DOCKETED	
Docket Number:	08-AFC-03C
Project Title:	Marsh Landing Generating Station Compliance
TN #:	237302
Document Title:	2020 CEC Annual Compliance Report - Marsh Landing Part 2
Description:	Annual Operations Compliance Report for Marsh Landing Generating Station
Filer:	David Frandsen
Organization:	NRG
Submitter Role:	Applicant
Submission Date:	3/25/2021 10:08:46 AM
Docketed Date:	3/25/2021

Industrial User Report Checklist And Certification Statement Form

Attn: Environmental Compliance Specialist	**Jason Yun**		
Environmental Specialist Phone	(925) 756-1913	Fax	(925) 756-1961
Industrial User Facility Name	**Marsh Landing LLC**		
Duly Authorized Representative Name	**Joe Moura**		
Duly Authorized Representative Phone	**925-779-6685**		

This Industrial User Report Checklist and Certification Statement Form shall be submitted with all Self-Monitoring Reports (SMRs), as specified by the Wastewater Discharge Permit issued by Delta Diablo, hereinafter referred to as the District. When submitting Self-Monitoring Report, check all that are applicable.

RECEIVED
OCT 07 2020
DELTA DIABLO

Self-Monitoring Reports (SMRs) (Required)

☒ Flow Discharge Summary (Review Discharge Permit.)

☐ Calibration of Effluent Flow Meters; if applicable.

☒ Monitoring Results – all required tests completed, results reviewed, results included Quality Assurance/Quality Control (QA/QC) and Chain-of-Custody (COC) (Review Discharge Permit):

☒ pH (**field-grab**) (shall be **analyzed within 15 minutes of sample collection**).
Results, collection time, analysis time and Technician's Initials shall be reported in the comments section of the respective COC. The pH meter shall be accurate and reproducible to 0.1 pH unit with a range of 0 to 14 and equipped with a temperature–compensation adjustment (Standard methods).

☒ Cyanide samples were tested for oxidizers and preserved with Sodium Hydroxide (NaOH).
This shall be reported in the comments section on the respective COC, if applicable.

☒ Selenium lab analysis by EPA Method 200.8 by Reaction Mode: if applicable.

☒ Total Phenolics lab analysis by EPA Method 420.4: if applicable.

☒ **All sample analysis for regulatory compliance reporting** shall be completed by an ELAP certified Laboratory.

☒ Certification Statement included (see attached)

☐ Other requested data _____

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.

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	**July 1-September 30, 2020**

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	
Duly Authorized Representative Print	**Joe Moura**
Date	

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

October 7, 2020

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

Subject: **2020 Third Quarterly (July 1-September 30) Self-Monitoring Report**
Marsh Landing LLC, Marsh Landing Generating Station,
Industrial Wastewater Discharge Permit 0311963-S

This letter documents the transmittal of the 2020 Third 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 July 1 through September 30, 2020. This report includes monthly flow data and quarterly and semiannual analytical data required to be collected in 2020. 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.

It should be noted that a Special Discharge Permit (#SDP-0818-1195) was obtained from Delta Diablo for the period of Aug. 18- Sept. 18, 2020 which allowed for an increased flow rate of 34 gpm which when added to our current permit (0311963-S0) of 21 gpm allowed for a total discharge flow rate of 55 GPM with a daily total discharge of 79,200 Gallons per day.

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
Marsh Landing LLC
Marsh Landing Generating Station

Attachments

Table 1:	Quarterly Results for Combined Wastewater (FAC Combined)
Table 2:	Semiannual Results for Combined Wastewater (FAC Combined)
Table 3:	July 2020 Monthly Flow Data
Table 4:	August 2020 Monthly Flow Data
Table 5:	September 2020 Monthly Flow Data

Attachment 1:	pH COC
Attachment 2:	Analytical Reports

Marsh Landing LLC
Marsh Landing Generating Station
Permit 0311963-S

Table 1

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	July - September 2020
Report Type	Quarterly

Constituent	Sample Date	Permit Limit	Result	Units
Field pH	7/22/2020	6-10	7.0	S.U.
BOD	7/22/2020	-	6.9	mg/L
COD	7/22/2020	-	27	mg/L
Arsenic	7/22/2020	0.15	0.00053	mg/L
Cadmium	7/22/2020	0.1	ND	mg/L
Chromium	7/22/2020	0.5	0.00057	mg/L
Copper	7/22/2020	0.5	0.010	mg/L
Iron	7/22/2020	-	0.15	mg/L
Lead	7/22/2020	0.5	ND	mg/L
Mercury	7/22/2020	0.003	ND	mg/L
Molybdenum	7/22/2020	-	0.0015	mg/L
Nickel	7/22/2020	0.5	0.0033	mg/L
Selenium	7/22/2020	0.25	ND	mg/L
Silver	7/22/2020	0.2	ND	mg/L
Zinc	7/22/2020	1.0	0.027	mg/L
TDS	7/22/2020	-	250	mg/L
TSS	7/22/2020	-	7.70	mg/L

mg/L = Milligrams per liter

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

Table 2

Semiannual 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	July - September 2020
Report Type	Semiannual

Constituent	Sample Date	Permit Limit	Result	Units
Cyanide	7/22/2020	0.20	ND	mg/L
Total Phenolics (EPA 420.4)	7/22/2020	1.0	ND	mg/L
Ammonia as N	7/22/2020	200	3.7	mg/L
Oil and Grease Animal/Vegetable (HEM)	7/22/2020	300	6.4	mg/L
Oil and Grease Petroleum/Mineral (SGT-HEM)	7/22/2020	100	5.0	mg/L
TOXIC ORGANICS				
Bromodichloromethane	7/22/2020	-	0.0019	mg/L
Chloroform	7/22/2020	-	0.0018	mg/L
Dibromochloromethane	7/22/2020	-	0.0011	mg/L
Bis (2-ethylhexyl) Phthalate	7/22/2020	-	0.00019 J	mg/L
Diethyl Phthalate	7/22/2020	-	0.000036 J	mg/L
Di-n-butyl phthalate	7/22/2020	-	0.000037 J	mg/L
Dimethyl Phthalate	7/22/2020	-	0.0000085 J	mg/L
Flouranthene	7/22/2020	-	0.0000043 J	mg/L
TOTAL TOXIC ORGANICS	7/22/2020	2.0	0.0048	mg/L

J = The reported concentration is an estimated value and is not included in Total Toxic Organic totals.

mg/L = Milligrams per liter

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

Table 3
Monthly 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	Jul-20
Report Type	Quarterly
Constituent	Flow
Sample Type	Continuous, measured by flow meter
Sample Date	7/1/2020 - 7/31/2020
Permit Limits (s.u.)	NTE 30,240 gpd. NTE 21 gpm +10% 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 21 (+10% = 23.1)
1	2,823	19.22	
2	6,634	19.07	
3	3,874	19.58	
4	6,073	19.07	
5	0	0.00	
6	430	12.76	
7	0	0.00	
8	7,007	19.46	
9	5,978	19.08	
10	1,890	20.55	
11	2,208	19.14	
12	0	0.00	
13	3,261	19.08	
14	7,638	19.08	
15	3,170	20.17	
16	8,431	19.09	
17	1,805	19.39	
18	0	0.00	
19	0	0.00	
20	0	0.00	
21	12,570	19.13	
22	19,872	19.22	
23	0	0.00	
24	11,623	20.13	
25	0	0.00	
26	0	0.00	
27	10,009	19.19	
28	21,222	19.11	
29	3,036	20.08	
30	12,985	19.23	
31	27,271	19.15	

Total Monthly Flow (gal)	179,810	Did flow exceed limits?	NO
Daily Max Flow (gpd)	27,271	Flow above daily max (30,240 gpd)?	NO
Average Monthly Flow (gpd)	5,800		

Table 4
Monthly 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	Aug-20		
Report Type	Quarterly		
Constituent	Flow		
Sample Type	Continuous, measured by flow meter		
Sample Date	8/1/2020 - 8/31/2020		
Permit Limits (s.u.)	NTE 30,240 gpd. NTE 21 gpm +10% for 15 consecutive minutes or 30 minutes in a 24-hour period		
* -Permit Limits (as of 8/18)	NTE 79,200 gpd. NTE 55 gpm +10% 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 21 (+10% = 23.1)
1	27,360	19.09	
2	9,328	19.09	
3	8,977	19.68	
4	27,361	19.17	
5	5,753	19.20	
6	8,798	19.09	
7	0	0.00	
8	0	0.00	
9	0	0.00	
10	7,832	20.46	
11	8,417	19.08	
12	5,317	20.94	
13	10,223	19.12	
14	28,165	20.54	
15	29,377	20.57	
16	29,376	20.52	
17	29,295	20.55	
18	29,374	20.56	*
19	29,377	20.53	*
20	43,357	50.11	*
21	71,730	50.24	*
22	71,849	50.39	*
23	49,458	50.01	*
24	8,749	37.10	*
25	53,463	38.36	*
26	47,688	47.41	*
27	35,112	30.99	*
28	51,828	49.85	*
29	33,500	49.39	*
30	23,479	49.19	*
31	17,831	36.46	*

* - Permit Flows from Aug 18 - Aug 31 were increased with a Special Permit (#SDP-0818-1195)to 55 GPM with a total daily flow of 79,200 gallons per day.

Total Monthly Flow (gal)	802,374	Did flow exceed limits?	NO
Daily Max Flow (gpd)	71,849	Flow above daily max (30,240 gpd)?	NO
Average Monthly Flow (gpd)	25,883	Flow above daily max (79,200 gpd)?	NO

Table 5
Monthly 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	Sep-20		
Report Type	Quarterly		
Constituent	Flow		
Sample Type	Continuous, measured by flow meter		
Sample Date	9/1/2020 - 9/31/2020		
Permit Limits (s.u.)	NTE 30,240 gpd. NTE 21 gpm +10% for 15 consecutive minutes or 30 minutes in a 24-hour period		
* -Permit Limits (Thru 9/18)	NTE 79,200 gpd. NTE 55 gpm +10% 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 21 (+10% = 23.1)
1	35,960	49.43	*
2	21,944	36.91	*
3	42,684	50.51	*
4	41,809	50.64	*
5	22,664	38.81	*
6	68,240	50.56	*
7	71,279	50.23	*
8	71,998	50.17	*
9	70,977	50.32	*
10	15,602	37.61	*
11	11,947	37.17	*
12	1,599	24.19	*
13	0	0.00	*
14	9,348	20.62	*
15	7,217	20.65	*
16	13,294	20.64	*
17	391	15.66	*
18	2,457	22.34	*
19	5,265	20.60	
20	0	0.00	
21	5,148	21.49	
22	9,202	20.59	
23	3,455	20.59	
24	12,490	20.69	
25	0	0.00	
26	0	0.00	
27	0	0.00	
28	7,100	21.59	
29	2,654	20.34	
30	18,827	20.21	

* - Permit Flows from Sept. 1 - Sept 18 were increased with a Special Permit (#SDP-0818-1195)to 55 GPM with a total daily flow of 79,200 gallons per day.

Total Monthly Flow (gal)	573,551	Did flow exceed limits?	NO
Daily Max Flow (gpd)	71,998	Flow above daily max (30,240 gpd)?	NO
Average Monthly Flow (gpd)	19,118	Flow above daily max (79,200 gpd)?	NO

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-20-079	7/22/20	1330	7/22/20	1330	Wastewater	Grab	7.0

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

Environmental Engineer David Frandsen

Signature: David Frandsen

Date: July 23, 2020

Sampling Technologist: James E Robinson

Signature: James E. Robinson

Date : 22-Jul-20

McCampbell Analytical, Inc.

"When Quality Counts"

Analytical Report

WorkOrder: 2007B27

Report Created for: NRG Energy, LLC

3201 Wilbur Avenue
Antioch, CA 94509

Project Contact: David Frandsen
Project P.O.: 4501896168
Project: Marsh Landing: DDSD: Quarterly

Project Received: 07/22/2020

Analytical Report reviewed & approved for release on 07/29/2020 by:

Jennifer Lagerbom
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.
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http://www.mccampbell.com / E-mail: main@mccampbell.com

Glossary of Terms & Qualifier Definitions

Client: NRG Energy, LLC
Project: Marsh Landing: DDSD: Quarterly
WorkOrder: 2007B27

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)

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Case Narrative

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

Work Order: 2007B27
July 29, 2020

EPA method 200.8: Metals

Our standard ICP-MS analytical procedure is to analyze selenium using the reaction mode.

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Analytical Report

Client:	NRG Energy, LLC	**WorkOrder:**	2007B27
Date Received:	07/22/2020 16:27	**Extraction Method:**	SM5210B
Date Prepared:	07/22/2020	**Analytical Method:**	SM5210 B-2001
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 ML-20-065	**2007B27-001B**	**Water**	**07/22/2020 13:30**	**WetChem**	**202294**

Analytes	Result	MDL	RL	DF	Date Analyzed
BOD	**6.9**	4.0	4.0	1	07/27/2020 16:49

Analyst(s): AL

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Analytical Report

Client:	NRG Energy, LLC	**WorkOrder:**	2007B27
Date Received:	07/22/2020 16:27	**Extraction Method:**	SM5220 D-1997
Date Prepared:	07/28/2020	**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 ML-20-064	**2007B27-001A**	**Water**	**07/22/2020 13:30**	**SPECTROPHOTOMETER**	**202647**

Analytes	Result	MDL	RL	DF	Date Analyzed
COD	**27**	7.2	10	1	07/28/2020 11:05

Analyst(s): RB

McCampbell Analytical, Inc.
"When Quality Counts"

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http://www.mccampbell.com / E-mail: main@mccampbell.com

Analytical Report

Client:	NRG Energy, LLC	**WorkOrder:**	2007B27
Date Received:	07/22/2020 16:27	**Extraction Method:**	E200.8
Date Prepared:	07/23/2020	**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 ML-20-068	**2007B27-001E**	**Water**	**07/22/2020 13:30**	**ICP-MS4 1206SMPL.d**	**202342**

Analytes	Result	MDL	RL	DF	Date Analyzed
Arsenic	**0.00053**	0.00012	0.00050	1	07/24/2020 15:55
Cadmium	ND	0.000060	0.00050	1	07/24/2020 15:55
Chromium	**0.00057**	0.00036	0.00050	1	07/24/2020 15:55
Copper	**0.010**	0.00043	0.00050	1	07/24/2020 15:55
Iron	**0.15**	0.0058	0.10	1	07/24/2020 15:55
Lead	ND	0.00032	0.00050	1	07/24/2020 15:55
Mercury	ND	0.000033	0.000050	1	07/24/2020 15:55
Molybdenum	**0.0015**	0.00021	0.00050	1	07/24/2020 15:55
Nickel	**0.0033**	0.00058	0.00050	1	07/24/2020 15:55
Selenium	ND	0.00018	0.00050	1	07/24/2020 15:55
Silver	ND	0.000042	0.00050	1	07/24/2020 15:55
Zinc	**0.027**	0.011	0.020	1	07/24/2020 15:55

Surrogates	REC (%)	Limits	
Terbium	115	70-130	07/24/2020 15:55

Analyst(s): JAG

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http://www.mccampbell.com / E-mail: main@mccampbell.com

Analytical Report

Client:	NRG Energy, LLC	**WorkOrder:**	2007B27
Date Received:	07/22/2020 16:27	**Extraction Method:**	SM2540 C-1997
Date Prepared:	07/27/2020	**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 ML-20-066	**2007B27-001C**	**Water**	**07/22/2020 13:30**	**WetChem**	**202627**

Analytes	Result	MDL	RL	DF	Date Analyzed
Total Dissolved Solids	**250**	10.0	10.0	1	07/28/2020 13:27

Analyst(s): HAD

McCampbell Analytical, Inc.
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Analytical Report

Client:	NRG Energy, LLC	**WorkOrder:**	2007B27
Date Received:	07/22/2020 16:27	**Extraction Method:**	SM2540 D-1997
Date Prepared:	07/23/2020	**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 ML-20-067	**2007B27-001D**	**Water**	**07/22/2020 13:30**	**WetChem**	**202392**

Analytes	Result	MDL	RL	DF	Date Analyzed
Total Suspended Solids	**7.70**	1.00	1.00	1	07/23/2020 16:05

Analyst(s): AL

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Quality Control Report

Client:	NRG Energy, LLC	**WorkOrder:**	2007B27
Date Prepared:	07/22/2020	**BatchID:**	202294
Date Analyzed:	07/27/2020	**Extraction Method:**	SM5210B
Instrument:	WetChem	**Analytical Method:**	SM5210 B-2001
Matrix:	Water	**Unit:**	mg/L
Project:	Marsh Landing: DDSD: Quarterly	**Sample ID:**	MB/LCS/LCSD-202294

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	214	227	198	108	115	80-120	5.90	16

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Quality Control Report

Client:	NRG Energy, LLC	**WorkOrder:**	2007B27
Date Prepared:	07/28/2020	**BatchID:**	202647
Date Analyzed:	07/28/2020	**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-202647 2007B27-001AMS/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	108	108	100	108	108	90-110	0	20

Analyte	MS DF	MS Result	MSD Result	SPK Val	SPKRef Val	MS %REC	MSD %REC	MS/MSD Limits	RPD	RPD Limit
COD	1	116	125	100	27.00	89	98	80-120	7.47	20

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Quality Control Report

Client:	NRG Energy, LLC	**WorkOrder:**	2007B27
Date Prepared:	07/22/2020 - 07/23/2020	**BatchID:**	202342
Date Analyzed:	07/23/2020 - 07/24/2020	**Extraction Method:**	E200.8
Instrument:	ICP-MS5	**Analytical Method:**	E200.8
Matrix:	Water	**Unit:**	µg/L
Project:	Marsh Landing: DDSD: Quarterly	**Sample ID:**	MB/LCS/LCSD-202342

QC Summary Report for Metals

Analyte	MB Result	MDL	RL	SPK Val	MB SS %REC	MB SS Limits
Arsenic	ND	0.120	0.500	-	-	-
Cadmium	ND	0.0600	0.500	-	-	-
Chromium	ND	0.360	0.500	-	-	-
Copper	ND	0.430	0.500	-	-	-
Iron	ND	58.0	100	-	-	-
Lead	ND	0.320	0.500	-	-	-
Mercury	ND	0.0330	0.0500	-	-	-
Molybdenum	ND	0.210	0.500	-	-	-
Nickel	ND	0.580	1.00	-	-	-
Selenium	ND	0.180	0.500	-	-	-
Silver	ND	0.0420	0.500	-	-	-
Zinc	ND	11.0	20.0	-	-	-
Surrogate Recovery						
Terbium	516			500	103	70-130

Analyte	LCS Result	LCSD Result	SPK Val	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Limit
Arsenic	51.1	50.9	50	102	102	85-115	0.385	20
Cadmium	51.1	51.0	50	102	102	85-115	0.257	20
Chromium	50.3	50.4	50	101	101	85-115	0.262	20
Copper	50.8	50.8	50	102	102	85-115	0.0393	20
Iron	4960	4920	5000	99	98	85-115	0.709	20
Lead	51.9	51.6	50	104	103	85-115	0.543	20
Mercury	1.21	1.24	1.25	97	99	85-115	1.96	20
Molybdenum	50.0	49.2	50	100	98	85-115	1.48	20
Nickel	50.6	51.2	50	101	102	85-115	1.08	20
Selenium	52.6	52.5	50	105	105	85-115	0.196	20
Silver	49.6	50.0	50	99	100	85-115	0.788	20
Zinc	521	519	500	104	104	85-115	0.389	20
Surrogate Recovery								
Terbium	559	527	500	112	105	70-130	5.92	20

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Quality Control Report

Client:	NRG Energy, LLC	**WorkOrder:**	2007B27
Date Prepared:	07/27/2020	**BatchID:**	202627
Date Analyzed:	07/28/2020	**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-202627

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	949	986	1000	95	99	80-120	3.82	10

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Quality Control Report

Client:	NRG Energy, LLC	**WorkOrder:**	2007B27
Date Prepared:	07/23/2020	**BatchID:**	202392
Date Analyzed:	07/23/2020	**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-202392

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	94.0	93.5	100	94	94	80-120	0.533	10

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CHAIN-OF-CUSTODY RECORD

WorkOrder: 2007B27 **ClientCode: GOA**

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

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

Email: joe.moura@nrg.com
cc/3rd Party: David.Frandsen@nrg.com; james.robinson
PO: 4501896168
Project: Marsh Landing: DDSD: Quarterly

Bill to:
Accounts Payable
NRG
112 Telly Street
New Roads, LA 70760
invoices@clearwayenergy.com

Requested TATs: 5 days; 7 days;

Date Received: **07/22/2020**
Date Logged: **07/22/2020**

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
2007B27-001	FAC Combined Wastewater ML-20-064	Water	7/22/2020 13:30	☐		A		A								
2007B27-001	FAC Combined Wastewater ML-20-065	Water	7/22/2020 13:30	☐	B											
2007B27-001	FAC Combined Wastewater ML-20-066	Water	7/22/2020 13:30	☐					C							
2007B27-001	FAC Combined Wastewater ML-20-067	Water	7/22/2020 13:30	☐						D						
2007B27-001	FAC Combined Wastewater ML-20-068	Water	7/22/2020 13:30	☐			E									

Test Legend:

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

Project Manager: Angela Rydelius **Prepared by: Kena Ponce**

Comments: Use QUOTE 192976 for any Marsh Landing projects to get correct analyte list. For Marsh Landing, report in mg/L.

