industrial Chemicals that may reduce waste generation.

Non-hazardous waste minimization and reduction initiatives include the following:

- Recycling of concrete to the extent possible.
- Equipment salvage.
- Recycling of scrap steel, copper, aluminum and other metals.
- Recycling of wood.
- Recycling of used 55-gallon drums as scrap metal.

Minimization and reduction of hazardous wastes generated by the power generation operations is accomplished through adherence to the above-referenced NRG Policy and applicable regulations. Recommendations, as they are presented, will be considered for purchasing alternative raw materials and/or Industrial Chemicals that may reduce waste generation.

6.4 Facility Waste Management During Unplanned or Temporary Closure

Regardless of the circumstances of the temporary closure (unplanned or planned), the facility will maintain 24 hour staffing and the CEC will be notified. Facility waste management practices in a temporary closure would essentially remain the same as those performed during operations, although the waste volumes would be less due to the non-operational status of the facility. In the event of an extended shutdown, the facility may

need to conduct certain tasks, such as the draining of chemicals, water, and other fluids from storage tanks and plant equipment to ensure worker safety, and to protect plant equipment and the environment. These activities would follow normal maintenance practices, and be performed in accordance with equipment manufacturer's recommendations.

All hazardous and nonhazardous wastes generated during the temporary closure would be collected, managed, and disposed of consistent with all laws, ordinances, regulations and standards (LORS). It is expected that the management methods, housekeeping, waste testing methods, transportation and disposal requirements would remain the same as those during the operational phase of the facility. Inspections of wastes would also continue to be performed consistent with Federal, State and local regulations. Even in a longer term facility closure, the regulatory compliance programs and ongoing waste practices would continue.

In an unplanned facility temporary closure, nonhazardous liquid wastes, such as wastewater, would be managed in similar fashion as those conducted during operation of the facility, although at a reduced scale, as some wastes would no longer be generated. Storm water, although not a waste, would continue to be managed in similar fashion as during operations. Nonhazardous solid wastes would also continue to be managed in similar means as those generated during the operational phase of the facility.

In the event of an unplanned temporary facility closure due to emergencies such as earthquakes, fires, or releases of hazardous materials, activation of the appropriate Contingency Plan would be implemented. Contingency Plans are required under a number of regulatory programs, and the implementation would depend upon the type of emergency encountered. For example, a release of a hazardous material would trigger the implementation of the Facility Emergency Plan and the Hazardous Materials/Hazardous Waste Contingency Plan under Hazardous Materials Business Plan requirements. These Contingency Plans include methods to control releases of hazardous materials, notification of appropriate authorities and the public, training for plant personnel, and other emergency response actions and preparation. When the release of hazardous materials has been contained and cleaned up, temporary closure will proceed as in the case of a closure where there is no release of hazardous materials.

If the facility closure is of extended duration, an updated Hazardous Materials Business Plan will be submitted to the local CUPA that would reflect the changes to the facility storage of hazardous materials including wastes. Should hazardous materials remain on the site, inspections, recordkeeping, training and all other compliance requirements of the CEC as well as all other LORS will be continued.

A facility closure plan would not be prepared as part of a temporary closure, as it would be expected the plant would eventually return to service.

6.5 Facility Wastes Management and Disposal upon Closure of the Facility

The original planned operational life of the facility is at least 30 years with at least 23 years remaining, although the facility could operate longer or shorter depending upon numerous variables and conditions. When the facility is expected to be finally closed, procedures set forth in a facility closure plan will be implemented. Refer to the Compliance Conditions for Facility Closure Plan for specific details.

Proposed decommissioning measures will attempt to maximize the recycling of all facility components. Unused chemicals will be sold back to the suppliers or other purchasers where practicable. All equipment will be shut down and drained so as to ensure public health and safety and protection of the environment. All hazardous and nonhazardous waste materials will be collected and disposed of consistent with all LORS. Until decommissioning activities have been completed, 24-hour staffing for the facility will be maintained.