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

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WORK ORDER SUMMARY

Client Name: NRG ENERGY, LLC
Client Contact: Joe Moura
Contact's Email: joe.moura@nrg.com

Project: Marsh Landing: DDSD: Quarterly
Comments: Use QUOTE 192976 for any Marsh Landing projects to get correct analyte list. For Marsh Landing, report in mg/L.

Work Order: 2007B27
QC Level: LEVEL 2
Date Logged: 7/22/2020

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

Lab ID	Client ID	Matrix	Test Name	Containers /Composites	Bottle & Preservative	De-chlorinated	Collection Date & Time	TAT	Sediment Content	Hold	SubOut
2007B27-001A	FAC Combined Wastewater ML-20-064	Water	SM5220D (COD)	2	aVOA w/ H2SO4	☐	7/22/2020 13:30	5 days	Trace	☐	
2007B27-001B	FAC Combined Wastewater ML-20-065	Water	SM5210B (BOD)	1	500mL HDPE, unprsv.	☐	7/22/2020 13:30	7 days	Trace	☐	
2007B27-001C	FAC Combined Wastewater ML-20-066	Water	SM2540C (TDS)	1	500mL HDPE, unprsv.	☐	7/22/2020 13:30	5 days	Trace	☐	
2007B27-001D	FAC Combined Wastewater ML-20-067	Water	SM2540D (TSS)	1	1L HDPE, unprsv.	☐	7/22/2020 13:30	5 days	Trace	☐	
2007B27-001E	FAC Combined Wastewater ML-20-068	Water	E200.8 (Metals) <Antimony, Arsenic, Barium, Beryllium, Cadmium, Calcium, Chromium, Cobalt, Copper, Lead, Magnesium, Mercury, Molybdenum, Nickel, Potassium, Selenium, Silver, Sodium, Thallium, Tungsten, Vanadium, Zinc>	1	250mL HDPE w/ HNO3	☐	7/22/2020 13:30	5 days	Trace	☐	

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.

Chain of Custody

Page 1 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

2007827

SAMPLES SUBMITTED TO		SEND INVOICE TO		PROJECT	
Laboratory:	McCampbell Analytical, Inc.	Company:	NRG Energy, Inc	Plant:	Marsh Landing
ELAP Cert. No.	1644	Attention:	Sandra Herndon	Title:	DDSD
Address:	1534 Willow Pass Road, Pittsburg, CA 94565-1701	Address:	112 Telly St. New Roads, LA 70760	Phase:	Quarterly
Phone/Fax:	925.252.9262/ 925.252.9269	P.O. No.:	4501896168	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-20-064	22-Jul-20	1330	DDSD	Quarterly	Wastewater	C-24	FAC Combined Wastewater	2	Amber VOAs	43	H_2SO_4 (pH<2, 4°C)	X			
ML-20-065	22-Jul-20	1330	DDSD	Quarterly	Wastewater	C-24	FAC Combined Wastewater	1	HDPE Bottle	1,000	None (ZHS, 4°C)		X		
ML-20-066	22-Jul-20	1330	DDSD	Quarterly	Wastewater	C-24	FAC Combined Wastewater	1	HDPE Bottle	500	None (4°C)			X	
ML-20-067	22-Jul-20	1330	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		
	Antioch, CA 94509		
Phone/Fax:	925.324-3533/6509		
E-mail:	david.frandsen@nrg.com		***Include sample description with client sample ID.**
E-mail CC:	james.robinson@nrg.com		
E-mail CC:	joe.moura@nrg.com		
E-mail CC:			
E-mail CC:			
E-mail CC:			

	PRINTED NAME	SIGNATURE	COMPANY	DATE	TIME
Sampled by:	James E Robinson	James E. Robinson	NRG	22-Jul-20	1330
Relinquished by:	James E Robinson	James E. Robinson	NRG	22-Jul-20	1627
Received by:	T.P.		MAI	22-Jul-20	1627
Relinquished by:					
Received by:					
Relinquished by:					
Received by:					4.8C

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:*	NRG Energy, Inc	*Plant:*	Marsh Landing	
ELAP Cert. No.	1644	*Attention:*	Sandra Herndon	*Title:*	DDSD	
Address:	1534 Willow Pass Road, Pittsburg, CA 94565-1701	*Address:*	112 Telly St. New Roads, LA 70760	*Phase:*	Quarterly	
Phone/Fax:	925.252.9262/ 925.252.9269	*P.O. No.:*	4501896168	*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-20-068	22-Jul-20	1330	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		
Phone/Fax:	925.324-3533/6509		***Include sample description with client sample ID.**
E-mail:	david.frandsen@nrg.com		
E-mail CC:	james.robinson@nrg.com		
E-mail CC:	joe.moura@nrg.com		
E-mail CC:			
E-mail CC:			
E-mail CC:			

	PRINTED NAME	SIGNATURE	COMPANY	DATE	TIME
Sampled by:	James E Robinson	James E. Robinson	NRG	22-Jul-20	1330
Relinquished by:	James E Robinson	James E. Robinson	NRG	22-Jul-20	1627
Received by:	T.P.		MAI	22-Jul-20	1627
Relinquished by:					
Received by:					
Relinquished by:					
Received by:					48C

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Sample Receipt Checklist

Client Name: **NRG Energy, LLC**
Project: **Marsh Landing: DDSD: Quarterly**

WorkOrder №: **2007B27** Matrix: Water
Carrier: Client Drop-In

Date and Time Received: **7/22/2020 16:27**
Date Logged: **7/22/2020**
Received by: Tina Perez
Logged by: Kena Ponce

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	☑
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: 4.8°C				NA	☐
Water - VOA vials have zero headspace / no bubbles?	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 (200.8: ≤2; 525.3: ≤4; 530: ≤7; 541: <3; 544: <6.5 & 7.5)?	Yes	☐	No	☐	NA	☑
Free Chlorine tested and acceptable upon receipt (<0.1mg/L)?	Yes	☐	No	☐	NA	☑

Comments:

McCampbell Analytical, Inc.

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Analytical Report

WorkOrder:	2007B28	**Amended:**	07/30/2020
		Revision:	1
Report Created for:	NRG Energy, LLC		
	3201 Wilbur Avenue Antioch, CA 94509		
Project Contact:	David Frandsen		
Project P.O.:	4501896168		
Project:	Marsh Landing: DDSD: Semi-Annual		
Project Received:	07/22/2020		

Analytical Report reviewed & approved for release on 07/30/2020 by:

Christine Askari
Project Manager

The report shall not be reproduced except in full, without the written approval of the laboratory. The analytical results relate only to the items tested. Results reported conform to the most current NELAP standards, where applicable, unless otherwise stated in the case narrative.

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Glossary of Terms & Qualifier Definitions

Client: NRG Energy, LLC
Project: Marsh Landing: DDSD: Semi-Annual
WorkOrder: 2007B28

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)

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Glossary of Terms & Qualifier Definitions

Client: NRG Energy, LLC
Project: Marsh Landing: DDSD: Semi-Annual
WorkOrder: 2007B28

Analytical Qualifiers

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

Quality Control Qualifiers

F2	LCS/LCSD recovery and/or RPD/RSD is out of acceptance criteria.

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Analytical Report

Client:	NRG Energy, LLC	**WorkOrder:**	2007B28
Date Received:	07/22/2020 16:27	**Extraction Method:**	E1664A_SG
Date Prepared:	07/27/2020	**Analytical Method:**	E1664A
Project:	Marsh Landing: DDSD: Semi-Annual	**Unit:**	mg/L

Hexane Extractable Material (HEM; Oil & Grease) with Silica Gel Clean-Up

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
FAC Combined Wastewater ML-20-070	**2007B28-001B**	**Water**	**07/22/2020 13:30**	**O&G**	**202589**

Analytes	Result	Qualifiers	MDL	RL	DF	Date Analyzed
SGT-HEM	**5.0**	J	0.80	5.6	1	07/28/2020 18:05

Analyst(s): PHU

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Analytical Report

Client:	NRG Energy, LLC	**WorkOrder:**	2007B28
Date Received:	07/22/2020 16:27	**Extraction Method:**	E1664A
Date Prepared:	07/27/2020	**Analytical Method:**	E1664A
Project:	Marsh Landing: DDSD: Semi-Annual	**Unit:**	mg/L

Hexane Extractable Material (HEM; Oil & Grease) without Silica Gel Clean-Up

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
FAC Combined Wastewater ML-20-069	**2007B28-001A**	**Water**	**07/22/2020 13:30**	**O&G**	**202315**

Analytes	Result	MDL	RL	DF	Date Analyzed
HEM	**6.4**	1.3	5.6	1	07/28/2020 14:41

Analyst(s): PHU

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Analytical Report

Client:	NRG Energy, LLC	**WorkOrder:**	2007B28
Date Received:	07/22/2020 16:27	**Extraction Method:**	E608.3/SW3620B
Date Prepared:	07/24/2020	**Analytical Method:**	E608.3
Project:	Marsh Landing: DDSD: Semi-Annual	**Unit:**	mg/L

Organochlorine Pesticides + PCBs w/ Florisil Clean-up

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
FAC Combined Wastewater ML-20-074	2007B28-001F	Water	07/22/2020 13:30	GC40 07242038.d	202471

Analytes	Result	MDL	RL	DF	Date Analyzed
Aldrin	ND	0.000000	0.0000010	1	07/24/2020 19:44
a-BHC	ND	0.000000	0.0000010	1	07/24/2020 19:44
b-BHC	ND	0.000000	0.0000010	1	07/24/2020 19:44
d-BHC	ND	0.000000	0.0000010	1	07/24/2020 19:44
g-BHC	ND	0.000000	0.0000010	1	07/24/2020 19:44
Chlordane (Technical)	ND	0.000002	0.000020	1	07/24/2020 19:44
p,p-DDD	ND	0.000000	0.0000010	1	07/24/2020 19:44
p,p-DDE	ND	0.000000	0.0000010	1	07/24/2020 19:44
p,p-DDT	ND	0.000000	0.0000010	1	07/24/2020 19:44
Dieldrin	ND	0.000000	0.0000010	1	07/24/2020 19:44
Endosulfan I	ND	0.000000	0.0000010	1	07/24/2020 19:44
Endosulfan II	ND	0.000000	0.0000010	1	07/24/2020 19:44
Endosulfan sulfate	ND	0.000000	0.0000020	1	07/24/2020 19:44
Endrin	ND	0.000000	0.0000010	1	07/24/2020 19:44
Endrin aldehyde	ND	0.000000	0.0000010	1	07/24/2020 19:44
Heptachlor	ND	0.000000	0.0000010	1	07/24/2020 19:44
Heptachlor epoxide	ND	0.000000	0.0000010	1	07/24/2020 19:44
Toxaphene	ND	0.000002	0.000020	1	07/24/2020 19:44
Aroclor1016	ND	0.000001	0.000020	1	07/24/2020 19:44
Aroclor1221	ND	0.000002	0.000020	1	07/24/2020 19:44
Aroclor1232	ND	0.000003	0.000020	1	07/24/2020 19:44
Aroclor1242	ND	0.000002	0.000020	1	07/24/2020 19:44
Aroclor1248	ND	0.000001	0.000020	1	07/24/2020 19:44
Aroclor1254	ND	0.000001	0.000020	1	07/24/2020 19:44
Aroclor1260	ND	0.000002	0.000020	1	07/24/2020 19:44

Surrogates	REC (%)	Limits	
Decachlorobiphenyl	93	14-168	07/24/2020 19:44

Analyst(s): CN

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Analytical Report

Client:	NRG Energy, LLC	**WorkOrder:**	2007B28
Date Received:	07/22/2020 16:27	**Extraction Method:**	E624.1
Date Prepared:	07/23/2020	**Analytical Method:**	E624.1
Project:	Marsh Landing: DDSD: Semi-Annual	**Unit:**	mg/L

Acrolein, Acrylonitrile, & 2-Chloroethyl Vinyl Ether

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
FAC Combined Wastewater ML-20-076	**2007B28-001H**	**Water**	**07/22/2020 13:30**	**GC45 07232009.D**	**202485**

Analytes	Result	MDL	RL	DF	Date Analyzed
Acrolein (Propenal)	ND	0.0025	0.0050	1	07/23/2020 12:46
Acrylonitrile	ND	0.0010	0.0020	1	07/23/2020 12:46
2-Chloroethyl Vinyl Ether	ND	0.00050	0.0010	1	07/23/2020 12:46

Surrogates	REC (%)	Limits	
Dibromofluoromethane	111	65-165	07/23/2020 12:46

Analyst(s): KF

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Analytical Report

Client:	NRG Energy, LLC	**WorkOrder:**	2007B28
Date Received:	07/22/2020 16:27	**Extraction Method:**	E624.1
Date Prepared:	07/25/2020	**Analytical Method:**	E624.1
Project:	Marsh Landing: DDSD: Semi-Annual	**Unit:**	mg/L

Volatile Organics

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
FAC Combined Wastewater ML-20-075	**2007B28-001G**	**Water**	**07/22/2020 13:30**	**GC18 07252011.D**	**202554**

Analytes	Result	MDL	RL	DF	Date Analyzed
Benzene	ND	0.000036	0.00050	1	07/25/2020 13:46
Bromodichloromethane	**0.0019**	0.000027	0.00050	1	07/25/2020 13:46
Bromoform	ND	0.00021	0.00050	1	07/25/2020 13:46
Bromomethane	ND	0.00027	0.00050	1	07/25/2020 13:46
Carbon tetrachloride	ND	0.000047	0.00050	1	07/25/2020 13:46
Chlorobenzene	ND	0.000087	0.00050	1	07/25/2020 13:46
Chloroethane	ND	0.00016	0.00050	1	07/25/2020 13:46
Chloroform	**0.0018**	0.000085	0.00050	1	07/25/2020 13:46
Chloromethane	ND	0.000096	0.00050	1	07/25/2020 13:46
Dibromochloromethane	**0.0011**	0.000083	0.00050	1	07/25/2020 13:46
1,2-Dichlorobenzene	ND	0.000070	0.00050	1	07/25/2020 13:46
1,3-Dichlorobenzene	ND	0.000084	0.00050	1	07/25/2020 13:46
1,4-Dichlorobenzene	ND	0.000068	0.00050	1	07/25/2020 13:46
1,1-Dichloroethane	ND	0.000072	0.00050	1	07/25/2020 13:46
1,2-Dichloroethane (1,2-DCA)	ND	0.000018	0.00050	1	07/25/2020 13:46
1,1-Dichloroethene	ND	0.000015	0.00050	1	07/25/2020 13:46
trans-1,2-Dichloroethene	ND	0.00011	0.00050	1	07/25/2020 13:46
1,2-Dichloropropane	ND	0.000011	0.00050	1	07/25/2020 13:46
cis-1,3-Dichloropropene	ND	0.000066	0.00050	1	07/25/2020 13:46
trans-1,3-Dichloropropene	ND	0.000093	0.00050	1	07/25/2020 13:46
Ethylbenzene	ND	0.000081	0.00050	1	07/25/2020 13:46
Methylene chloride	ND	0.0010	0.0020	1	07/25/2020 13:46
1,1,2,2-Tetrachloroethane	ND	0.000035	0.00050	1	07/25/2020 13:46
Tetrachloroethene	ND	0.000079	0.00050	1	07/25/2020 13:46
Toluene	ND	0.00019	0.00050	1	07/25/2020 13:46
1,1,1-Trichloroethane	ND	0.000074	0.00050	1	07/25/2020 13:46
1,1,2-Trichloroethane	ND	0.00015	0.00050	1	07/25/2020 13:46
Trichloroethene	ND	0.00019	0.00050	1	07/25/2020 13:46
Trichlorofluoromethane	ND	0.000098	0.00050	1	07/25/2020 13:46
Vinyl chloride	ND	0.000052	0.00050	1	07/25/2020 13:46

Surrogates	REC (%)	Limits	
Dibromofluoromethane	92	78-112	07/25/2020 13:46
Toluene-d8	100	82-109	07/25/2020 13:46
4-BFB	99	63-121	07/25/2020 13:46

Analyst(s): AK

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Analytical Report

Client:	NRG Energy, LLC	**WorkOrder:**	2007B28
Date Received:	07/22/2020 16:27	**Extraction Method:**	E625.1
Date Prepared:	07/23/2020	**Analytical Method:**	E625.1
Project:	Marsh Landing: DDSD: Semi-Annual	**Unit:**	mg/L

Semi-Volatile Organics

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
FAC Combined Wastewater ML-20-077	2007B28-001I	Water	07/22/2020 13:30	GC21 07282048.D	202408

Analytes	Result	Qualifiers	MDL	RL	DF	Date Analyzed
Acenaphthene	ND		0.000002	0.0000049	1	07/29/2020 03:26
Acenaphthylene	ND		0.000001	0.0000049	1	07/29/2020 03:26
Anthracene	ND		0.000004	0.0000098	1	07/29/2020 03:26
Benzidine	ND		0.00057	0.0049	1	07/29/2020 03:26
Benzo (a) anthracene	ND		0.000019	0.000049	1	07/29/2020 03:26
Benzo (a) pyrene	ND		0.000004	0.0000098	1	07/29/2020 03:26
Benzo (b) fluoranthene	ND		0.000004	0.000020	1	07/29/2020 03:26
Benzo (g,h,i) perylene	ND		0.000008	0.000020	1	07/29/2020 03:26
Benzo (k) fluoranthene	ND		0.000005	0.0000098	1	07/29/2020 03:26
Bis (2-chloroethoxy) Methane	ND		0.00018	0.00098	1	07/29/2020 03:26
Bis (2-chloroethyl) Ether	ND		0.000002	0.0000098	1	07/29/2020 03:26
Bis (2-chloroisopropyl) Ether	ND		0.000016	0.000049	1	07/29/2020 03:26
Bis (2-ethylhexyl) Phthalate	**0.00019**	J	0.000095	0.00020	1	07/29/2020 03:26
4-Bromophenyl Phenyl Ether	ND		0.000083	0.00098	1	07/29/2020 03:26
Butylbenzyl Phthalate	ND		0.000042	0.000049	1	07/29/2020 03:26
4-Chloro-3-methylphenol	ND		0.00015	0.00098	1	07/29/2020 03:26
2-Chloronaphthalene	ND		0.000062	0.00098	1	07/29/2020 03:26
2-Chlorophenol	ND		0.000007	0.000049	1	07/29/2020 03:26
4-Chlorophenyl Phenyl Ether	ND		0.00011	0.00098	1	07/29/2020 03:26
Chrysene	ND		0.000008	0.0000098	1	07/29/2020 03:26
Dibenzo (a,h) anthracene	ND		0.000008	0.0000098	1	07/29/2020 03:26
Di-n-butyl Phthalate	**0.000037**	J	0.000014	0.000049	1	07/29/2020 03:26
1,2-Dichlorobenzene	ND		0.00047	0.00098	1	07/29/2020 03:26
1,3-Dichlorobenzene	ND		0.00023	0.00098	1	07/29/2020 03:26
1,4-Dichlorobenzene	ND		0.00033	0.00098	1	07/29/2020 03:26
3,3-Dichlorobenzidine	ND		0.000002	0.000020	1	07/29/2020 03:26
2,4-Dichlorophenol	ND		0.000002	0.0000098	1	07/29/2020 03:26
Diethyl Phthalate	**0.000036**	J	0.000019	0.000049	1	07/29/2020 03:26
2,4-Dimethylphenol	ND		0.00014	0.00098	1	07/29/2020 03:26
Dimethyl Phthalate	**0.0000085**	J	0.000004	0.0000098	1	07/29/2020 03:26
4,6-Dinitro-2-methylphenol	ND		0.00098	0.0049	1	07/29/2020 03:26
2,4-Dinitrophenol	ND		0.00054	0.0020	1	07/29/2020 03:26
2,4-Dinitrotoluene	ND		0.000012	0.000049	1	07/29/2020 03:26
2,6-Dinitrotoluene	ND		0.000004	0.000049	1	07/29/2020 03:26
Di-n-octyl Phthalate	ND		0.000017	0.000049	1	07/29/2020 03:26
1,2-Diphenylhydrazine	ND		0.00013	0.00098	1	07/29/2020 03:26
Fluoranthene	**0.0000043**	J	0.000004	0.0000098	1	07/29/2020 03:26

(Cont.)

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Analytical Report

Client:	NRG Energy, LLC	**WorkOrder:**	2007B28
Date Received:	07/22/2020 16:27	**Extraction Method:**	E625.1
Date Prepared:	07/23/2020	**Analytical Method:**	E625.1
Project:	Marsh Landing: DDSD: Semi-Annual	**Unit:**	mg/L

Semi-Volatile Organics

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
FAC Combined Wastewater ML-20-077	**2007B28-001I**	**Water**	**07/22/2020 13:30**	**GC21 07282048.D**	**202408**

Analytes	Result	Qualifiers	MDL	RL	DF	Date Analyzed
Fluorene	ND		0.000004	0.0000098	1	07/29/2020 03:26
Hexachlorobenzene	ND		0.000000	0.0000049	1	07/29/2020 03:26
Hexachlorobutadiene	ND		0.000000	0.0000098	1	07/29/2020 03:26
Hexachlorocyclopentadiene	ND		0.00083	0.0049	1	07/29/2020 03:26
Hexachloroethane	ND		0.000007	0.000049	1	07/29/2020 03:26
Indeno (1,2,3-cd) pyrene	ND		0.000007	0.000020	1	07/29/2020 03:26
Isophorone	ND		0.00018	0.00098	1	07/29/2020 03:26
Naphthalene	ND		0.000005	0.000049	1	07/29/2020 03:26
Nitrobenzene	ND		0.00013	0.00098	1	07/29/2020 03:26
2-Nitrophenol	ND		0.00054	0.0049	1	07/29/2020 03:26
4-Nitrophenol	ND		0.0016	0.0049	1	07/29/2020 03:26
N-Nitrosodiphenylamine	ND		0.000088	0.00098	1	07/29/2020 03:26
N-Nitrosodi-n-propylamine	ND		0.00031	0.00098	1	07/29/2020 03:26
Pentachlorophenol	ND		0.000049	0.00024	1	07/29/2020 03:26
Phenanthrene	ND		0.000007	0.000020	1	07/29/2020 03:26
Phenol	ND		0.000020	0.00020	1	07/29/2020 03:26
Pyrene	ND		0.000004	0.0000098	1	07/29/2020 03:26
1,2,4-Trichlorobenzene	ND		0.000073	0.00098	1	07/29/2020 03:26
2,4,6-Trichlorophenol	ND		0.000003	0.0000098	1	07/29/2020 03:26
N-Nitrosodimethylamine	ND		0.00072	0.0049	1	07/29/2020 03:26

Surrogates	REC (%)	Limits	
2-Fluorophenol	49	20-130	07/29/2020 03:26
Phenol-d5	38	20-130	07/29/2020 03:26
Nitrobenzene-d5	66	30-130	07/29/2020 03:26
2-Fluorobiphenyl	69	40-130	07/29/2020 03:26
2,4,6-Tribromophenol	79	40-130	07/29/2020 03:26
Terphenyl-d14	53	40-130	07/29/2020 03:26

Analyst(s): AK

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Analytical Report

Client:	NRG Energy, LLC	**WorkOrder:**	2007B28
Date Received:	07/22/2020 16:27	**Extraction Method:**	E350.1
Date Prepared:	07/25/2020	**Analytical Method:**	E350.1
Project:	Marsh Landing: DDSD: Semi-Annual	**Unit:**	mg/L

Ammonia As Nitrogen

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
FAC Combined Wastewater ML-20-073	**2007B28-001E**	**Water**	**07/22/2020 13:30**	**WC_SKALAR 072520A1_61**	**202548**

Analytes	Result	MDL	RL	DF	Date Analyzed
Ammonia, total as N	**3.7**	0.092	0.10	1	07/25/2020 13:09

Analyst(s): RB

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Analytical Report

Client:	NRG Energy, LLC	**WorkOrder:**	2007B28
Date Received:	07/22/2020 16:27	**Extraction Method:**	Kelada-01
Date Prepared:	07/29/2020	**Analytical Method:**	Kelada-01
Project:	Marsh Landing: DDSD: Semi-Annual	**Unit:**	mg/L

Cyanide, Total

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
FAC Combined Wastewater ML-20-071	2007B28-001C	Water	07/22/2020 13:30	WC_SKALAR 072920D1_86	202753

Analytes	Result	MDL	RL	DF	Date Analyzed
Total Cyanide	ND	0.00077	0.0010	1	07/29/2020 15:44

Analyst(s): NM

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Analytical Report

Client:	NRG Energy, LLC	**WorkOrder:**	2007B28
Date Received:	07/22/2020 16:27	**Extraction Method:**	E420.4
Date Prepared:	07/24/2020	**Analytical Method:**	E420.4
Project:	Marsh Landing: DDSD: Semi-Annual	**Unit:**	mg/L

Phenolics

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
FAC Combined Wastewater ML-20-072	2007B28-001D	Water	07/22/2020 13:30	WC_SKALAR 072420B1_18	202473

Analytes	Result	MDL	RL	DF	Date Analyzed
Phenolics	ND	0.0016	0.0020	1	07/24/2020 09:48

Analyst(s): RB

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Quality Control Report

Client:	NRG Energy, LLC	**WorkOrder:**	2007B28
Date Prepared:	07/27/2020	**BatchID:**	202589
Date Analyzed:	07/27/2020	**Extraction Method:**	E1664A_SG
Instrument:	O&G	**Analytical Method:**	E1664A
Matrix:	Water	**Unit:**	mg/L
Project:	Marsh Landing: DDSD: Semi-Annual	**Sample ID:**	MB/LCS/LCSD-202589

QC Summary Report for E1664A

Analyte	MB Result	MDL	RL			
SGT-HEM	ND	0.720	5.00	-	-	-

Analyte	LCS Result	LCSD Result	SPK Val	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Limit
SGT-HEM	9.62	10.5	10.42	92	101	64-132	8.60	30

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Quality Control Report

Client:	NRG Energy, LLC	**WorkOrder:**	2007B28
Date Prepared:	07/22/2020	**BatchID:**	202315
Date Analyzed:	07/22/2020	**Extraction Method:**	E1664A
Instrument:	O&G	**Analytical Method:**	E1664A
Matrix:	Water	**Unit:**	mg/L
Project:	Marsh Landing: DDSD: Semi-Annual	**Sample ID:**	MB/LCS/LCSD-202315

QC Summary Report for E1664A

Analyte	MB Result	MDL	RL			
HEM	ND	1.20	5.00	-	-	-

Analyte	LCS Result	LCSD Result	SPK Val	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Limit
HEM	19.5	22.1	20.83	94	106	78-114	12.2	30

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Quality Control Report

Client:	NRG Energy, LLC	**WorkOrder:**	2007B28
Date Prepared:	07/24/2020	**BatchID:**	202471
Date Analyzed:	07/24/2020	**Extraction Method:**	E608.3/SW3620B
Instrument:	GC40	**Analytical Method:**	E608.3
Matrix:	Water	**Unit:**	µg/L
Project:	Marsh Landing: DDSD: Semi-Annual	**Sample ID:**	MB/LCS/LCSD-202471

QC Summary Report for E608.3 w/ Florisil Clean-up

Analyte	MB Result	MDL	RL	SPK Val	MB SS %REC	MB SS Limits
Aldrin	ND	0.000280	0.00100	-	-	-
a-BHC	ND	0.000310	0.00100	-	-	-
b-BHC	ND	0.000690	0.00100	-	-	-
d-BHC	ND	0.000140	0.00100	-	-	-
g-BHC	ND	0.000450	0.00100	-	-	-
a-Chlordane	ND	0.000850	0.00100	-	-	-
g-Chlordane	ND	0.000150	0.00100	-	-	-
p,p-DDD	ND	0.000110	0.00100	-	-	-
p,p-DDE	ND	0.000180	0.00100	-	-	-
p,p-DDT	ND	0.000170	0.00100	-	-	-
Dieldrin	ND	0.000140	0.00100	-	-	-
Endosulfan I	ND	0.000110	0.00100	-	-	-
Endosulfan II	ND	0.000460	0.00100	-	-	-
Endosulfan sulfate	ND	0.000330	0.00200	-	-	-
Endrin	ND	0.000180	0.00100	-	-	-
Endrin aldehyde	ND	0.000530	0.00100	-	-	-
Endrin ketone	ND	0.000260	0.00100	-	-	-
Heptachlor	ND	0.000410	0.00100	-	-	-
Heptachlor epoxide	ND	0.000250	0.00100	-	-	-
Methoxychlor	ND	0.000120	0.00100	-	-	-
Toxaphene	ND	0.00200	0.0200	-	-	-
Aroclor1016	ND	0.00190	0.0200	-	-	-
Aroclor1221	ND	0.00240	0.0200	-	-	-
Aroclor1232	ND	0.00380	0.0200	-	-	-
Aroclor1242	ND	0.00280	0.0200	-	-	-
Aroclor1248	ND	0.00180	0.0200	-	-	-
Aroclor1254	ND	0.00150	0.0200	-	-	-
Aroclor1260	ND	0.00280	0.0200	-	-	-
Surrogate Recovery						
Decachlorobiphenyl	0.0437			0.05	87	35-113

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Quality Control Report

Client:	NRG Energy, LLC	**WorkOrder:**	2007B28
Date Prepared:	07/24/2020	**BatchID:**	202471
Date Analyzed:	07/24/2020	**Extraction Method:**	E608.3/SW3620B
Instrument:	GC40	**Analytical Method:**	E608.3
Matrix:	Water	**Unit:**	µg/L
Project:	Marsh Landing: DDSD: Semi-Annual	**Sample ID:**	MB/LCS/LCSD-202471

QC Summary Report for E608.3 w/ Florisil Clean-up

Analyte	LCS Result	LCSD Result	SPK Val	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Limit
Aldrin	0.0377	0.0357	0.050	75	71	50-103	5.34	20
a-BHC	0.0465	0.0443	0.050	93	89	63-131	4.72	20
b-BHC	0.0395	0.0374	0.050	79	75	56-112	5.62	20
d-BHC	0.0449	0.0421	0.050	90	84	63-132	6.44	20
g-BHC	0.0362	0.0342	0.050	72	68	61-135	5.63	20
a-Chlordane	0.0382	0.0358	0.050	76	72	54-113	6.54	20
g-Chlordane	0.0419	0.0392	0.050	84	78	55-117	6.50	20
p,p-DDD	0.0472	0.0441	0.050	94	88	56-135	6.73	20
p,p-DDE	0.0437	0.0408	0.050	87	82	56-131	6.95	20
p,p-DDT	0.0451	0.0416	0.050	90	83	47-153	7.94	20
Dieldrin	0.0474	0.0444	0.050	95	89	67-152	6.54	20
Endosulfan I	0.0423	0.0397	0.050	85	79	56-137	6.32	20
Endosulfan II	0.0462	0.0433	0.050	92	87	50-113	6.57	20
Endosulfan sulfate	0.0471	0.0439	0.050	94	88	57-121	7.14	20
Endrin	0.0464	0.0434	0.050	93	87	60-150	6.64	20
Endrin aldehyde	0.0384	0.0365	0.050	77	73	47-121	5.19	20
Endrin ketone	0.0419	0.0391	0.050	84	78	48-130	6.94	20
Heptachlor	0.0390	0.0371	0.050	78	74	46-133	4.88	20
Heptachlor epoxide	0.0383	0.0365	0.050	77	73	54-105	4.86	20
Methoxychlor	0.0480	0.0442	0.050	96	88	54-135	8.21	20
Aroclor1016	0.148	0.139	0.15	99	93	50-114	6.44	20
Aroclor1260	0.153	0.152	0.15	102	101	42-121	0.605	20
Surrogate Recovery								
Decachlorobiphenyl	0.0483	0.0444	0.050	97	89	35-113	8.45	20

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Quality Control Report

Client:	NRG Energy, LLC	**WorkOrder:**	2007B28
Date Prepared:	07/23/2020	**BatchID:**	202485
Date Analyzed:	07/23/2020	**Extraction Method:**	E624.1
Instrument:	GC45	**Analytical Method:**	E624.1
Matrix:	Water	**Unit:**	µg/L
Project:	Marsh Landing: DDSD: Semi-Annual	**Sample ID:**	MB/LCS/LCSD-202485

QC Summary Report for E624.1

Analyte	MB Result	MDL	RL	SPK Val	MB SS %REC	MB SS Limits
Acrolein (Propenal)	ND	2.50	5.00	-	-	-
Acrylonitrile	ND	1.00	2.00	-	-	-
2-Chloroethyl Vinyl Ether	ND	0.500	1.00	-	-	-
Surrogate Recovery						
Dibromofluoromethane	27.3			25	109	76-110

Analyte	LCS Result	LCSD Result	SPK Val	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Limit
Acrolein (Propenal)	18.8	19.4	20	94	97	71-140	3.09	20
Acrylonitrile	21.3	21.6	20	106	108	67-145	1.77	20
2-Chloroethyl Vinyl Ether	16.8	18.4	20	84	92	70-124	9.33	20
Surrogate Recovery								
Dibromofluoromethane	27.0	26.9	25	108	108	76-110	0.578	20

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Quality Control Report

Client:	NRG Energy, LLC	**WorkOrder:**	2007B28
Date Prepared:	07/25/2020	**BatchID:**	202554
Date Analyzed:	07/25/2020	**Extraction Method:**	E624.1
Instrument:	GC18	**Analytical Method:**	E624.1
Matrix:	Water	**Unit:**	µg/L
Project:	Marsh Landing: DDSD: Semi-Annual	**Sample ID:**	MB/LCS/LCSD-202554

QC Summary Report for E624.1

Analyte	MB Result	MDL	RL	SPK Val	MB SS %REC	MB SS Limits
Benzene	ND	0.0360	0.500	-	-	-
Bromodichloromethane	ND	0.0270	0.500	-	-	-
Bromoform	ND	0.210	0.500	-	-	-
Bromomethane	ND	0.270	0.500	-	-	-
t-Butyl alcohol (TBA)	ND	2.20	5.00	-	-	-
Carbon tetrachloride	ND	0.0470	0.500	-	-	-
Chlorobenzene	ND	0.0870	0.500	-	-	-
Chloroethane	ND	0.160	0.500	-	-	-
Chloroform	ND	0.0850	0.500	-	-	-
Chloromethane	ND	0.0960	0.500	-	-	-
Dibromochloromethane	ND	0.0830	0.500	-	-	-
1,2-Dibromoethane (EDB)	ND	0.0750	0.500	-	-	-
1,2-Dichlorobenzene	ND	0.0700	0.500	-	-	-
1,3-Dichlorobenzene	ND	0.0840	0.500	-	-	-
1,4-Dichlorobenzene	ND	0.0680	0.500	-	-	-
1,1-Dichloroethane	ND	0.0720	0.500	-	-	-
1,2-Dichloroethane (1,2-DCA)	ND	0.0180	0.500	-	-	-
1,1-Dichloroethene	ND	0.0150	0.500	-	-	-
trans-1,2-Dichloroethene	ND	0.110	0.500	-	-	-
1,2-Dichloropropane	ND	0.0110	0.500	-	-	-
cis-1,3-Dichloropropene	ND	0.0660	0.500	-	-	-
trans-1,3-Dichloropropene	ND	0.0930	0.500	-	-	-
Ethylbenzene	ND	0.0810	0.500	-	-	-
Methyl-t-butyl ether (MTBE)	ND	0.120	0.500	-	-	-
Methylene chloride	ND	1.00	2.00	-	-	-
Styrene	ND	0.470	2.00	-	-	-
1,1,2,2-Tetrachloroethane	ND	0.0350	0.500	-	-	-
Tetrachloroethene	ND	0.0790	0.500	-	-	-
Toluene	ND	0.190	0.500	-	-	-
1,2,4-Trichlorobenzene	ND	0.200	0.500	-	-	-
1,1,1-Trichloroethane	ND	0.0740	0.500	-	-	-
1,1,2-Trichloroethane	ND	0.150	0.500	-	-	-
Trichloroethene	ND	0.190	0.500	-	-	-
Trichlorofluoromethane	ND	0.0980	0.500	-	-	-
Vinyl chloride	ND	0.0520	0.500	-	-	-
m,p-Xylene	ND	0.150	0.500	-	-	-
o-Xylene	ND	0.0700	0.500	-	-	-

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Quality Control Report

Client:	NRG Energy, LLC	**WorkOrder:**	2007B28
Date Prepared:	07/25/2020	**BatchID:**	202554
Date Analyzed:	07/25/2020	**Extraction Method:**	E624.1
Instrument:	GC18	**Analytical Method:**	E624.1
Matrix:	Water	**Unit:**	µg/L
Project:	Marsh Landing: DDSD: Semi-Annual	**Sample ID:**	MB/LCS/LCSD-202554

QC Summary Report for E624.1

Analyte	MB Result	MDL	RL	SPK Val	MB SS %REC	MB SS Limits
Surrogate Recovery						
Dibromofluoromethane	22.7			25	91	76-110
Toluene-d8	25.1			25	101	84-111
4-BFB	2.49			2.5	99	64-121

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Quality Control Report

Client:	NRG Energy, LLC	**WorkOrder:**	2007B28
Date Prepared:	07/25/2020	**BatchID:**	202554
Date Analyzed:	07/25/2020	**Extraction Method:**	E624.1
Instrument:	GC18	**Analytical Method:**	E624.1
Matrix:	Water	**Unit:**	µg/L
Project:	Marsh Landing: DDSD: Semi-Annual	**Sample ID:**	MB/LCS/LCSD-202554

QC Summary Report for E624.1

Analyte	LCS Result	LCSD Result	SPK Val	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Limit
tert-Amyl methyl ether (TAME)	3.32	3.29	4	83	82	62-119	0.965	20
Benzene	3.63	3.80	4	91	95	71-126	4.67	20
Bromodichloromethane	3.61	3.67	4	90	92	63-119	1.71	20
Bromoform	3.22	3.16	4	80	79	46-117	1.70	20
Bromomethane	4.26	4.14	4	106	103	32-171	2.86	20
t-Butyl alcohol (TBA)	11.8	11.5	16	74	72	40-131	2.39	20
Carbon tetrachloride	3.69	3.91	4	92	98	67-122	5.70	20
Chlorobenzene	3.63	3.79	4	91	95	71-117	4.40	20
Chloroethane	4.02	4.16	4	100	104	53-136	3.60	20
Chloroform	3.65	3.78	4	91	95	67-126	3.53	20
Chloromethane	4.14	4.29	4	104	107	42-148	3.55	20
Dibromochloromethane	3.31	3.37	4	83	84	52-120	1.81	20
1,2-Dibromoethane (EDB)	1.73	1.73	2	86	86	58-117	0.0892	20
1,2-Dichlorobenzene	3.50	3.64	4	88	91	71-117	3.70	20
1,3-Dichlorobenzene	3.77	3.83	4	94	96	74-116	1.44	20
1,4-Dichlorobenzene	3.67	3.71	4	92	93	71-115	1.05	20
1,1-Dichloroethane	3.69	3.82	4	92	95	68-128	3.46	20
1,2-Dichloroethane (1,2-DCA)	3.72	3.74	4	93	93	61-123	0.454	20
1,1-Dichloroethene	3.59	3.82	4	90	95	65-126	6.11	20
trans-1,2-Dichloroethene	3.57	3.74	4	89	94	70-126	4.85	20
1,2-Dichloropropane	3.49	3.59	4	87	90	67-124	2.86	20
cis-1,3-Dichloropropene	3.47	3.58	4	87	90	63-119	3.19	20
trans-1,3-Dichloropropene	3.47	3.54	4	87	88	63-116	1.87	20
Diisopropyl ether (DIPE)	3.49	3.56	4	87	89	64-128	2.06	20
Ethylbenzene	3.74	3.97	4	94	99	69-120	5.79	20
Ethyl tert-butyl ether (ETBE)	3.45	3.46	4	86	87	63-120	0.408	20
Methyl-t-butyl ether (MTBE)	3.37	3.33	4	84	83	60-121	1.18	20
Methylene chloride	3.49	3.57	4	87	89	40-148	2.28	20
Styrene	3.46	3.55	4	86	89	57-118	2.57	20
1,1,2,2-Tetrachloroethane	3.17	3.16	4	79	79	60-116	0.345	20
Tetrachloroethene	3.56	3.80	4	89	95	60-131	6.46	20
Toluene	3.50	3.74	4	87	93	67-115	6.59	20
1,2,4-Trichlorobenzene	3.50	3.49	4	87	87	61-133	0.234	20
1,1,1-Trichloroethane	3.71	3.94	4	93	99	67-124	6.14	20
1,1,2-Trichloroethane	3.26	3.28	4	81	82	62-117	0.607	20
Trichloroethene	3.64	3.82	4	91	96	69-120	4.92	20
Trichlorofluoromethane	3.79	4.02	4	95	101	60-134	5.82	20
Vinyl chloride	2.00	2.10	2	100	105	52-145	5.05	20