Figures

CAD File:	Drawn By:	Date:	Project No.
G:\DWGS\0428281 NRG\001\0428281001-01.dwg	J. Estrada	01/03/18	0428281.001

Figure 1

Site Vicinity Map

Marsh Landing Generating Station

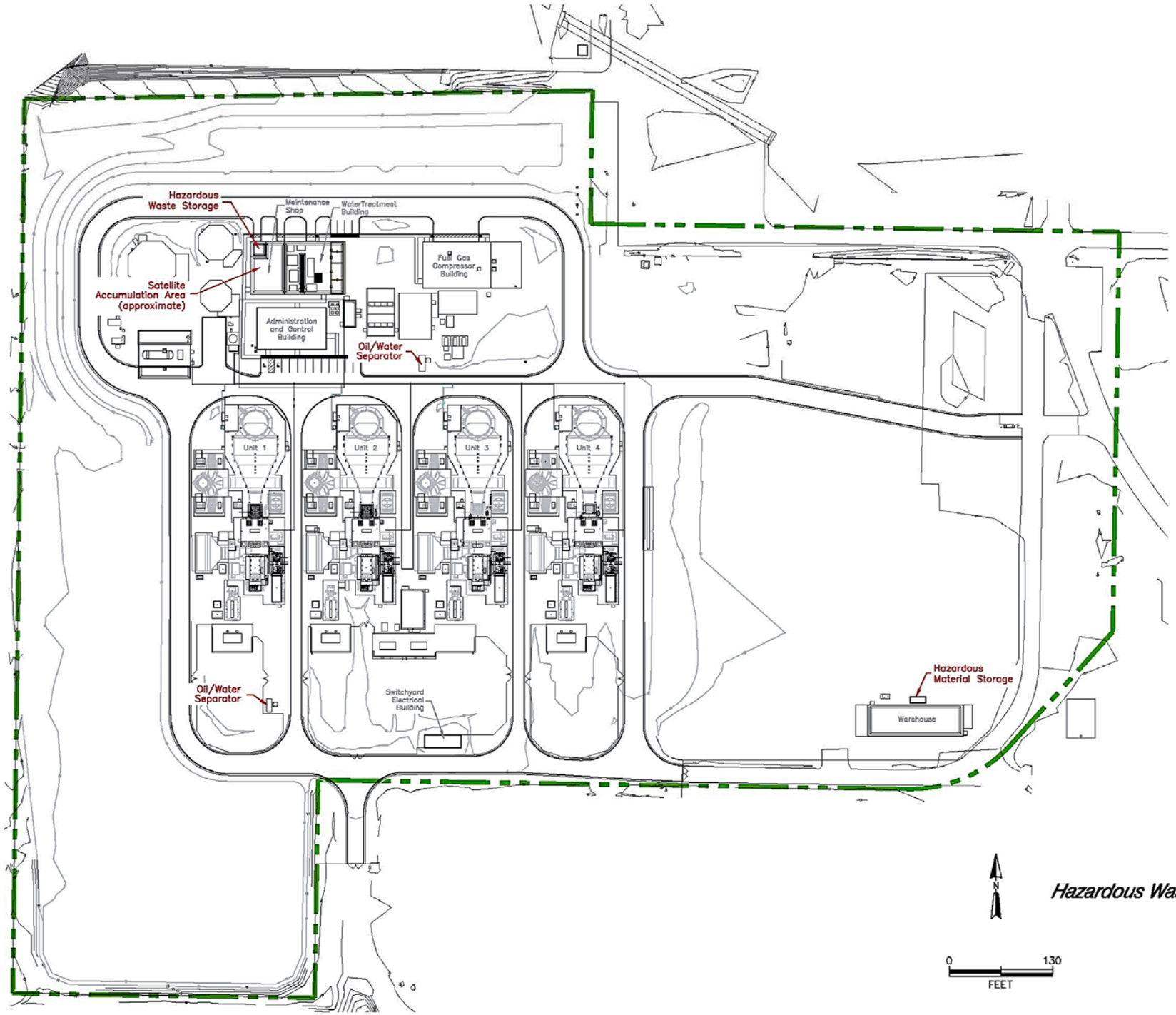
NRG Marsh Landing, LLC

3201-C Wilbur Avenue

Antioch, California

ERM *01/18*

CAD File: G:\0185229\018522900-07.dwg
Drawn By: J. Estrada
Date: 02/27/13
Project No. 0185229.00