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Quality Control Report

Client:	NRG Energy, LLC	**WorkOrder:**	2007B28
Date Prepared:	07/25/2020	**BatchID:**	202554
Date Analyzed:	07/25/2020	**Extraction Method:**	E624.1
Instrument:	GC18	**Analytical Method:**	E624.1
Matrix:	Water	**Unit:**	µg/L
Project:	Marsh Landing: DDSD: Semi-Annual	**Sample ID:**	MB/LCS/LCSD-202554

QC Summary Report for E624.1

Analyte	LCS Result	LCSD Result	SPK Val	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Limit
m,p-Xylene	7.12	7.45	8	89	93	67-119	4.56	20
o-Xylene	3.68	3.81	4	92	95	68-120	3.69	20
Surrogate Recovery								
Dibromofluoromethane	22.1	21.6	25	88	86	76-110	2.24	20
Toluene-d8	25.5	26.0	25	102	104	84-111	1.73	20
4-BFB	2.62	2.53	2.5	105	101	64-121	3.73	20

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Quality Control Report

Client:	NRG Energy, LLC	**WorkOrder:**	2007B28
Date Prepared:	07/23/2020	**BatchID:**	202408
Date Analyzed:	07/23/2020	**Extraction Method:**	E625.1
Instrument:	GC17	**Analytical Method:**	E625.1
Matrix:	Water	**Unit:**	µg/L
Project:	Marsh Landing: DDSD: Semi-Annual	**Sample ID:**	MB/LCS/LCSD-202408

QC Summary Report for E625.1

Analyte	MB Result	MDL	RL	SPK Val	MB SS %REC	MB SS Limits
Carbazole	ND	0.110	1.00	-	-	-
n-Decane	ND	0.230	1.00	-	-	-
n-Octadecane	ND	0.100	1.00	-	-	-
Acenaphthene	ND	0.00280	0.00500	-	-	-
Acenaphthylene	ND	0.00170	0.00500	-	-	-
Anthracene	ND	0.00440	0.0100	-	-	-
Benzidine	ND	0.580	5.00	-	-	-
Benzo (a) anthracene	ND	0.0190	0.0500	-	-	-
Benzo (a) pyrene	ND	0.00440	0.0100	-	-	-
Benzo (b) fluoranthene	ND	0.00500	0.0200	-	-	-
Benzo (g,h,i) perylene	ND	0.00830	0.0200	-	-	-
Benzo (k) fluoranthene	ND	0.00520	0.0100	-	-	-
Benzyl Alcohol	ND	3.00	5.00	-	-	-
Bis (2-chloroethoxy) Methane	ND	0.180	1.00	-	-	-
Bis (2-chloroethyl) Ether	ND	0.00260	0.0100	-	-	-
Bis (2-chloroisopropyl) Ether	ND	0.0160	0.0500	-	-	-
Bis (2-ethylhexyl) Adipate	ND	0.110	1.00	-	-	-
Bis (2-ethylhexyl) Phthalate	ND	0.0970	0.200	-	-	-
4-Bromophenyl Phenyl Ether	ND	0.0850	1.00	-	-	-
Butylbenzyl Phthalate	ND	0.0430	0.0500	-	-	-
4-Chloroaniline	ND	0.00210	0.00500	-	-	-
4-Chloro-3-methylphenol	ND	0.150	1.00	-	-	-
2-Chloronaphthalene	ND	0.0640	1.00	-	-	-
2-Chlorophenol	ND	0.00770	0.0500	-	-	-
4-Chlorophenyl Phenyl Ether	ND	0.110	1.00	-	-	-
Chrysene	ND	0.00880	0.0100	-	-	-
Dibenzo (a,h) anthracene	ND	0.00830	0.0100	-	-	-
Dibenzofuran	ND	0.0530	1.00	-	-	-
Di-n-butyl Phthalate	ND	0.0140	0.0500	-	-	-
1,2-Dichlorobenzene	ND	0.480	1.00	-	-	-
1,3-Dichlorobenzene	ND	0.240	1.00	-	-	-
1,4-Dichlorobenzene	ND	0.340	1.00	-	-	-
3,3-Dichlorobenzidine	ND	0.00290	0.0200	-	-	-
2,4-Dichlorophenol	ND	0.00290	0.0100	-	-	-
2,6-Dichlorophenol	ND	0.00930	0.0500	-	-	-
Diethyl Phthalate	ND	0.0190	0.0500	-	-	-
2,4-Dimethylphenol	ND	0.140	1.00	-	-	-
Dimethyl Phthalate	ND	0.00480	0.0100	-	-	-

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Quality Control Report

Client:	NRG Energy, LLC	**WorkOrder:**	2007B28
Date Prepared:	07/23/2020	**BatchID:**	202408
Date Analyzed:	07/23/2020	**Extraction Method:**	E625.1
Instrument:	GC17	**Analytical Method:**	E625.1
Matrix:	Water	**Unit:**	µg/L
Project:	Marsh Landing: DDSD: Semi-Annual	**Sample ID:**	MB/LCS/LCSD-202408

QC Summary Report for E625.1

Analyte	MB Result	MDL	RL	SPK Val	MB SS %REC	MB SS Limits
4,6-Dinitro-2-methylphenol	ND	1.00	5.00	-	-	-
2,4-Dinitrophenol	ND	0.550	2.00	-	-	-
2,4-Dinitrotoluene	ND	0.0120	0.0500	-	-	-
2,6-Dinitrotoluene	ND	0.00480	0.0500	-	-	-
Di-n-octyl Phthalate	ND	0.0170	0.0500	-	-	-
1,2-Diphenylhydrazine	ND	0.130	1.00	-	-	-
Fluoranthene	ND	0.00430	0.0100	-	-	-
Fluorene	ND	0.00450	0.0100	-	-	-
Hexachlorobenzene	ND	0.000730	0.00500	-	-	-
Hexachlorobutadiene	ND	0.000910	0.0100	-	-	-
Hexachlorocyclopentadiene	ND	0.850	5.00	-	-	-
Hexachloroethane	ND	0.00720	0.0500	-	-	-
Indeno (1,2,3-cd) pyrene	ND	0.00780	0.0200	-	-	-
Isophorone	ND	0.180	1.00	-	-	-
2-Methylnaphthalene	ND	0.00180	0.0100	-	-	-
2-Methylphenol (o-Cresol)	ND	0.320	1.00	-	-	-
3 & 4-Methylphenol (m,p-Cresol)	ND	0.420	1.00	-	-	-
Naphthalene	ND	0.00550	0.0500	-	-	-
2-Nitroaniline	ND	0.310	5.00	-	-	-
3-Nitroaniline	ND	0.660	5.00	-	-	-
4-Nitroaniline	ND	1.30	5.00	-	-	-
Nitrobenzene	ND	0.130	1.00	-	-	-
2-Nitrophenol	ND	0.550	5.00	-	-	-
4-Nitrophenol	ND	1.60	5.00	-	-	-
N-Nitrosodiphenylamine	ND	0.0900	1.00	-	-	-
N-Nitrosodi-n-propylamine	ND	0.320	1.00	-	-	-
Pentachlorophenol	ND	0.0500	0.250	-	-	-
Phenanthrene	ND	0.00740	0.0200	-	-	-
Phenol	ND	0.0200	0.200	-	-	-
Pyrene	ND	0.00420	0.0100	-	-	-
Pyridine	ND	0.160	1.00	-	-	-
1,2,4-Trichlorobenzene	ND	0.0750	1.00	-	-	-
2,4,5-Trichlorophenol	ND	0.00200	0.0100	-	-	-
2,4,6-Trichlorophenol	ND	0.00350	0.0100	-	-	-
N-Nitrosodimethylamine	ND	0.740	5.00	-	-	-

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Quality Control Report

Client:	NRG Energy, LLC	**WorkOrder:**	2007B28
Date Prepared:	07/23/2020	**BatchID:**	202408
Date Analyzed:	07/23/2020	**Extraction Method:**	E625.1
Instrument:	GC17	**Analytical Method:**	E625.1
Matrix:	Water	**Unit:**	µg/L
Project:	Marsh Landing: DDSD: Semi-Annual	**Sample ID:**	MB/LCS/LCSD-202408

QC Summary Report for E625.1

Analyte	MB Result	MDL	RL	SPK Val	MB SS %REC	MB SS Limits
Surrogate Recovery						
2-Fluorophenol	4.70			5	94	50-130
Phenol-d5	5.25			5	105	60-130
Nitrobenzene-d5	4.86			5	97	60-130
2-Fluorobiphenyl	3.85			5	77	60-130
2,4,6-Tribromophenol	4.28			5	86	60-130
Terphenyl-d14	4.07			5	81	70-130

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Quality Control Report

Client:	NRG Energy, LLC	**WorkOrder:**	2007B28
Date Prepared:	07/23/2020	**BatchID:**	202408
Date Analyzed:	07/23/2020	**Extraction Method:**	E625.1
Instrument:	GC17	**Analytical Method:**	E625.1
Matrix:	Water	**Unit:**	µg/L
Project:	Marsh Landing: DDSD: Semi-Annual	**Sample ID:**	MB/LCS/LCSD-202408

QC Summary Report for E625.1

Analyte	LCS Result	LCSD Result	SPK Val	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Limit
Carbazole	9.25	8.41	10	93	84	70-130	9.60	25
n-Decane	7.20	7.24	10	72	72	50-130	0.550	25
n-Octadecane	8.45	7.87	10	84	79	70-130	7.10	25
Acenaphthene	0.467	0.416	0.50	93	83	70-130	11.4	25
Acenaphthylene	0.512	0.453	0.50	102	91	60-130	12.3	25
Anthracene	0.490	0.450	0.50	98	90	70-130	8.60	25
Benzidine	38.4	35.2	50	77	70	50-130	8.65	25
Benzo (a) anthracene	0.529	0.480	0.50	106	96	60-130	9.82	25
Benzo (a) pyrene	0.577	0.512	0.50	115	102	70-130	11.8	25
Benzo (b) fluoranthene	0.594	0.516	0.50	119	103	60-130	14.2	25
Benzo (g,h,i) perylene	0.532	0.472	0.50	106	94	70-130	11.9	25
Benzo (k) fluoranthene	0.541	0.490	0.50	108	98	70-130	10.0	25
Benzyl Alcohol	39.9	38.3	50	80	77	70-130	3.99	25
Bis (2-chloroethoxy) Methane	8.28	7.77	10	83	78	70-130	6.44	25
Bis (2-chloroethyl) Ether	0.456	0.452	0.50	91	90	60-130	0.921	25
Bis (2-chloroisopropyl) Ether	0.412	0.418	0.50	82	84	60-130	1.25	25
Bis (2-ethylhexyl) Adipate	9.87	9.10	10	99	91	60-130	8.10	25
Bis (2-ethylhexyl) Phthalate	0.572	0.523	0.50	114	105	60-130	8.98	25
4-Bromophenyl Phenyl Ether	10.6	10.0	10	105	100	70-130	4.89	25
Butylbenzyl Phthalate	0.558	0.516	0.50	112	103	60-130	7.86	25
4-Chloroaniline	0.532	0.505	0.50	106	101	70-130	5.04	25
4-Chloro-3-methylphenol	12.7	11.8	10	127	118	70-130	7.28	25
2-Chloronaphthalene	11.2	9.09	10	112	91	70-130	20.6	25
2-Chlorophenol	0.456	0.465	0.50	91	93	60-130	2.07	25
4-Chlorophenyl Phenyl Ether	10.8	9.54	10	108	95	70-130	12.3	25
Chrysene	0.534	0.481	0.50	107	96	70-130	10.5	25
Dibenzo (a,h) anthracene	0.516	0.451	0.50	103	90	70-130	13.5	25
Dibenzofuran	9.29	8.16	10	93	82	70-130	13.0	25
Di-n-butyl Phthalate	0.543	0.490	0.50	109	98	70-130	10.2	25
1,2-Dichlorobenzene	9.39	9.31	10	94	93	60-130	0.931	25
1,3-Dichlorobenzene	10.2	10.3	10	102	103	60-130	0.271	25
1,4-Dichlorobenzene	9.82	9.76	10	98	98	60-130	0.581	25
3,3-Dichlorobenzidine	0.536	0.495	0.50	107	99	70-130	7.94	25
2,4-Dichlorophenol	0.593	0.566	0.50	119	113	70-130	4.63	25
2,6-Dichlorophenol	0.586	0.562	0.50	117	112	70-130	4.29	25
Diethyl Phthalate	0.520	0.448	0.50	104	90	70-130	14.9	25
2,4-Dimethylphenol	11.1	10.7	10	111	107	70-130	3.54	25
Dimethyl Phthalate	0.498	0.431	0.50	100	86	70-130	14.4	25

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Quality Control Report

Client:	NRG Energy, LLC	**WorkOrder:**	2007B28
Date Prepared:	07/23/2020	**BatchID:**	202408
Date Analyzed:	07/23/2020	**Extraction Method:**	E625.1
Instrument:	GC17	**Analytical Method:**	E625.1
Matrix:	Water	**Unit:**	µg/L
Project:	Marsh Landing: DDSD: Semi-Annual	**Sample ID:**	MB/LCS/LCSD-202408

QC Summary Report for E625.1

Analyte	LCS Result	LCSD Result	SPK Val	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Limit
4,6-Dinitro-2-methylphenol	50.2	47.5	50	100	95	70-130	5.52	25
2,4-Dinitrophenol	12.2	11.2	10	122	111	60-130	9.17	25
2,4-Dinitrotoluene	0.631	0.558	0.50	126	112	70-130	12.3	25
2,6-Dinitrotoluene	0.609	0.544	0.50	122	109	70-130	11.3	25
Di-n-octyl Phthalate	0.645	0.592	0.50	129	118	70-130	8.65	25
1,2-Diphenylhydrazine	10.1	9.24	10	101	92	70-130	9.03	25
Fluoranthene	0.532	0.477	0.50	106	95	70-130	10.9	25
Fluorene	0.522	0.454	0.50	105	91	70-130	14.1	25
Hexachlorobenzene	0.507	0.468	0.50	101	94	60-130	8.01	25
Hexachlorobutadiene	0.444	0.442	0.50	89	88	60-130	0.545	25
Hexachlorocyclopentadiene	36.7	34.8	50	73	70	60-130	5.38	25
Hexachloroethane	0.399	0.402	0.50	80	80	60-130	0.575	25
Indeno (1,2,3-cd) pyrene	0.556	0.497	0.50	111	99	70-130	11.1	25
Isophorone	9.71	8.96	10	97	90	70-130	8.05	25
2-Methylnaphthalene	0.546	0.515	0.50	109	103	60-130	5.91	25
2-Methylphenol (o-Cresol)	10.1	9.59	10	101	96	70-130	5.04	25
3 & 4-Methylphenol (m,p-Cresol)	10.9	10.2	10	109	102	70-130	5.98	25
Naphthalene	0.468	0.452	0.50	94	90	50-130	3.62	25
2-Nitroaniline	48.8	41.8	50	98	84	70-130	15.4	25
3-Nitroaniline	51.5	44.5	50	103	89	70-130	14.7	25
4-Nitroaniline	51.4	43.4	50	103	87	70-130	16.8	25
Nitrobenzene	9.79	9.40	10	98	94	70-130	4.11	25
2-Nitrophenol	50.1	49.3	50	100	99	70-130	1.75	25
4-Nitrophenol	67.9	55.6	50	136,F2	111	50-130	19.9	25
N-Nitrosodiphenylamine	9.00	8.30	10	90	83	70-130	8.16	25
N-Nitrosodi-n-propylamine	9.80	9.30	10	98	93	60-130	5.23	25
Pentachlorophenol	2.62	2.46	2.5	105	98	60-130	6.51	25
Phenanthrene	0.464	0.424	0.50	93	85	70-130	9.13	25
Phenol	1.83	1.80	2	91	90	60-130	1.57	25
Pyrene	0.533	0.492	0.50	107	98	70-130	7.88	25
Pyridine	6.56	6.23	10	66	62	50-130	5.18	25
1,2,4-Trichlorobenzene	9.14	9.03	10	91	90	70-130	1.26	25
2,4,5-Trichlorophenol	0.602	0.533	0.50	120	107	70-130	12.2	25
2,4,6-Trichlorophenol	0.544	0.481	0.50	109	96	70-130	12.3	25
N-Nitrosodimethylamine	39.5	38.4	50	79	77	60-130	2.85	25

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Quality Control Report

Client:	NRG Energy, LLC	**WorkOrder:**	2007B28
Date Prepared:	07/23/2020	**BatchID:**	202408
Date Analyzed:	07/23/2020	**Extraction Method:**	E625.1
Instrument:	GC17	**Analytical Method:**	E625.1
Matrix:	Water	**Unit:**	µg/L
Project:	Marsh Landing: DDSD: Semi-Annual	**Sample ID:**	MB/LCS/LCSD-202408

QC Summary Report for E625.1

Analyte	LCS Result	LCSD Result	SPK Val	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Limit
Surrogate Recovery								
2-Fluorophenol	3.73	4.03	5	75	81	50-130	7.81	25
Phenol-d5	4.33	4.70	5	87	94	60-130	8.32	25
Nitrobenzene-d5	5.02	5.35	5	100	107	60-130	6.45	25
2-Fluorobiphenyl	4.37	4.27	5	87	85	60-130	2.26	25
2,4,6-Tribromophenol	4.56	4.53	5	91	91	60-130	0.699	25
Terphenyl-d14	4.67	4.69	5	93	94	70-130	0.440	25

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Quality Control Report

Client:	NRG Energy, LLC	**WorkOrder:**	2007B28
Date Prepared:	07/25/2020	**BatchID:**	202548
Date Analyzed:	07/25/2020	**Extraction Method:**	E350.1
Instrument:	WC_SKALAR	**Analytical Method:**	E350.1
Matrix:	Water	**Unit:**	mg/L
Project:	Marsh Landing: DDSD: Semi-Annual	**Sample ID:**	MB/LCS/LCSD-202548

QC Summary Report for E350.1

Analyte	MB Result	MDL	RL			
Ammonia, total as N	ND	0.0920	0.100	-	-	-

Analyte	LCS Result	LCSD Result	SPK Val	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Limit
Ammonia, total as N	4.13	4.21	4	103	105	88-113	1.99	20

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Quality Control Report

Client:	NRG Energy, LLC	**WorkOrder:**	2007B28
Date Prepared:	07/29/2020	**BatchID:**	202753
Date Analyzed:	07/29/2020	**Extraction Method:**	Kelada-01
Instrument:	WC_SKALAR	**Analytical Method:**	Kelada-01
Matrix:	Water	**Unit:**	µg/L
Project:	Marsh Landing: DDSD: Semi-Annual	**Sample ID:**	MB/LCS/LCSD-202753

QC Summary Report for Kelada-01

Analyte	MB Result	MDL	RL			
Total Cyanide	ND	0.770	1.00	-	-	-

Analyte	LCS Result	LCSD Result	SPK Val	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Limit
Total Cyanide	42.4	43.6	40	106	109	80-120	2.74	20

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Quality Control Report

Client:	NRG Energy, LLC	**WorkOrder:**	2007B28
Date Prepared:	07/24/2020	**BatchID:**	202473
Date Analyzed:	07/24/2020	**Extraction Method:**	E420.4
Instrument:	WC_SKALAR	**Analytical Method:**	E420.4
Matrix:	Water	**Unit:**	µg/L
Project:	Marsh Landing: DDSD: Semi-Annual	**Sample ID:**	MB/LCS/LCSD-202473

QC Summary Report for E420.4

Analyte	MB Result	MDL	RL			
Phenolics	ND	1.60	2.00	-	-	-

Analyte	LCS Result	LCSD Result	SPK Val	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Limit
Phenolics	38.3	38.3	40	96	96	80-120	0.113	20

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CHAIN-OF-CUSTODY RECORD

WorkOrder: 2007B28 **ClientCode: GOA** **QuoteID: 192976**

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

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: 4501896168
Project: Marsh Landing: DDSD: Semi-Annual

Bill to:
Accounts Payable
NRG
112 Telly Street
New Roads, LA 70760
invoices@clearwayenergy.com

Requested TAT: 5 days;

Date Received: **07/22/2020**
Date Logged: **07/22/2020**

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
2007B28-001	FAC Combined Wastewater ML-20-069	Water	7/22/2020 13:30	☐		A								A		
2007B28-001	FAC Combined Wastewater ML-20-070	Water	7/22/2020 13:30	☐	B											
2007B28-001	FAC Combined Wastewater ML-20-071	Water	7/22/2020 13:30	☐								C				
2007B28-001	FAC Combined Wastewater ML-20-072	Water	7/22/2020 13:30	☐									D			
2007B28-001	FAC Combined Wastewater ML-20-073	Water	7/22/2020 13:30	☐							E					
2007B28-001	FAC Combined Wastewater ML-20-074	Water	7/22/2020 13:30	☐			F									
2007B28-001	FAC Combined Wastewater ML-20-075	Water	7/22/2020 13:30	☐				G								
2007B28-001	FAC Combined Wastewater ML-20-076	Water	7/22/2020 13:30	☐					H							
2007B28-001	FAC Combined Wastewater ML-20-077	Water	7/22/2020 13:30	☐						I						

Test Legend:

1	1664A_SG_W	2	1664A_W	3	608_W [J]	4	624_W
5	624ACR+2CEVE_W	6	625_SCSM_W	7	AMMONIA_W	8	CN_PPM_W
9	PHENOLICS_W	10	PRDisposal Fee	11		12	

Project Manager: Angela Rydelius

Prepared by: Kena Ponce

Comments: Use QUOTE 192976 for any Marsh Landing projects to get correct analyte list. For Marsh Landing, report in mg/L.

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

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WORK ORDER SUMMARY

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

Project: Marsh Landing: DDSD: Semi-Annual

Comments: Use QUOTE 192976 for any Marsh Landing projects to get correct analyte list. For Marsh Landing, report in mg/L.

Work Order: 2007B28
QC Level: LEVEL 2
Date Logged: 7/22/2020

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

Lab ID	Client ID	Matrix	Test Name	Containers /Composites	Bottle & Preservative	De-chlorinated	Collection Date & Time	TAT	Sediment Content	Hold	SubOut
2007B28-001A	FAC Combined Wastewater ML-20-069	Water	E1664A (HEM; Oil & Grease w/o S.G. Clean-Up)	1	1LA w/ HCl	☐	7/22/2020 13:30	5 days	Present	☐	
2007B28-001B	FAC Combined Wastewater ML-20-070	Water	E1664A (SGT- HEM; Non-polar Material)	1	1LA w/ HCl	☐	7/22/2020 13:30	5 days	Present	☐	
2007B28-001C	FAC Combined Wastewater ML-20-071	Water	Kelada-01 (Cyanide, Total)	1	250mL aHDPE w/ NaOH	☐	7/22/2020 13:30	5 days	Present	☐	
2007B28-001D	FAC Combined Wastewater ML-20-072	Water	E420.4 (Phenolics)	1	250mL aG w/ H2SO4	☐	7/22/2020 13:30	5 days	Present	☐	
2007B28-001E	FAC Combined Wastewater ML-20-073	Water	E350.1 (Ammonia)	1	250mL aG w/ H2SO4	☐	7/22/2020 13:30	5 days	Present	☐	
2007B28-001F	FAC Combined Wastewater ML-20-074	Water	E608.3 (OC Pesticides+PCBs w/ Florisil Clean-up) <a-BHC_1, Aldrin_1, Aroclor1016_1, Aroclor1221_1, Aroclor1232_1, Aroclor1242_1, Aroclor1248_1, Aroclor1254_1, Aroclor1260_1, b-BHC_1, Chlordane (Technical)_1, d-BHC_1, Dieldrin_1, Endosulfan I_1, Endosulfan II_1, Endosulfan sulfate_1, Endrin aldehyde_1, Endrin_1, g-BHC_1, Heptachlor epoxide_1, Heptachlor_1, p,p-DDD_1, p,p-DDE_1, p,p-DDT_1, Toxaphene_1>	1	1LA Narrow Mouth, Unpres	☐	7/22/2020 13:30	5 days	Present	☐	

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.

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WORK ORDER SUMMARY

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

Project: Marsh Landing: DDSD: Semi-Annual

Comments: Use QUOTE 192976 for any Marsh Landing projects to get correct analyte list. For Marsh Landing, report in mg/L.

Work Order: 2007B28
QC Level: LEVEL 2
Date Logged: 7/22/2020

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

Lab ID	Client ID	Matrix	Test Name	Containers /Composites	Bottle & Preservative	De-chlorinated	Collection Date & Time	TAT	Sediment Content	Hold	SubOut
2007B28-001G	FAC Combined Wastewater ML-20-075	Water	E624.1 (VOCs) <1,1,1-Trichloroethane, 1,1,2,2-Tetrachloroethane, 1,1,2-Trichloroethane, 1,1-Dichloroethane, 1,1-Dichloroethene, 1,2-Dichlorobenzene, 1,2-Dichloroethane (1,2-DCA), 1,2-Dichloropropane, 1,3-Dichlorobenzene, 1,4-Dichlorobenzene, Benzene, Bromodichloromethane, Bromoform, Bromomethane, Carbon tetrachloride, Chlorobenzene, Chloroethane, Chloroform, Chloromethane, cis-1,3-Dichloropropene, Dibromochloromethane, Ethylbenzene, Methylene chloride, Tetrachloroethene, Toluene, trans-1,2-Dichloroethene, trans-1,3-Dichloropropene, Trichloroethene, Trichlorofluoromethane, Vinyl chloride>	2	VOA w/ HCl	☐	7/22/2020 13:30	5 days	Present	☐	
2007B28-001H	FAC Combined Wastewater ML-20-076	Water	E624.1 (ACRO, ACRY, & 2-CEVE)	2	VOA, Unpres	☐	7/22/2020 13:30	5 days	Present	☐	

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.

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WORK ORDER SUMMARY

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

Project: Marsh Landing: DDSD: Semi-Annual

Comments: Use QUOTE 192976 for any Marsh Landing projects to get correct analyte list. For Marsh Landing, report in mg/L.

Work Order: 2007B28
QC Level: LEVEL 2
Date Logged: 7/22/2020

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

Lab ID	Client ID	Matrix	Test Name	Containers /Composites	Bottle & Preservative	De-chlorinated	Collection Date & Time	TAT	Sediment Content	Hold	SubOut
2007B28-001I	FAC Combined Wastewater ML-20-077	Water	E625.1 (SVOCs) <1,2,4-Trichlorobenzene, 1,2-Dichlorobenzene, 1,2-Diphenylhydrazine, 1,3-Dichlorobenzene, 1,4-Dichlorobenzene, 2,4,6-Trichlorophenol, 2,4-Dichlorophenol, 2,4-Dimethylphenol, 2,4-Dinitrophenol, 2,4-Dinitrotoluene, 2,6-Dichlorophenol, 2,6-Dinitrotoluene, 2-Chloronaphthalene, 2-Chlorophenol, 2-Nitrophenol, 3,3-Dichlorobenzidine, 4,6-Dinitro-2-methylphenol, 4-Bromophenyl Phenyl Ether, 4-Chloro-3-methylphenol, 4-Chlorophenyl Phenyl Ether, 4-Nitrophenol, Acenaphthene, Acenaphthylene, Anthracene, Benzidine, Benzo (a) anthracene, Benzo (a) pyrene, Benzo (b) fluoranthene, Benzo (g,h,i) perylene, Benzo (k) fluoranthene, Bis (2-chloroethoxy) Methane, Bis (2-chloroethyl) Ether, Bis (2-chloroisopropyl) Ether, Bis (2-ethylhexyl) Phthalate, Butylbenzyl Phthalate, Carbazole, Chrysene, Dibenzo (a,h) anthracene, Diethyl Phthalate, Dimethyl Phthalate, Di-n-butyl Phthalate, Di-n-octyl Phthalate,	1	1LA Narrow Mouth, Unpres	☐	7/22/2020 13:30	5 days	Present	☐	

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.

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: Semi-Annual

Comments: Use QUOTE 192976 for any Marsh Landing projects to get correct analyte list. For Marsh Landing, report in mg/L.

Work Order: 2007B28
QC Level: LEVEL 2
Date Logged: 7/22/2020

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

Lab ID	Client ID	Matrix	Test Name	Containers /Composites	Bottle & Preservative	De-chlorinated	Collection Date & Time	TAT	Sediment Content	Hold	SubOut
			Fluoranthene, Fluorene, Hexachlorobenzene, Hexachlorobutadiene, Hexachlorocyclopentadiene, Hexachloroethane, Indeno (1,2,3-cd) pyrene, Isophorone, Naphthalene, n-Decane, Nitrobenzene, N-Nitrosodimethylamine, N-Nitrosodi-n-propylamine, N-Nitrosodiphenylamine, n-Octadecane, Pentachlorophenol, Phenanthrene, Phenol, Pyrene>								

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.

Chain of Custody

Page 1 of 3-Semi-Annual

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

1107B28

SAMPLES SUBMITTED TO		SEND INVOICE TO		PROJECT		ANALYSIS REQUEST
Laboratory:	McCampbell Analytical, Inc.	*Company:*	NRG Energy, Inc	*Plant:*	Marsh Landing	
Attention:		*Attention:*	Sandra Herndon	*Title:*	DDSD	
Address:	1534 Willow Pass Road, Pittsburg, CA 94565-1701	*Address:*	112 Telly St. New Roads, LA 70760	*Phase:*	Semi-Annual	
Phone/Fax:	925.252.9262/ 925.252.9269	*P.O. No.:*	4501896168	*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, L)	Preserv.	Oil and Grease [1] (animal/vegetable) (EPA Method 1664A)	Oil and Grease [2] (Petroleum/Mineral) (EPA Method 1664A)		
ML-20-069	22-Jul-20	1330	DDSD	Semi-Annual	Wastewater	Grab	FAC Combined Wastewater	1	Amber Glass Jar	1	Hydrochloric Acid (pH<2, 4°C)	X			
ML-20-070	22-Jul-20	1330	DDSD	Semi-Annual	Wastewater	Grab	FAC Combined Wastewater	1	Amber Glass Jar	1	Hydrochloric Acid (pH<2, 4°C)		X		
											HOLDING TIME:	28 days	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. 1. Animal/Vegetable O/G 2. Petroleum/Mineral O/G **RESULTS AND PRICING PER QUOTE ID: 192976.** ***Include sample description with client sample ID.**
Title:	Environmental Specialist/Engineer		
Address:	P.O. Box 1687 Antioch, CA 94509		
Phone/Fax:	925.324-3533/6509		
E-mail:	david.frandsen@nrg.com		
E-mail CC:	james.robinson@nrg.com		
E-mail CC:	joe.moura@nrg.com		
E-mail CC:			
E-mail CC:			
E-mail CC:			

	PRINTED NAME	SIGNATURE	COMPANY	DATE	TIME
Sampled by:	James E Robinson	James E. Robinson	NRG	22-Jul-20	1330
Relinquished by:	James E Robinson	James E. Robinson	NRG	22-Jul-20	1627
Received by:	T.P.		MAI	22-Jul-20	1627
Relinquished by:					
Received by:					
Relinquished by:					
Received by:					4.8C

Chain of Custody

Page 2 of 3-Semi-Annual

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:	NRG Energy, Inc	Plant:	Marsh Landing
Attention:		Attention:	Sandra Herndon	Title:	DDSD
Address:	1534 Willow Pass Road, Pittsburg, CA 94565-1701	Address:	112 Telly St. New Roads, LA 70760	Phase:	Semi-Annual
Phone/Fax:	925.252.9262/ 925.252.9269	P.O. No.:	4501896168	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.	Cyanide[1] (Kelada-01)	Phenols (EPA Method 420.4)	Ammonia as N (EPA Method 350.1)	
ML-20-071	22-Jul-20	1330	DDSD	Semi-Annual	Wastewater	Grab	FAC Combined Wastewater	1	HDPE Bottle	250	HNO3 (pH<2)	X			
ML-20-072	22-Jul-20	1330	DDSD	Semi-Annual	Wastewater	Grab	FAC Combined Wastewater	1	Amber Glass Jar	~~500~~ 250	H_2SO_4 (pH<2, 4°C)		X		
ML-20-073	22-Jul-20	1330	DDSD	Semi-Annual	Wastewater	C-24	FAC Combined Wastewater	1	Amber Glass Jar	~~500~~ 250	H_2SO_4 (pH<2, 4°C)			X	
											HOLDING TIME:	14 days	28 days	28 days	

REPORTING		LABORATORY NOTES RE: SAMPLE RECEIPT/CONDITION	DIRECTIONS FOR LABORATORY
Original to:	David Frandsen	Cyanide sample pretreated with sodium thiosulfate prior to preservation with sodium hydroxide.	**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. 1. Cyanide sample was pretreated with sodium thiosulfate prior to preservation with sodium hydroxide. **RESULTS AND PRICING PER QUOTE ID: 192976.** ***Include sample description with client sample ID.**
Title:	Environmental Specialist/Engineer		
Address:	P.O. Box 1687 Antioch, CA 94509		
Phone/Fax:	925.324-3533/6509		
E-mail:	david.frandsen@nrg.com		
E-mail CC:	james.robinson@nrg.com		
E-mail CC:	joe.moura@nrg.com		
E-mail CC:			
E-mail CC:			
E-mail CC:			

	PRINTED NAME	SIGNATURE	COMPANY	DATE	TIME
Sampled by:	James E Robinson	James E. Robinson	NRG	22-Jul-20	1330
Relinquished by:	James E Robinson	James E. Robinson	NRG	22-Jul-20	1627
Received by:	T.P.		MAI	22-Jul-20	1627
Relinquished by:					
Received by:					
Relinquished by:					
Received by:					4.3°C

Chain of Custody

Page 3 of 3-Semi-Annual

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:	NRG Energy, Inc	Plant:	Marsh Landing
Attention:		Attention:	Sandra Herndon	Title:	DDSD
Address:	1534 Willow Pass Road, Pittsburg, CA 94565-1701	Address:	112 Telly St. New Roads, LA 70760	Phase:	Semi-Annual
Phone/Fax:	925.252.9262/ 925.252.9269	P.O. No.:	4501896168	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.	Pesticides & PCBs (EPA Method 608)	Volatile Organics (EPA Method 624)	Volatile Organics[1] (EPA Method 624)	Semi-Volatile Organics (EPA Method 625)
ML-20-074	22-Jul-20	1330	DDSD	Semi-Annual	Water	Grab	FAC Combined Wastewater	1	Amber Glass	1,000	None (4°C)	X			
ML-20-075	22-Jul-20	1330	DDSD	Semi-Annual	Water	Grab	FAC Combined Wastewater	2	Clear VOA	43	HCL (ZHS, pH<2, 4°C)		X		
ML-20-076	22-Jul-20	1330	DDSD	Semi-Annual	Water	Grab	FAC Combined Wastewater	2	Clear VOA	43	None (4°C)			X	
ML-20-077	22-Jul-20	1330	DDSD	Semi-Annual	Water	Grab	FAC Combined Wastewater	1	Amber Glass	1,000	None (4°C)				X
											HOLDING TIME:	40 days	14 days	3 days	40 days

* For composite samples, the completion time of the 24-hr composite or the time of the final sample aliquot is considered the "sample collection time" for the purpose of determining sample holding time.

REPORTING		LABORATORY NOTES RE: SAMPLE RECEIPT/CONDITION	DIRECTIONS FOR LABORATORY
Original to:	David Frandsen		**Standard TAT (5-DAYS).** 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. VOCs- Acrolein, acrylonitrile, and 2cleave
Address:	P.O. Box 1687		
	Antioch, CA 94509		**RESULTS AND PRICING PER QUOTE ID: 192976.**
Phone/Fax:	925.324-3533/6509		***Include sample description with client sample ID.**
E-mail:	david.frandsen@nrg.com		
E-mail CC:	james.robinson@nrg.com		
E-mail CC:	joe.moura@nrg.com		
E-mail CC:			
E-mail CC:			
E-mail CC:			
E-mail CC:			

	PRINTED NAME	SIGNATURE	COMPANY	DATE	TIME
Sampled by:	James E Robinson	James E. Robinson	NRG	22-Jul-20	1330
Relinquished by:	James E Robinson	James E. Robinson	NRG	22-Jul-20	1627
Received by:	T-P-		MAI	22-Jul-20	1627
Relinquished by:					
Received by:					
Relinquished by:					
Received by:					4.8°

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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:	**7/22/2020 16:27**
Project:	**Marsh Landing: DDSD: Semi-Annual**	Date Logged:	**7/22/2020**
		Received by:	Tina Perez
WorkOrder №:	**2007B28** Matrix: Water	Logged by:	Kena Ponce
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 ☑
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: 4.8°C				NA ☐
Water - VOA vials have zero headspace / no bubbles?	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 (200.8: ≤2; 525.3: ≤4; 530: ≤7; 541: <3; 544: <6.5 & 7.5)?	Yes	☐	No	☐	NA ☑
Free Chlorine tested and acceptable upon receipt (<0.1mg/L)?	Yes	☐	No	☐	NA ☑

Comments:

Delta Diablo

Industrial User Report Checklist And Certification Statement Form

Attn: Environmental Compliance Specialist	**Jason Yun**			
Environmental Specialist Phone	(925) 756-1913	Fax	(925) 756-1961	
Industrial User Facility Name	**Marsh Landing LLC**			
Duly Authorized Representative Name	**Joe Moura**			
Duly Authorized Representative Phone	**925-779-6685**			

This Industrial User Report Checklist and Certification Statement Form shall be submitted with all Self-Monitoring Reports (SMRs), as specified by the Wastewater Discharge Permit issued by Delta Diablo, hereinafter referred to as the District. When submitting Self-Monitoring Reports, check all that are applicable.

Self-Monitoring Reports (SMRs) (Required)

☒ Flow Discharge Summary (Review Discharge Permit.)

☐ Calibration of Effluent Flow Meters; if applicable.

☒ Monitoring Results – all required tests completed, results reviewed, results included
Quality Assurance/Quality Control (QA/QC) and Chain-of-Custody (COC) (Review Discharge Permit):

☒ pH (**field-grab**) (shall be **analyzed within 15 minutes of sample collection**).
Results, collection time, analysis time and Technician's Initials shall be reported in the comments section of the respective COC. The pH meter shall be accurate and reproducible to 0.1 pH unit with a range of 0 to 14 and equipped with a temperature–compensation adjustment (Standard methods).

☐ Cyanide samples were tested for oxidizers and preserved with Sodium Hydroxide (NaOH).
This shall be reported in the comments section on the respective COC, if applicable.

☒ Selenium lab analysis by EPA Method 200.8 by Reaction Mode: if applicable.

☐ Total Phenolics lab analysis by EPA Method 420.4: if applicable.

☒ **All sample analysis for regulatory compliance reporting** shall be completed by an ELAP certified Laboratory.

☒ Certification Statement included (see attached)

☐ Other requested data _____

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.

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, 2020**

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	1/5/2021

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

January 5, 2020

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

Subject: **2020 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 2020 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, 2020. This report includes monthly flow data and quarterly analytical data required to be collected in 2020. 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 2020 Monthly Flow Data
Table 3:	November 2020 Monthly Flow Data
Table 4:	December 2020 Monthly Flow Data

Attachment 1:	pH COC
Attachment 2:	Analytical Reports

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 2020
Report Type	Quarterly

Constituent	Sample Date	Permit Limit	Result	Units
Field pH	10/6/2020	6-10	6.8	S.U.
BOD	10/6/2020	-	4.6	mg/L
COD	10/6/2020	-	17	mg/L
Arsenic	10/6/2020	0.15	0.00099	mg/L
Cadmium	10/6/2020	0.1	ND	mg/L
Chromium	10/6/2020	0.5	0.00037 J	mg/L
Copper	10/6/2020	0.5	0.0067	mg/L
Iron	10/6/2020	-	0.110	mg/L
Lead	10/6/2020	0.5	0.00045 J	mg/L
Mercury	10/6/2020	0.003	ND	mg/L
Molybdenum	10/6/2020	-	0.0020	mg/L
Nickel	10/6/2020	0.5	0.0025	mg/L
Selenium	10/6/2020	0.25	0.00028 J	mg/L
Silver	10/6/2020	0.2	ND	mg/L
Zinc	10/6/2020	1.0	0.029	mg/L
TDS	10/6/2020	-	835	mg/L
TSS	10/6/2020	-	4.30	mg/L

J = The reported concentration is an estimated value.