LEGEND

Parcel Boundary

Notes:

1. Actual parcel location is approximate and based on construction drawings to date. For more detailed and accurate specifications, see Kiewit Marsh Landing Generating Station drawing number 2009-019-CM-013, 2009-019-CM-007, and 2009-019-PP-001.
2. Parcel boundary based on Contra Costa County Assessor's Map, Book 51, Page 3; 10-6-2010 (Block No. 031, Parcel 18). Parcel area = 26.84 acres.

N

0 130
FEET

Figure 2

Hazardous Waste Storage and Accumulation Areas
Marsh Landing Generating Station
GenOn Marsh Landing, LLC
3201-C Wilbur Avenue
Antioch, California

Appendix 1

Department of Toxic Substances Control
Meredith Williams, Ph.D.
Director
1001 "I" Street
P.O. Box 806
Sacramento, California 95812-0806

Jared Blumenfeld
Secretary for
Environmental Protection

Gavin Newsom
Governor

Facility Search Results

Selection Criteria:

Facility: MARSH LANDING
Search on: Physical Address
Status: Active and Inactive
Sort Direction: asc
Sorted By: EPA ID
Records Found: 2

EPA ID Number	Name	Address	City	Zip
CAL000359366	MARSH LANDING GENERATING STATION	3201 WILBUR AVE	ANTIOCH	94509
CAR000217273	MARSH LANDING GENERATING STATION	3201 WILBUR AVE # C	ANTIOCH	945098546

The Department of Toxics Substances Control (DTSC) takes every precaution to ensure the accuracy of data in the Hazardous Waste Tracking System (HWTS). However, because of the large number of manifests handled, inaccuracies in the submitted data, limitations of the manifest system and the technical limitations of the database, DTSC cannot guarantee that the data accurately reflect what was actually transported or produced.

Report Generation Date: 01/03/2020

ANNA M. ROTH, RN, MS, MPH
HEALTH SERVICES DIRECTOR
RANDALL L. SAWYER
DEPUTY HEALTH DIRECTOR
MATTHEW S. KAUFMANN
ACTING DIRECTOR OF HAZARDOUS MATERIALS PROGRAMS

CONTRA COSTA HEALTH SERVICES

CONTRA COSTA HAZARDOUS MATERIALS PROGRAMS
4585 Pacheco Boulevard, Suite 100
Martinez, California 94553
Ph (925) 655-3200
Fax (925) 646-2073
ccchazmat@cchealth.org
www.cchealth.org/hazmat/

HAZARDOUS WASTE GENERATOR (HWG) REPORTING FORM

FACILITY NAME: MARSH LANDING GENERATING STATION
3201 WILBUR AVE UNIT C
ANTIOCH, CA 94509

CUPA FACILITY ID: 774528
CERS ID: 10480876
EPA ID: CAR000217273

Please review the following to determine if submittal of the HWG Reporting form is necessary.

- Determine the amount of hazardous waste your business disposed of during the calendar year 2021. See "*Calculating Hazardous Waste*" on the reverse for tips on calculating hazardous waste disposal quantities.
- According to CCHSHMP records your business's annual hazardous waste disposal is:

LESS THAN 5 TONS/YEAR

- If your hazardous waste disposal calculations fall within the listed range, you do not need to submit the HWG Reporting Form. Calculations will be verified during your next inspection. Discrepancies confirmed during an inspection will result in a fee adjustment.
- If your hazardous waste disposal calculations do not fall within the range shown above, you will need to submit the HWG Reporting Form. Calculations will be verified during your next inspection and discrepancies will result in a fee adjustment. The instructions and the form are on the reverse. Forms are due to CCHSHMP on or before March 1, 2022.