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, 2020
Report Type	Quarterly
Constituent	Flow
Sample Type	Continuously Measured (Rosemount 8705 Flanged Magnetic Flow Meter)
Sample Date	10/1/2020 - 10/31/2020
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	4229	20.16	
2	0	0.00	
3	2795	21.52	
4	2118	21.48	
5	457	13.99	
6	0	0.00	
7	5692	20.67	
8	13856	20.28	
9	28629	20.20	
10	28805	20.36	
11	28797	20.36	
12	28801	20.10	
13	28676	20.11	
14	20799	20.10	
15	726	15.27	
16	6919	20.21	
17	3195	20.07	
18	6701	20.08	
19	11603	21.57	
20	451	13.67	
21	4669	19.59	
22	6421	19.57	
23	28801	20.26	
24	9714	20.09	
25	0	0.00	
26	0	0.00	
27	17718	20.32	
28	28799	20.10	
29	12414	20.40	
30	0	0.00	
31	404	14.78	

Total Monthly Flow (gal)	332,188	Did flow exceed limits?	NO
Daily Max Flow (gpd)	28,805	Flow above daily max (30,240 gpd)?	NO
Average Monthly Flow (gpd)	10,716		

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, 2020
Report Type	Quarterly
Constituent	Flow
Sample Type	Continuously Measured (Rosemount 8705 Flanged Magnetic Flow Meter)
Sample Date	11/1/2020 - 11/30/2020
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*	0	0.00	
2	6229	21.42	
3	8513	19.62	
4	9624	20.02	
5	8354	19.92	
6	3917	19.58	
7	4444	20.84	
8	0	0.00	
9	17974	19.66	
10	6151	19.57	
11	0	0.00	
12	4396	20.78	
13	0	0.00	
14	0	0.00	
15	0	0.00	
16	6899	19.63	
17	6846	19.59	
18	8809	21.13	
19	3175	19.99	
20	11558	20.00	
21	0	0.00	
22	0	0.00	
23	0	0.00	
24	4571	19.60	
25	0	0.00	
26	0	0.00	
27	0	0.00	
28	4152	20.92	
29	400	12.57	
30	2809	19.73	

* - Nov 1st includes 25 hours of flow data -- Time Change

Total Monthly Flow (gal)	118,822	Did flow exceed limits?	NO
Daily Max Flow (gpd)	17,974	Flow above daily max (30,240 gpd)?	NO
Average Monthly Flow (gpd)	3,961		

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, 2020
Report Type	Quarterly
Constituent	Flow
Sample Type	Continuously Measured (Rosemount 8705 Flanged Magnetic Flow Meter)
Sample Date	12/1/2020 - 12/31/2020
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	1434	19.58	
2	10119	20.60	
3	0	0.00	
4	3456	19.66	
5	9185	19.59	
6	0	0.00	
7	9106	20.66	
8	8622	19.57	
9	3519	19.63	
10	7782	19.60	
11	5998	20.94	
12	4623	19.58	
13	0	0.00	
14	6129	19.68	
15	10631	19.58	
16	0	0.00	
17	5560	20.04	
18	6667	19.59	
19	487	15.86	
20	0	0.00	
21	0	0.00	
22	7287	21.01	
23	1411	19.61	
24	10884	19.58	
25	2001	19.70	
26	12000	19.61	
27	0	0.00	
28	3791	19.58	
29	13761	20.02	
30	5612	19.62	
31	6712	19.58	

Total Monthly Flow (gal)	156,776	Did flow exceed limits?	NO
Daily Max Flow (gpd)	13,761	Flow above daily max (30,240 gpd)?	NO
Average Monthly Flow (gpd)	5,057		

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
							ReportingLimit:	0.18
							Method Detection Limit:	0.06
FAC Combined Waste Water	ML-20-151	10/6/20	1400	10/6/20	1400	Wastewater	Grab	6.8

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

Environmental Engineer David Frandsen

Signature: David Frandsen

Date: Oct. 6, 2020

Sampling Technologist: James E Robinson

Signature: James E. Robinson

Date : 6-Oct-20

McCampbell Analytical, Inc.

"When Quality Counts"

Analytical Report

WorkOrder: 2010264

Report Created for: NRG Energy, LLC

3201 Wilbur Avenue
Antioch, CA 94509

Project Contact: David Frandsen
Project P.O.: 4501896168
Project: Marsh Landing

Project Received: 10/06/2020

Analytical Report reviewed & approved for release on 10/12/2020 by:

Yen Cao
Project Manager

McCampbell Analytical, Inc.
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Glossary of Terms & Qualifier Definitions

Client: NRG Energy, LLC
Project: Marsh Landing
WorkOrder: 2010264

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)

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Glossary of Terms & Qualifier Definitions

Client: NRG Energy, LLC
Project: Marsh Landing
WorkOrder: 2010264

Analytical Qualifiers

J	Result is less than the RL/ML but greater than the MDL. The reported concentration is an estimated value.
j1	See attached narrative.

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Case Narrative

Client: NRG Energy, LLC
Project: Marsh Landing

Work Order: 2010264
October 09, 2020

EPA method 200.8: Metals

Our standard ICP-MS analytical procedure is to analyze selenium using the reaction mode.

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Analytical Report

Client:	NRG Energy, LLC	**WorkOrder:**	2010264
Date Received:	10/06/2020 16:17	**Extraction Method:**	E200.8
Date Prepared:	10/07/2020	**Analytical Method:**	E200.8
Project:	Marsh Landing	**Unit:**	µg/L

Metals

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
FAC Combined Wastewater	**2010264-001A**	**Water**	**10/06/2020 14:00**	**ICP-MS4 1217SMPL.d**	**206938**

Analytes	Result	Qualifiers	MDL	RL	DF	Date Analyzed
Arsenic	**0.99**		0.12	0.50	1	10/07/2020 18:03
Cadmium	ND		0.060	0.50	1	10/07/2020 18:03
Chromium	**0.37**	J	0.36	0.50	1	10/07/2020 18:03
Copper	**6.7**		0.43	0.50	1	10/07/2020 18:03
Iron	**110**		58	100	1	10/07/2020 18:03
Lead	**0.45**	J	0.32	0.50	1	10/07/2020 18:03
Mercury	ND		0.033	0.050	1	10/07/2020 18:03
Molybdenum	**2.0**		0.21	0.50	1	10/07/2020 18:03
Nickel	**2.5**		0.58	1.0	1	10/07/2020 18:03
Selenium	**0.28**	J	0.18	0.50	1	10/07/2020 18:03
Silver	ND		0.042	0.50	1	10/07/2020 18:03
Zinc	**29**		11	20	1	10/07/2020 18:03

Surrogates	REC (%)	Limits	
Terbium	108	70-130	10/07/2020 18:03

Analyst(s): WV

Analytical Comments: j1

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Quality Control Report

Client:	NRG Energy, LLC	**WorkOrder:**	2010264
Date Prepared:	10/07/2020	**BatchID:**	206938
Date Analyzed:	10/07/2020 - 10/08/2020	**Extraction Method:**	E200.8
Instrument:	ICP-MS4	**Analytical Method:**	E200.8
Matrix:	Water	**Unit:**	µg/L
Project:	Marsh Landing	**Sample ID:**	MB/LCS/LCSD-206938

QC Summary Report for Metals

Analyte	MB Result	MDL	RL	SPK Val	MB SS %REC	MB SS Limits
Arsenic	ND	0.120	0.500	-	-	-
Cadmium	ND	0.0600	0.500	-	-	-
Chromium	ND	0.360	0.500	-	-	-
Copper	ND	0.430	0.500	-	-	-
Iron	ND	58.0	100	-	-	-
Lead	ND	0.320	0.500	-	-	-
Mercury	ND	0.0330	0.0500	-	-	-
Molybdenum	ND	0.210	0.500	-	-	-
Nickel	ND	0.580	1.00	-	-	-
Selenium	ND	0.180	0.500	-	-	-
Silver	ND	0.0420	0.500	-	-	-
Zinc	ND	11.0	20.0	-	-	-
Surrogate Recovery						
Terbium	508			500	102	70-130

Analyte	LCS Result	LCSD Result	SPK Val	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Limit
Arsenic	51.5	49.8	50	103	100	85-115	3.16	20
Cadmium	52.8	51.0	50	106	102	85-115	3.47	20
Chromium	52.5	51.4	50	105	103	85-115	2.27	20
Copper	51.4	50.6	50	103	101	85-115	1.72	20
Iron	5260	5210	5000	105	104	85-115	1.06	20
Lead	51.2	50.5	50	102	101	85-115	1.45	20
Mercury	1.23	1.22	1.25	98	97	85-115	0.737	20
Molybdenum	49.7	49.4	50	99	99	85-115	0.611	20
Nickel	51.2	50.3	50	102	101	85-115	1.75	20
Selenium	53.8	52.5	50	107	105	85-115	2.30	20
Silver	51.4	50.0	50	103	100	85-115	2.84	20
Zinc	529	512	500	106	102	85-115	3.23	20
Surrogate Recovery								
Terbium	520	521	500	104	104	70-130	0.222	20

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Pittsburg, CA 94565-1701
(925) 252-9262

CHAIN-OF-CUSTODY RECORD

WorkOrder: 2010264 **ClientCode: GOA** **QuoteID: 192976**

☐ WaterTrax ☐ WriteOn ☐ 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:
PO: 4501679786
Project: Marsh Landing

Bill to:
Accounts Payable
NRG
112 Telly Street
New Roads, LA 70760
invoices@clearwayenergy.com

Requested TAT: **5 days;**

Date Received: **10/06/2020**
Date Logged: **10/06/2020**

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
2010264-001	FAC Combined Wastewater	Water	10/6/2020 14:00	☐	A	A										

Test Legend:

1	METALSMS_TTLC_W	2	PRDisposal Fee	3		4	
5		6		7		8	
9		10		11		12	

Project Manager: Angela Rydelius **Prepared by: Nancy Palacios**

Comments: Use QUOTE 192976 for any Marsh Landing projects to get correct analyte list. Always report in mg/L. For Marsh Landing, report in mg/L. For Marsh Landing, report in mg/L.

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

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WORK ORDER SUMMARY

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

Project: Marsh Landing

Comments: Use QUOTE 192976 for any Marsh Landing projects to get correct analyte list. Always report in mg/L. For Marsh Landing, report in mg/L. For Marsh Landing, report in mg/L

Work Order: 2010264
QC Level: LEVEL 2
Date Logged: 10/6/2020

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

Lab ID	Client ID	Matrix	Test Name	Containers /Composites	Bottle & Preservative	DryWeight	Collection Date & Time	TAT	Sediment Content	Hold	SubOut
2010264-001A	FAC Combined Wastewater	Water	E200.8 (Metals) <Arsenic, Cadmium, Chromium, Copper, Iron, Lead, Mercury, Molybdenum, Nickel, Selenium, Silver, Zinc>	1	250mL HDPE w/ HNO3	☐	10/6/2020 14:00	5 days	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.

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

2010264

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:*	invoices@clearwayenergy.com	*Phase:*	Quarterly	
Phone/Fax:	925.252.9262/ 925.252.9269	*P.O. No.:*	4501896168	*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-20-145	6-Oct-20	1400	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	1.7°C wet VA.	**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		***Include sample description with client sample ID.**
Phone/Fax:	925.324-3533/6509		
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 Robinson	James E. Robinson	NRG	6-Oct-20	1400
Relinquished by:	James Robinson	James E. Robinson	NRG	6-Oct-20	1617
Received by:	Valerie Alfaro	Valerie Alfaro	MAI	6-Oct-20	1617
Relinquished by:					
Received by:					
Relinquished by:					
Received by:					

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Sample Receipt Checklist

Client Name: **NRG Energy, LLC**
Project: **Marsh Landing**

WorkOrder №: **2010264** Matrix: Water
Carrier: Client Drop-In

Date and Time Received: **10/6/2020 16:17**
Date Logged: **10/6/2020**
Received by: Nancy Palacios
Logged by: Nancy Palacios

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	☑
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: 1.7°C				NA	☐
Water - VOA vials have zero headspace / no bubbles?	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 (200.8: ≤2; 525.3: ≤4; 530: ≤7; 541: <3; 544: <6.5 & 7.5)?	Yes	☐	No	☐	NA	☑
Free Chlorine tested and acceptable upon receipt (<0.1mg/L)?	Yes	☐	No	☐	NA	☑

Comments:

McCampbell Analytical, Inc.
"When Quality Counts"

Analytical Report

WorkOrder: 2010263

Report Created for: NRG Energy, LLC

3201 Wilbur Avenue
Antioch, CA 94509

Project Contact: David Frandsen
Project P.O.: 4501896168
Project: Marsh Landing

Project Received: 10/06/2020

Analytical Report reviewed & approved for release on 10/12/2020 by:

Christine Askari
Project Manager

McCampbell Analytical, Inc.
"When Quality Counts"

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Glossary of Terms & Qualifier Definitions

Client: NRG Energy, LLC
Project: Marsh Landing
WorkOrder: 2010263

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
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NR	Data Not Reported due to matrix interference or insufficient sample amount.
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PDSD	Post Digestion Spike Duplicate
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RL	Reporting Limit (The RL is the lowest calibration standard in a multipoint calibration.)
RPD	Relative Percent Deviation
RRT	Relative Retention Time
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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)

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Analytical Report

Client:	NRG Energy, LLC	**WorkOrder:**	2010263
Date Received:	10/06/2020 16:17	**Extraction Method:**	SM5210B
Date Prepared:	10/07/2020	**Analytical Method:**	SM5210 B-2001
Project:	Marsh Landing	**Unit:**	mg/L

Biochemical Oxygen Demand (BOD)

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
FAC Combined Wastewater	**2010263-001B**	**Water**	**10/06/2020 14:00**	**WetChem**	**206910**

Analytes	Result	MDL	RL	DF	Date Analyzed
BOD	**4.6**	4.0	4.0	1	10/12/2020 10:24

Analyst(s): HAD

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Analytical Report

Client:	NRG Energy, LLC	**WorkOrder:**	2010263
Date Received:	10/06/2020 16:17	**Extraction Method:**	SM5220 D-1997
Date Prepared:	10/07/2020	**Analytical Method:**	SM5220 D-1997
Project:	Marsh Landing	**Unit:**	mg/L

Chemical Oxygen Demand (COD) as mg O2 /L

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
FAC Combined Wastewater	**2010263-001A**	**Water**	**10/06/2020 14:00**	**SPECTROPHOTOMETER**	**206902**

Analytes	Result	MDL	RL	DF	Date Analyzed
COD	**17**	7.2	10	1	10/07/2020 11:10

Analyst(s): RB

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Analytical Report

Client:	NRG Energy, LLC	**WorkOrder:**	2010263
Date Received:	10/06/2020 16:17	**Extraction Method:**	SM2540 C-1997
Date Prepared:	10/07/2020	**Analytical Method:**	SM2540 C-1997
Project:	Marsh Landing	**Unit:**	mg/L

Total Dissolved Solids

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
FAC Combined Wastewater	**2010263-001C**	**Water**	**10/06/2020 14:00**	**WetChem**	**206958**

Analytes	Result	MDL	RL	DF	Date Analyzed
Total Dissolved Solids	**835**	10.0	10.0	1	10/08/2020 09:00

Analyst(s): AL

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Analytical Report

Client:	NRG Energy, LLC	**WorkOrder:**	2010263
Date Received:	10/06/2020 16:17	**Extraction Method:**	SM2540 D-1997
Date Prepared:	10/08/2020	**Analytical Method:**	SM2540 D-1997
Project:	Marsh Landing	**Unit:**	mg/L

Total Suspended Solids

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
FAC Combined Wastewater	**2010263-001D**	**Water**	**10/06/2020 14:00**	**WetChem**	**207000**

Analytes	Result	MDL	RL	DF	Date Analyzed
Total Suspended Solids	**4.30**	1.00	1.00	1	10/08/2020 15:25

Analyst(s): AL

McCampbell Analytical, Inc.
"When Quality Counts"

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http://www.mccampbell.com / E-mail: main@mccampbell.com

Quality Control Report

Client:	NRG Energy, LLC	**WorkOrder:**	2010263
Date Prepared:	10/07/2020	**BatchID:**	206910
Date Analyzed:	10/12/2020	**Extraction Method:**	SM5210B
Instrument:	WetChem	**Analytical Method:**	SM5210 B-2001
Matrix:	Water	**Unit:**	mg/L
Project:	Marsh Landing	**Sample ID:**	MB-206910

QC Summary Report for BOD

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

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Quality Control Report

Client:	NRG Energy, LLC	**WorkOrder:**	2010263
Date Prepared:	10/07/2020	**BatchID:**	206902
Date Analyzed:	10/07/2020	**Extraction Method:**	SM5220 D-1997
Instrument:	SPECTROPHOTOMETER	**Analytical Method:**	SM5220 D-1997
Matrix:	Water	**Unit:**	mg/L
Project:	Marsh Landing	**Sample ID:**	MB/LCS/LCSD-206902

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	103	100	102	103	90-110	0.976	20

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Quality Control Report

Client:	NRG Energy, LLC	**WorkOrder:**	2010263
Date Prepared:	10/07/2020	**BatchID:**	206958
Date Analyzed:	10/08/2020	**Extraction Method:**	SM2540 C-1997
Instrument:	WetChem	**Analytical Method:**	SM2540 C-1997
Matrix:	Water	**Unit:**	mg/L
Project:	Marsh Landing	**Sample ID:**	MB/LCS/LCSD-206958

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	959	991	1000	96	99	80-120	3.28	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:**	2010263
Date Prepared:	10/08/2020	**BatchID:**	207000
Date Analyzed:	10/08/2020	**Extraction Method:**	SM2540 D-1997
Instrument:	WetChem	**Analytical Method:**	SM2540 D-1997
Matrix:	Water	**Unit:**	mg/L
Project:	Marsh Landing	**Sample ID:**	MB/LCS/LCSD-207000

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	102	102	100	103	102	80-120	0.489	10

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

CHAIN-OF-CUSTODY RECORD

WorkOrder: 2010263 **ClientCode: GOA** **QuoteID: 192976**

☐ WaterTrax ☐ WriteOn ☐ 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:
PO: 4501679786
Project: Marsh Landing

Bill to:
Accounts Payable
NRG
112 Telly Street
New Roads, LA 70760
invoices@clearwayenergy.com

Requested TATs: **5 days; 7 days;**

Date Received: **10/06/2020**
Date Logged: **10/06/2020**

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
2010263-001	FAC Combined Wastewater	Water	10/6/2020 14:00	☐	B	A	A	C	D							

Test Legend:

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

Project Manager: Angela Rydelius **Prepared by: Nancy Palacios**

Comments: Use QUOTE 192976 for any Marsh Landing projects to get correct analyte list. Always report in mg/L. For Marsh Landing, report in mg/L. For Marsh Landing, report in mg/L.

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

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WORK ORDER SUMMARY

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

Project: Marsh Landing
Comments: Use QUOTE 192976 for any Marsh Landing projects to get correct analyte list. Always report in mg/L. For Marsh Landing, report in mg/L. For Marsh Landing, report in mg/L

Work Order: 2010263
QC Level: LEVEL 2
Date Logged: 10/6/2020

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

Lab ID	Client ID	Matrix	Test Name	Containers /Composites	Bottle & Preservative	DryWeight	Collection Date & Time	TAT	Sediment Content	Hold	SubOut
2010263-001A	FAC Combined Wastewater	Water	SM5220D (COD)	2	aVOA w/ H2SO4	☐	10/6/2020 14:00	5 days	None	☐	
2010263-001B	FAC Combined Wastewater	Water	SM5210B (BOD)	1	500mL HDPE, unprsv.	☐	10/6/2020 14:00	7 days	None	☐	
2010263-001C	FAC Combined Wastewater	Water	SM2540C (TDS)	1	500mL HDPE, unprsv.	☐	10/6/2020 14:00	5 days	None	☐	
2010263-001D	FAC Combined Wastewater	Water	SM2540D (TSS)	1	1L HDPE, unprsv.	☐	10/6/2020 14:00	5 days	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.

Chain of Custody

Page 1 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

2010263

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:	invoices@clearwayenergy.com	Phase:	Quarterly
Phone/Fax:	925.252.9262/ 925.252.9269	P.O. No.:	4501896168	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-20-141	6-Oct-20	1400	DDSD	Quarterly	Wastewater	C-24	FAC Combined Wastewater	2	Amber VOAs	43	H_2SO_4 (pH<2, 4°C)	X			
ML-20-142	6-Oct-20	1400	DDSD	Quarterly	Wastewater	C-24	FAC Combined Wastewater	1	HDPE Bottle	1,000	None (ZHS, 4°C)		X		
ML-20-143	6-Oct-20	1400	DDSD	Quarterly	Wastewater	C-24	FAC Combined Wastewater	1	HDPE Bottle	500	None (4°C)			X	
ML-20-144	6-Oct-20	1400	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	1.7°C wet VA.	**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 Antioch, CA 94509		***Include sample description with client sample ID.**
Phone/Fax:	925.324-3533/6509		
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	6-Oct-20	1400
Relinquished by:	James E. Robinson	James E. Robinson	NRG	6-Oct-20	1617
Received by:	Valerie Alfard	Valerie Alfard	MAI	6-Oct-20	1617
Relinquished by:					
Received by:					
Relinquished by:					
Received by:					

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http://www.mccampbell.com / E-mail: main@mccampbell.com

Sample Receipt Checklist

Client Name: **NRG Energy, LLC**
Project: **Marsh Landing**

WorkOrder №: **2010263** Matrix: Water
Carrier: Client Drop-In

Date and Time Received: **10/6/2020 16:17**
Date Logged: **10/6/2020**
Received by: Valerie Alfaro
Logged by: Nancy Palacios

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	☑
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: 1.7°C				NA	☐
Water - VOA vials have zero headspace / no bubbles?	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 (200.8: ≤2; 525.3: ≤4; 530: ≤7; 541: <3; 544: <6.5 & 7.5)?	Yes	☐	No	☐	NA	☑
Free Chlorine tested and acceptable upon receipt (<0.1mg/L)?	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 10.6 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.

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-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-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

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 2021:

- Some minor painting activities are anticipated for 2021 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.
- 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 2020 we replaced 12 trees and installed a total of 36 tree support stakes.

Performed periodic weed abatement activities.

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 was between 2.5 tons. (See attached CCHS Hazardous Waste Generator Reporting Form.)

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

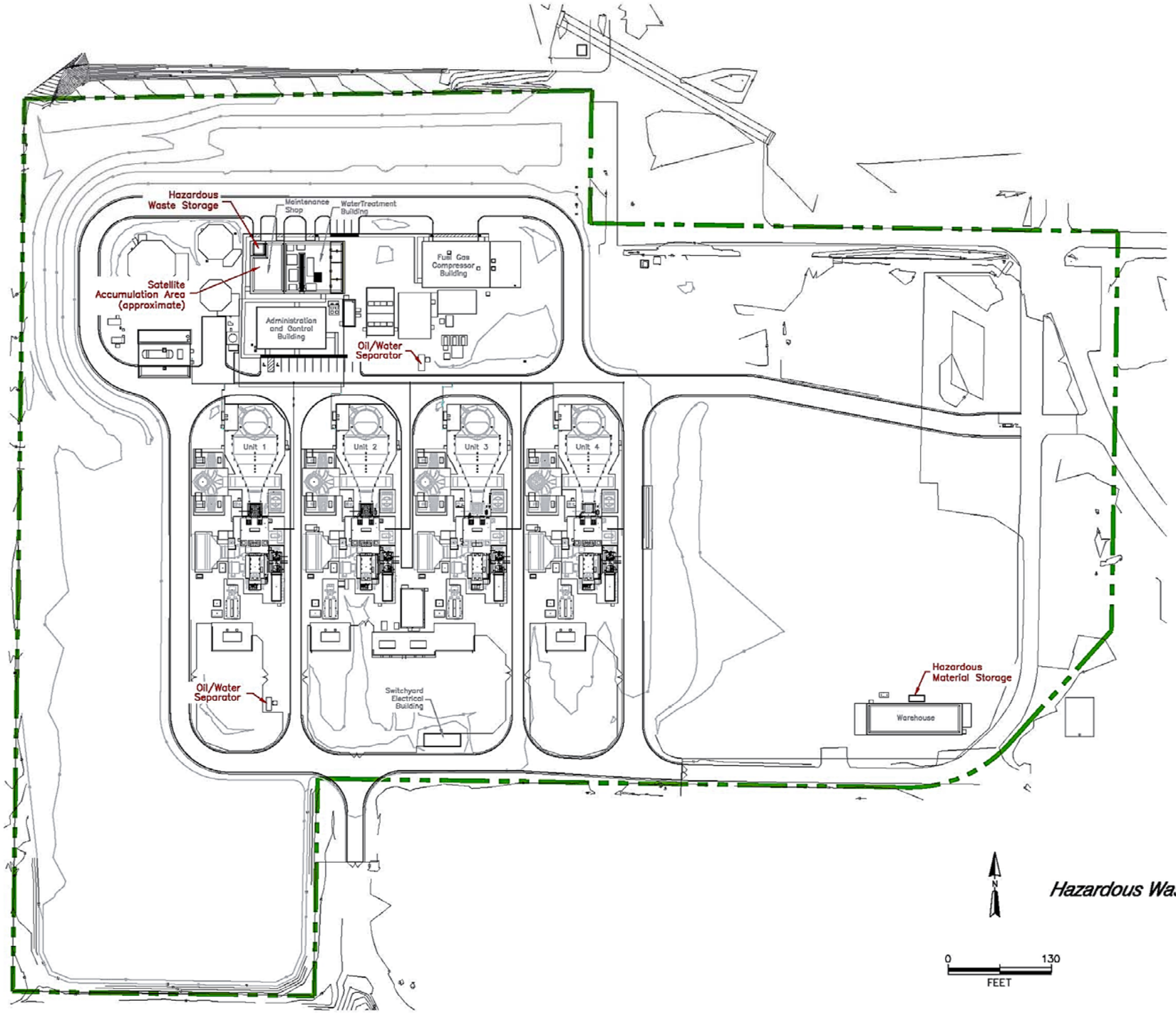
NRG Marsh Landing, LLC

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.

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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

Jared Blumenfeld
Secretary for
Environmental Protection

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

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
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2021
HAZARDOUS WASTE GENERATOR 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 2020. 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:

25 - <50 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, 2021.

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 cchazmat@cchealth.org.

Please read the instructions on the reverse carefully before continuing.
The HWG Reporting Form is due on or before **March 1, 2021.**

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3201 WILBUR AVE UNIT C
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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 2020. 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 2020 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 2020 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 2021 HWG Reporting Form. Type in "HWG Reporting Form" in the document title section and then click *Save & Finish*.
FAX: You may fax the completed Reporting Form to (925) 646-2073.
EMAIL: You may email the completed Reporting Form to cchazmat@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 2020

- ☐ 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: Joseph Moura **Date:** 2/15/2021

Print Name: Joseph Moura **Phone:** 925-324-3512

Joe.Moura@nrg.com

3.9 BIO-8

The California Wildlife Foundation Annual Report for 2020 is included.

Projects and Accomplishments at Antioch Dunes NWR
Funded by NRG Energy, Inc.
January 2020 to December 2020 Summary Report

The 2020 field season was problematic and necessitated major adjustments. Most of the world had to alter their lives and work plans for the Covid-19 global pandemic. In the San Francisco Bay Area work was also complicated by wildfires and dangerous air quality caused by the smoke. Although we did have to make some major changes in our work plans, we are proud of the work we did accomplish in 2020 with the help from the California Wildlife Foundation and funds donated by NRG Energy, Inc. In 2020 NRG Energy INC generously donated $23,400.00 to the Antioch Dunes National Wildlife Refuge in May 2020. This report will summarize the transactions and activities supported by the funds donated by NRG Energy, INC. in 2020 combined with a balance of funds previously donated by NRG. The donated funds are used by the Antioch Dunes National Wildlife Refuge in an effort to conserve the endangered Antioch Dunes evening primrose (*Oenothera deltoides howellii*), Contra Costa wallflower (*Erysimum capitatum angustatum*), and Lange's metalmark butterfly (*Apodemia mormo langei*) and their habitat between January 1st 2020 and Dec 31st 2020.

The Antioch Dunes NWR partner's with the California Wildlife Foundation (CWF) in order to complete these tasks. The CWF is a nonprofit organization that administers restoration of land and water projects and works with partners to maintain habitat for the benefit of people, plants and wildlife. The funds donated by NRG Energy, INC are a tremendous benefit to the CWF and Antioch Dunes NWR, and help to complete our missions at the Antioch Dunes NWR. The mission of the United States Fish & Wildlife Service is "Working with others to conserve, protect, and enhance fish, wildlife, plants, and their habitats for the continuing benefit of the American people". These donated funds also help to complete the FWS mission and the vision statement for the Antioch Dunes NWR, which is "Endangered species management will be incorporated into the overall management actions that mimic natural processes, the Refuge will support self-sustaining populations of Lange's metalmark butterflies, Contra Costa wallflowers, and Antioch Dunes evening primroses, and other native species".

The 2020 NRG donation of $23,400.00 was combined with a remaining $56,010.83 held by the California Wildlife Foundation from NRG previous year's donations. The 2020 donation increased the total budget to $72,275.80 on the date of May 21st 2020 (Table 2). The remaining balance held by the CWF at the end of the 2019 year was $56,010.83. During the 2020 year, $9,898.75 were used on the rental of debris boxes from Allied Waste Disposal (Republic Services). This amounted to 69% of the expenses used during 2020. $2,184 were used to hire Vegetation Solutions, Inc. to control non-native invasive plants on and around the new sand dune restoration site on the Stamm Unit. This amount equaled to 15% of the total funds expended in 2020. $2,340.00 or 16% of the total expended in 2020 were used to support the California Wildlife Foundation and their services. The remaining funds donated by NRG Energy, INC. were conserved by the CWF for projects and activities at the Antioch Dunes NWR in the 2021 year. All funds were

used in support of restoration and conservation purposes on multiple projects ongoing at the Antioch Dunes NWR (Tables 1 & 2). Including support for non-native invasive plant control projects throughout the Refuge. The following report will describe 2020 work plan adjustments, how funds were used for contracting Invasive plant control, and for the rental of Allied Waste debris boxes, as well as 2021 project proposals (Table 3).

2020 Work Plan Complications and Adjustments:

Although we were limited in the fieldwork we were able to accomplish due to the COVID-19 pandemic shelter in place orders and the wildfire smoke pollution, we did manage to complete some vital work at the Antioch Dunes NWR in 2020. Prior to the shelter in place orders we were able to host students from Sutter Elementary School, Antioch Charter Academy II (Photo 1), Contra Costa Christian School, and Antioch High School EarthTeam volunteers (Photo 2). Students visited the Refuge and learned about endangered species and wildlife conservation, explored the refuge and the San Joaquin River, and helped us clear weeds away from endangered plants and host plants for the endangered Lange's metalmark butterfly.

Contractors from Vegetation Solutions were able to get on site and control non-native invasive plants on and around the restoration sites on the Stamm Unit Management Areas 1 & 2 in February of 2020. This was fortunate because the Refuge staff were shut down from March 17th to May 1st of 2020 due to the COVID -19 pandemic. We were required to work from home offices for that period of time and missed some opportunities to control invasive plants on site. For the rest of the year we were limited on the amount of time we could spend working on site due to safety precautions. After May 1st FWS staff attempted to get on site to control vegetation 1 to 2 days per week. Although we were not able to get help from volunteers and students on the Refuge after March 17th, staff relied more on heavy equipment. We used a John Deere tractor to mow grasses and other invasive plants and a Bobcat skid-steer to remove some larger vegetation and place them into the rented Allied Waste dumpsters. Staff is currently still limited on the amount of time they can get into the field, but we are planning on using NRG Funds to get contractors on site in the Spring of 2021.

Invasive Plant Control:

In 2020 the Antioch Dunes NWR once again used NRG donated funds to hire Vegetation Solutions, INC (a local small business) to conduct non-native invasive plant control on and around the sand dune restoration sites on the Stamm Unit (Map 1). Vegetation Solutions staff applied herbicides around the new dune restoration sites Management Area 1 & 2 (Map 1). The management of the sand dune restoration site is a priority conservation strategy for the Antioch Dunes NWR. Since 2013 we have worked with the Port of Stockton and the Army Corp of Engineers and their contractors to acquire 68,300 cubic yards of dredged sand material onto Management Area 1 of the Stamm Unit. In 2019 and 2020 we received 19,510 & 4,000 cubic yards of sand material in Management Area 2 of the Stamm Unit.

In 2021 the refuge will again seek help from Vegetation Solutions, and/or other local

contractors to help control non-native invasive plants on both sand dune restoration sites. The Antioch Dunes NWR staff is limited and in need of support from contractors in order to complete all of the priority conservation strategies outlined in our Natural Resource Management Plan. NRG funds help to support and complete some of the priority conservation strategies on the refuge, such as invasive plant management and sand dune restoration management. Controlling non-native invasive plants around the restoration sites helps to keep them from spreading onto the newly acquired dredged sand material.

Debris Box Rentals:

The Antioch Dunes NWR and the endangered species that it was established to protect are highly threatened by non-native invasive plants and wildfires. Non-native invasive plants directly threaten the endangered plant species and the host plant for the endangered Lange's metalmark butterfly on the refuge by out competing them for water, space and sunlight. Some invasive plants, such as winter vetch (*Vacia villosa*) will climb on and smother the endangered plants and host plants, if not controlled annually. In the hot and dry summer, the invasive plant vegetation dry up and act as fuel for wildfires. In the past the Antioch Dunes NWR has had relatively large wildfires that have directly impacted the populations of all three endangered species. This is why the rental and use of dumpsters to remove non-native invasive plants and dead and dried plant material is such a vital and a valuable management tool on the refuge.

Dumpsters are rented from Allied Waste Disposal (Republic Services) to remove non-native invasive plant material and dried vegetation from the Antioch Dunes NWR. The dumpsters rented from Allied Waste cost $425.24 per month or per dump and vary in size from 20 to 40 cubic yards. Extra charges are incurred when the boxes exceed 1 ton. The dumpsters are filled with mostly non-native invasive plant material by the refuge staff, biological technicians, interns, hired contractors, and volunteers (see Photos 1 & 2). Non-native invasive plants, such as winter vetch, yellow starthistle (*Centaurea solstitialis*), Russian thistle (*Salsola tragus*), and tree-of-Heaven (*Ailanthus altissima*) are pulled and deposited into the dumpsters. After the dumpsters are filled, they are hauled away by Allied Waste trucks.

In 2020 $9,989.75 or 69% of the total expenses were spent on the rental of debris boxes from Allied Waste (Table 1 & 2). The rental and use of the debris boxes from Allied Waste remains a very valuable resource needed for the control and management of non-native invasive plants on the refuge. Invasive plant control on both the Stamm and Sardis Units are supported by the rental of the dumpsters from Allied Waste. Non-native invasive plants are controlled on and around the new sand dunes restoration site on the Stamm Unit (Map1), and also in and around host plants for the endangered Lange's metalmark butterfly and the endangered CCW and ADEP plants on the Sardis Unit (Map 2). Standing dry vegetation are also manually removed and deposited into the dumpsters during vital wildfire management work throughout the refuge. Vegetation is also cleared out and removed in order to make more room for native plant restoration plantings conducted by refuge staff and the local community. Thus, the rental of these dumpsters supports multiple priority conservation strategies for the

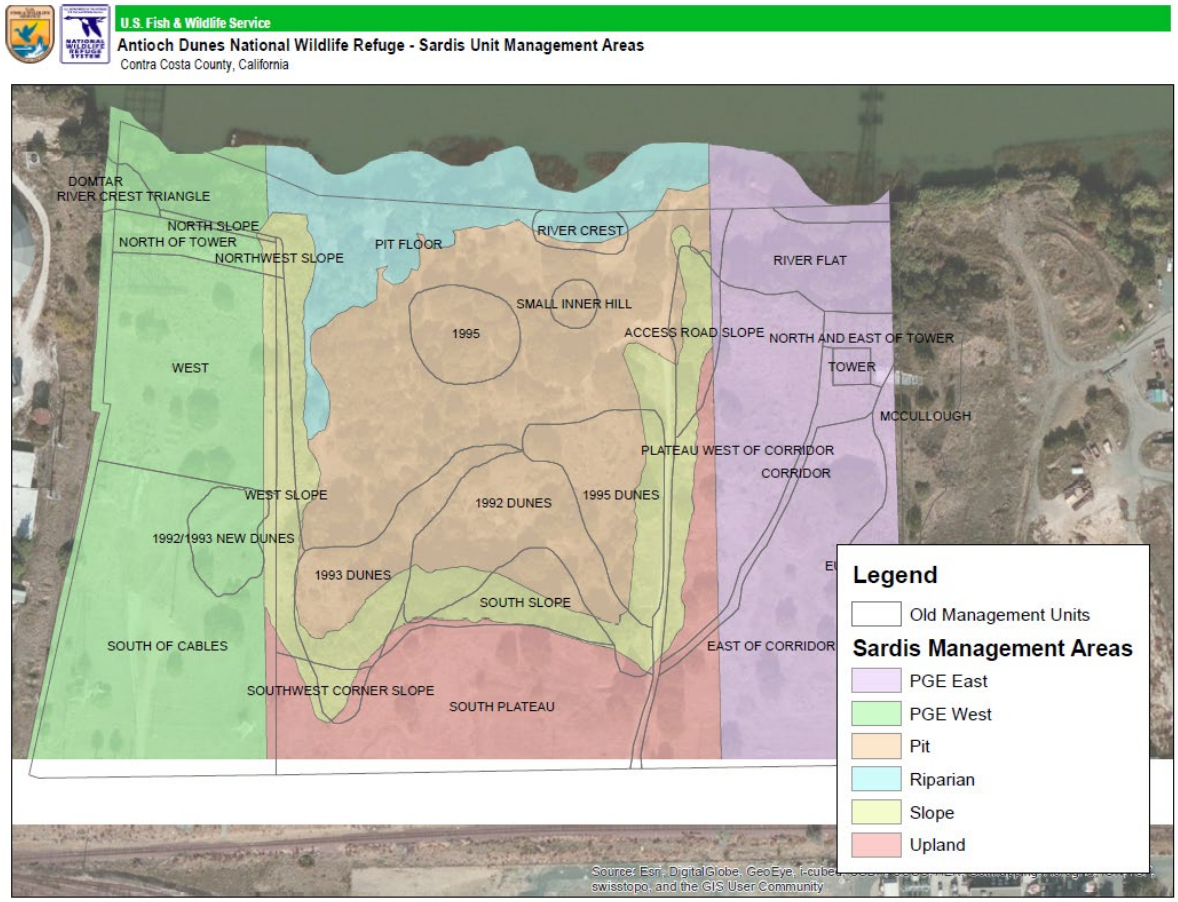
Antioch Dunes NWR. Those strategies include sand dune restoration management, invasive plant management, native plant restoration, and wildfire prevention.

Proposed Projects for the 2021 year:

The following is a general proposal for the remaining funds donated by NRG Energy, INC. including funds saved from previous NRG donations. The remaining funds add up to $64,988.80 as of December 2020. Table 3 displays four proposed projects or tasks and the estimated expenses for the 2021 year. Proposed projects include $10,000 used to hire biological technicians through HR Options. Approximately $10,000.00 will be used to rent large debris boxes from Allied Waste for non-native invasive plant and dead vegetation disposal. The California Wildlife Foundation will be paid approximately $2,340.00 for a 10 percent services fee. Approximately $30,000.00 will be used to hire local contractors to help control non-native invasive plants throughout the Antioch Dunes NWR. We plan on conserving approximately $12,648.08 for the 2022 project year. Some of these remaining funds may be used for field supplies and equipment for biological technicians, volunteers and staff. Actual cost will vary throughout the 2021 year.