This request for information is separate than the California Environmental Reporting System (CERS) requirements. Completion of this form, or not having to complete this form, does not fulfill the CERS reporting requirement under Title 27 of the California Code of Regulations.

YOU MUST ALSO COMPLETE AN ONLINE CERS SUBMITTAL
http://cers.calepa.ca.gov/

For additional assistance, please call CCHSHMP at (925) 655-3200 to speak with a Hazardous Materials Specialist or email us at ccchazmat@cchealth.org.

FACILITY NAME: MARSH LANDING GENERATING STATION
3201 WILBUR AVE UNIT C
ANTIOCH, CA 94509

CUPA FACILITY ID: 774528
CERS ID: 10480876
EPA ID: CAR000217273

Completing and Submitting the Hazardous Waste Generator Reporting Form

Calculating Hazardous Waste

Determine the amount of hazardous waste disposed of by your business by reviewing your business's hazardous waste manifests, consolidated manifests, and disposal receipts for calendar year 2021. Disposal includes any hazardous waste picked up by a licensed transporter or taken to a certified collection location. Hazardous waste is defined as any waste that is listed or meets the criteria of toxicity, corrosivity, ignitability, or reactivity as defined by the California Code of Regulations, Title 22, Chapter 11.
These guideline conversion factors may be used when calculating tonnage:

a) Number of gallons X 0.00417 tons / gallon = Number of tons
b) Number of cubic yards x 1.35 tons / cubic yard = Number of tons
c) Number of pounds / 2000 pounds = Number of tons

Completing the Reporting Form

1. If your calculation for the 2021 calendar year is outside your current disposal category you must complete this form.
2. Check the box that indicates the correct tonnage of hazardous waste disposed of during the 2021 calendar year.
3. Fill in signature, print name, date, phone number, and email address.

Submitting Options

CERS: Upload a pdf of the completed HWG Reporting Form to CERS under *Miscellaneous State-Required Documents* in the *Facility Information* submittal element. If there is a previously submitted Reporting Form, click on "Discard" to remove it before uploading the 2022 HWG Reporting Form. Type in "HWG Reporting Form" in the document title section and then click *Save & Finish*.
FAX: You may fax the completed HWG Reporting Form to (925) 646-2073.
EMAIL: You may email the completed HWG Reporting Form to ccchazmat@cchealth.org
MAIL: Contra Costa Health Services Hazardous Materials Programs
4585 Pacheco Blvd., Suite 100, Martinez, CA 94553

Hazardous Waste Generator Reporting Form

Total Tonnage of Hazardous Waste Disposed Of During 2021

- ☐ Zero tons
- ☐ Less than 5 tons
- ☐ 5 tons ≤ amount disposed < 12 tons
- ☐ 12 tons ≤ amount disposed < 25 tons
- ☒ 25 tons ≤ amount disposed < 50 tons
- ☐ 50 tons ≤ amount disposed < 250 tons
- ☐ 250 tons ≤ amount disposed < 500 tons
- ☐ 500 tons ≤ amount disposed < 1000 tons
- ☐ 1000 tons ≤ amount disposed < 2000 tons
- ☐ Greater than 2000 tons

I hereby certify that this form, including any accompanying statements, is true and correct to the best of my knowledge and belief.

Signature: Joe Moura **Date:** 2/16/2022
Print Name: Joe Moura **Phone:** 925-779-6685
Email Address: Joe.Moura@nrg.com

4.0 Approved Changes to Conditions of Certification – Cumulative List

Condition of Certification	Date Change was Approved
PAL-3	September 26, 2010
AQ-SC7	May 15, 2012
BIO-8	May 15, 2012
BIO-8 Verification modified	October 3, 2016
AQ-41 Through AQ-52 (Added with BESS)	February 2019
Application Modifications	Date Change was Approved
Emergency Diesel Generator	December 3, 2014
Fire Pump System(including diesel pump)	December 3, 2014
Modular Building – Simulator/Library	March 13, 2015
Paving Project	May 9, 2017
Black Start – Battery Energy Storage System	March 12, 2019