On behalf of the Antioch Dunes National Wildlife Refuge staff we would like to thank our partners at the NRG, Energy INC and California Wildlife Foundation for their continued support and partnership at Antioch Dunes NWR. We would especially like to thank NRG, Energy, INC. for their continuous generous donations to the Antioch Dunes National Wildlife Refuge for the past ten years. These donations to the Antioch Dunes NWR continue to help conserve the critically endangered Antioch Dunes evening primrose, Contra Costa wallflower, and Lange's metalmark butterfly and their habitats, as well as numerous other native plant and animal wildlife that use the Antioch Dunes NWR. Funds also help to provide environmental education to the local community (see Photos 1 & 2). Projects funded by NRG Energy, INC. donations provide resources for projects that have benefited local Girl Scouts, volunteers, as well as Antioch High School, Sutter Elementary School, Antioch Charter Academy II, Willow Cove Elementary, Contra Costa Christian Schools, and the local community. These donations from NRG Energy, INC. are not only a tremendous benefit to the Lange's metalmark butterfly, Contra Costa wallflower, the Antioch Dunes evening primrose, and the Antioch Dunes NWR; but are also indirectly beneficial for environmental education programs, recreational purposes and for the general wellbeing of the local community. Thank you very much for your continued support.

Map 1. Antioch Dunes NWR Stamm Unit Map. New Sand Dunes located on western end of Stamm Unit in MA1 & MA2.



Map 2. Antioch Dunes NWR Sardis Unit.

Photo 1. Students from Antioch Charter Academy II School clear out weeds from a previous planting, Identify, count and flag endangered plants in February of 2020.

Photo 2. Students from Antioch High School work for EarthTeam at Antioch Dunes NWR removing invasive plants and dump them into Allied Waste dumpsters February of 2020.

Photo 3. Antioch Dunes evening primrose on Management Area 1 of the Stamm Unit in May of 2020

Photo 4. New dredged sand material from the San Joaquin River deposited onto Management Area 2 of the Stamm Unit in October of 2020.

Photo 5. Endangered Lange's metalmark butterfly observed during surveys at the Antioch Dunes NWR on August 28 2020.

Table 1. Jan 2020 - Dec 2020 Expended Funds Summary

Project / Partner	$ Cost	% of Total
Allied Waste Dumpsters	$9,898.75	69%
Invasive Plant Control	$2,184.00	15%
Biological Technician	0	0%
CWF 10% Fee for 2019	$2,340.00	16%
Total Funds Expended	**$14,422.75**	100%

Table 2. Jan 2020 – Dec 2020 Funds Activity

Date	Action	Name	Memo	Transaction	Balance
	Balance	Balance			**$56,010.83**
Jan 13 2020	Charge	Allied Waste	Dumpster rental for invasive plants	$1,812.17	$54,198.66
Mar 12 2020	Charge	Allied Waste	Dumpster rental for invasive plants	$1,569.43	$52,629.23
Apr 02 2020	Charge	Vegetation Solutions, Inc	Invasive plant control on Stamm Unit, herbicide application	$2,184.00	$50,445.23
Apr 16 2020	Charge	Allied Waste	Dumpster rental for invasive plants	$971.70	$49,473.53
May 14 2020	Charge	Allied Waste	Dumpster rental for invasive plants	$597.73	$48,875.80
May 21 2020	**Deposit**	**NRG Energy, Inc.**	**2020 NRG Energy, Inc. Donation**	**$23,400.00**	$72,275.80
May 21 2020	Charge	**CWF**	10% Service Fee	$2,340.00	$69,935.80
Jun 10 2020	Charge	Allied Waste	Dumpster rental for invasive plants	$597.73	$69,338.07
Jul 20 2020	Charge	Allied Waste	Dumpster rental for invasive plants	$597.73	$68,740.34
Aug 20 2020	Charge	Allied Waste	Dumpster rental for invasive plants	$1,497.37	$67,242.97
Sep 10 2020	Charge	Allied Waste	Dumpster rental for invasive plants	$485.85	$66,757.12
Oct 13 2020	Charge	Allied Waste	Dumpster rental for invasive plants	$797.34	$65,959.78
Nov 11 2020	Charge	Allied Waste	Dumpster rental for invasive plants	$485.85	$65,473.93
Dec 00 2020	Charge	Allied Waste	Dumpster rental for invasive plants	$485.85	$64,988.08
			Total Expended Jan 2019 - Dec 2019	$14,422.75	
			Total Remaining as of Dec 2019		**$64,988.08**

Table 3. NRG Energy, Inc. Funds Proposal for 2021.

Task/Name	Est. Cost	Task Description
Total Balance for 2020	**$64,988.08**	Balance remaining from 2020
Allied Waste / Republic Service	$10,000.00	Rental of debris box dumpsters for vegetation removal
HR Options	$10,000.00	Bio Tech hired by CWF via HR Options
California Wildlife Foundation	$2,340.00	10% Service Fee
Contractors	$30,000.00	Invasive Plant Control/ Concrete Removal
Total Proposed Expenditures	$52,340.00	Total proposed for 2021
Proposed Remaining Balance	$12,648.08	Remaining balance to be held by the CWF

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
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

5.0 Submittal Deadlines Missed

1. No submittal deadlines were missed during 2020.

6.0 Other Governmental Agency Filings and Permits Issued

Permit Required	Date of Approval Given
1. Annual Permit to Operate by BAAQMD, Plant # 19169	11/13/20 Actual
2. Clean Air Act Title IV Permit by BAAQMD (Acid Rain Permit)	9/9/2019 Actual
3. Clean Air Act Title V Permit by BAAQMD (to be obtained within 12 months after commencing operation)	9/9/2019 Actual
4. BAAQMD issued authority to construct black start equipment on Units 3 and 4:	4/23/2019
5. Application filed with the BAAQMD to change facility name filed on 11/8/18.	12/1/2019
6. Application filed with BAAQMD to renew Title V and Acid Rain permits. Renewal of Title V included a request to change permit conditions: 27, 28, 32	3/26/2020 & 4/22/2020, respectively.
7. Additional Governmental Approvals Identified in the CEC Decision or otherwise required in the ordinary course of business, including the following:	
a. Other CBO approvals to be obtained as specified in the CEC Decision	Ongoing
b. Notice of Termination, General National Pollutant Discharge Elimination System Permit for Discharges of Storm Water Associated with Construction Activity, and California Statewide General Industrial Storm Water Permits (State Water Resources Control Board Order No. 97-03-DWQ)	7/1/18 Actual
c. Certification to Store Hazardous Materials (Hazardous Materials Business Plan) by Contra Costa County Health Services Department (to be obtained at least 30 days prior to receiving hazardous materials on site)	5/2/2013 Actual
d. Compliance with certification, verification and other requirements specified in California Public Utilities Commission General Order 167 (to be provided when the MLGS Project is interconnected and capable of operating in parallel with the electric system)	2/2/2015 Actual
e. DDSD Industrial Wastewater Discharge Permit	5/25/2019 Actual
f. Emergency Diesel Generator – Initial Permit to Operate. Here in incorporated in the Facility Wide Permit to Operate, #1 above.	11/4/2015 Actual

g. Diesel Fire Pump – Initial Permit to Operate. Here in incorporated in the Facility Wide Permit to Operate, #1 above.	3/20/2019 Actual

Permit Required	**Date of Approval Given**
8. Department of Transportation Hazardous Materials Certificate of Registration Effective: 07-01-2020, Expires: 06-30-2021	7/01/2020 Actual
9. Department of Toxic Substance Control – Well Inspection Report provided by PG&E.	12/29/2020 Actual
10. San Joaquin Regional Water Quality Control Board – Request to rescind the Industrial General Permit for Storm Water. The board agreed.	5/03/2017 Actual
11. CUPA Hazardous Material Storage Certificate for 2020/2021	7/01/2020 Actual

7.0 Project Compliance Activity Schedule for 2021

Compliance Activity	Schedule
Calibrate Met Station	Q2 & Q4
RATA and Emission Compliance Testing	Q4
Calibrate Water Flow Meters (3)	Q1
Calibrate Gas Flow Meters	Q1

8.0 Additions to the On-Site Compliance File

The following items were added to the compliance file since the April 2013 Monthly Report:

MLGS Sub #	Conditions Submitted	Date of Submission
161	Soil & Water-4	April 24, 2013
162	Soil & Water-4 and Soil & Water-5	May 1, 2013
163	Monthly Compliance Report No. 32 for April 2013	May 14, 2013
164	AQ-10, AQ-30, and AQ-32	June 25, 2013
165	HAZ-1	June 25, 2013
166	WASTE-5	June 26, 2013
167	NOISE-4	July 8, 2013

MLGS Sub #	Conditions Submitted	Date of Submission
168	NOISE-5	July 8, 2013
169	TSLN-3	July 12, 2013
170	Quarterly Compliance Report for Q2-2013	July 30, 2013
171	WASTE-5	August 5, 2013
172	BIO-6	August 14, 2013
173	CUL-4a	August 22, 2013
174	PAL-7	August 22, 2013
175	CIV-4	October 23, 2013
	Quarterly Compliance Report for Q3-2013	October 25, 2013
	Quarterly Compliance Report for Q4-2013	January 29, 2014
176	TRANS-2b	November 15, 2013

	Conditions Submitted	Date of Submission
	Quarterly Compliance Report for Q1-2014 Addendum – Air Quality Reports	April 30, 2014 July 2, 2014
	Quarterly Compliance Report for Q2-2014	July 30, 2014
	Quarterly Compliance Report for Q3-2014	November 14, 2014
	Quarterly Compliance Report for Q4-2014 partial Full Report	January 30, 2015 February 2, 2015
	Quarterly Compliance Report for Q1-2015 partial Full Report	April 30, 2015 June 9, 2015
	Quarterly Compliance Report for Q2-2015	July 30, 2015
	Quarterly Compliance Report for Q3-2015	October 29, 2015
	Quarterly Compliance Report for Q4-2015	January 29, 2016
	Quarterly Compliance Report for Q1-2016	April 30, 2016
	Quarterly Compliance Report for Q2-2016	July 30, 2016
	Quarterly Compliance Report for Q3-2016	October 30, 2016

	Conditions Submitted	Date of Submission
	Quarterly Compliance Report for Q4-2016	January 30, 2017
	Quarterly Compliance Report for Q1-2017	April 28, 2017
	Quarterly Compliance Report for Q2-2017	July 30, 2017
	Quarterly Compliance Report for Q3-2017	October 30, 2017
	Quarterly Compliance Report for Q4-2017	January 30, 2018 (Partial) February 9, 2018 (Final)
	Quarterly Compliance Report for Q1-2018	April 30, 2018
	Quarterly Compliance Report for Q2-2018	July 30, 2018
	Quarterly Compliance Report for Q3-2018	October 30, 2018
	Quarterly Compliance Report for Q4-2018	January 28, 2019* corrected
	Quarterly Compliance Report for Q1-2019	April 30, 2019
	Quarterly Compliance Report for Q2-2019	July 29, 2019

	Conditions Submitted	Date of Submission
	Quarterly Compliance Report for Q3-2019	October 30, 2019
	Quarterly Compliance Report for Q4-2019	January 30, 2020
	Quarterly Compliance Report for Q1-2020	April 22, 2020
	Quarterly Compliance Report for Q2-2020	July 29, 2020
	Quarterly Compliance Report for Q3-2020	October 29,2020
	Quarterly Compliance Report for Q4-2020	January 28, 2021

9.0 Review of Unplanned Facility Closure Plan

The on-site contingency plan for unplanned facility closure has been reviewed and updated. Plan included.

Marsh Landing LLC

Facility Closure Plan

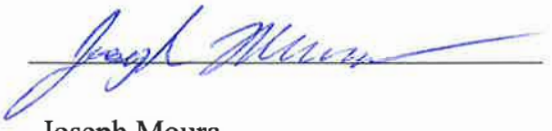
Marsh Landing Generating Station
Antioch, California

Revision 6
February 2021

Table of Contents

PLANT MANAGER REVIEW

The Marsh Landing Facility Closure Plan has been reviewed by the Plant Manager.

Signature	
Name	Joseph Moura
Title	Plant Manager
Date	2/15/2021

PLAN REVIEW AND CHANGE LOG

Revision No.	Revision Date	Completed by	Description	Revised Pages
0	4/2013	C. Hicklin	Original Plan	NA
1	1/2016	D. Frandsen	Reviewed and revised the Plan as follows: • Added cover page and Plan Review and Change Log. • Revised text to indicate present tense instead of future tense.	All
2	1/2017	D. Frandsen	Reviewed and revised the Plan as follows: • Added Facility Manager Review, Table of Contents and Introduction. • Revised document title to be consistent with the content. • Revised project description. • Separated the elements listed in the Unplanned Temporary Closure Section for the SPCC Plan and HMBP. • Added excerpts from General Conditions COMPLIANCE 11 through 13 contained in the Commission Decision 08-AFC-03 for MLGS.	All
3	9/2018	D. Frandsen	Administrative – • Update Site Manager information. • Removed sodium hydroxide from the chemicals listed onsite.	Throughout
4	1/2019	D. Frandsen	Administrative – • Updated Plant Manager information. • Updated Water Treatment tank reserved capacity.	Throughout
5	1/2020	D. Frandsen	Reviewed and revised the Plan as follows: • Added RO Permeate Tank size information	5
6	2/2021	D. Frandsen	Reviewed and revised the Plan as follows: • Added breif discussion of black start capabilities to be provided in 2021 in the Overview. • Added breif discussions regarding the emergency generator and fire pump house in the Equipment and Systems Description. • Changed the name of the Plan to be consistent with the CEC Compliance Conditions.	4 & 5

Marsh Landing Generating Station

INTRODUCTION

At some point in the future, the Marsh Landing Generating Station will cease operation and close down. At that time, it will be necessary to ensure that the closure occurs in such a way that public health and safety and the environment are protected from adverse impacts. The Marsh Landing Facility Closure Plan provides guidance for decommissioning activities and facility closure plan requirements as required by General Conditions COMPLIANCE 11 through 13 issued by the California Energy Commission (CEC) in Commission Decision 08-AFC-03 for MLGS.

I PROJECT DESCRIPTION

Overview

Marsh Landing Generating Station (MLGS) is located at 3201C Wilbur Avenue, Antioch, California, adjacent to the Contra Costa Generating Station (CCGS), a retired steam electric generating plant. MLGS was substantially completed in April 2013 with commercial operations commencing May 1, 2013, and is a nominal 760-MW simple cycle combustion turbine power plant designed to operate on natural gas fuel. The plant utilizes four Siemens Energy, Inc. SGT6-5000F4 combustion turbine-generators (CTGs). The site comprises an area that is a brownfield site measuring approximately 27 acres.

The MLGS is designed to provide peaking power, and is expected to operate at less than 10 percent annual capacity factor and a maximum 20 percent annual capacity factor. The MLGS is ideally suited to serve the needs of California's electric system as it increasingly relies on intermittent renewable resources such as solar and wind facilities. The four simple cycle turbines are capable of fast-start operation (within about 11 minutes from cold status), and are designed to be started, ramped up and down, and shut down on an intra-day basis as needed to meet the needs of the system. The facility is receiving and installing equipment to become black start capable in the Fall of 2021.

The CEC has regulatory jurisdiction over power plants located in California rated 50 MW or above and monitors all construction, operations, and decommissioning phases. The CEC approved this project's Application for Certification on August 25, 2010.

Equipment and Systems Description

Siemens provided the CTGs and auxiliaries, generator step-up transformers (GSUs), fuel gas compressors, fuel gas conditioning equipment and start-up support. Each unit includes one CTG with dry ultra-low nitrogen oxide (NOx) combustors and inlet air evaporative coolers. In the simple cycle arrangement, fuel is fired in the combustion turbines that utilize the Brayton power cycle in which hot combustion gases are expanded through the combustion turbines, which then drives an electric generator.

Kiewit Power Constructors Co. was the Engineering, Procurement and Construction (EPC) contractor for the project. Kiewit provided all facilities and equipment not provided by Siemens, including buildings, auxiliary transformers, and oxidation catalyst and selective catalytic reduction (SCR) systems for air emissions control. Kiewit was responsible for installation and commissioning of all equipment, including the turbines. Buildings and structures include an administration/control building, a water treatment building, a warehouse building, a medium voltage electrical building, electrical enclosures in the switchyard and water treatment areas, continuous emissions monitoring system enclosures, and a fuel gas compressor enclosure.

An emergency generator capable of 500 KW was added to the site in 2014. The generator can provide emergency power to the CTGs lubricating oil pumping systems in the event the facility loses power. This will allow for the safe shutdown of the any CTGs that may have been operating at the time.

In 2018 a fire pump building was added that contains both a diesel engine and electric motor driven fire pump which allows the fire system to be independent of outside resources. Each fire pump is capable of 1,500 gallons per minute at a pressure of 110 psi.

Water Treatment Systems

Process and potable water needs are supplied with water from the City of Antioch municipal supply. Raw water for process use is stored in a 600,000 gallon raw water storage tank. The top half (300,000 gallons) of the tank is utilized for process use while the bottom half (300,000 gallons plus) is reserved for firefighting capacity. Raw water is treated prior to use in the evaporative coolers and is stored in a 170,000 gallon RO Permeate tank. In addition, demineralized water for combustion turbine compressor water washes is provided on an as needed basis via a third-party agreement with a mobile treatment vendor. Demineralized water is stored in a 10,000 gallon storage tank.

Wastewater and Storm Water Systems

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 double valved and connects to CCGS's discharge tunnel to the River. The valves are kept closed and discharges to the River will only occur if the infiltration is inadequate to keep appropriate freeboard in the reservoir.

Gas Supply

Kiewit supplied two natural gas fired dew point heaters, filtration and regulation systems, including fuel gas coalescing filter/separators, in accordance with Siemens fuel gas specification.

Natural gas is supplied by Pacific Gas & Electric Company (PG&E) pursuant to the Power Purchase & Sale Agreement (PPA). The project owner and PG&E entered into a Gas Interconnection and Transportation Agreement pursuant to which PG&E constructed a short interconnection from its Line 400, a backbone gas transmission line, to the CCGS site. Kiewit designed and constructed the gas line from the outlet flange of the gas meter set on the CCGS site to the project.

Electric Interconnection

The project owner connected with the electricity network owned by PG&E and operated by the California Independent System Operator (CAISO). Electricity delivery is made to the PG&E transmission system at PG&E's Contra Costa 230 kV switchyard. The switchyard is adjacent to the MLGS site. The project owner, PG&E and CAISO executed a Large Generator Interconnection Agreement (LGIA) under the CAISO LGIP in February 2011.

Auxiliary/Station Service Power
Power for the project's auxiliary loads is provided by two station auxiliary transformers, each supplied from the project switchyard. This electrical arrangement enables the project's load to be served directly from the transmission system when the turbines are not in service.

II FACILITY CLOSURE

The MLGS has a planned operational life of at least 30 years with more than 22 years remaining. During this time, there are at least three circumstances that a facility closure can take place: planned closure, unplanned temporary closure, and unplanned permanent closure. Planned closure is defined to occur when the facility is closed in an anticipated, orderly manner, at the end of its useful economic or mechanical life, or due to gradual obsolescence. Unplanned temporary closure is defined to occur when the facility is closed suddenly and/or unexpectedly, on a short-term basis, due to unforeseen circumstances such as a natural disaster or an emergency. Unplanned permanent closure is defined to occur if the owner closes the facility suddenly and/or unexpectedly, on a permanent basis. This includes unplanned closure where the owner implements the on-site contingency plan.

1) Planned Closure
Although the planned life of MLGS is 30 years, the actual life of the facility may vary for economic or other reasons. The removal of the facility from service (decommissioning) when it reaches the end of its useful life ranges from "mothballing," to the removal of all equipment and appurtenant facilities and subsequent restoration of the site. Future conditions that could affect decommissioning are largely unknown at this time. Such conditions would be presented to the CEC, Contra Costa County, and the City of Antioch when more information is available and decommissioning is imminent.

In order to ensure that decommissioning will be completed in a manner that is environmentally sound, safe, and protects the public health and safety, the owner will submit a proposed facility closure plan to the CEC for review and approval at least 12 months prior to the commencement of closure activities. CEC staff proposed general conditions for decommissioning activities to be included in the facility closure plan and consist of the following:

- Identify any impacts and mitigation to address significant adverse impacts associated with proposed closure activities and to address facilities, equipment, or other project related remnants that will remain at the site.

- Identify a schedule of activities for closure of the power plant site, transmission line corridor, and all other appurtenant facilities constructed as part of the project.

- Identify any facilities or equipment intended to remain on site after closure, the reason, and any future use; and

- Address conformance of the plan with all applicable laws, ordinances, regulations, standards, and local/regional plans in existence at the time of facility closure, and applicable conditions of certification.

Prior to submittal of the proposed facility closure plan, the owner will organize a meeting with the CEC for the purpose of discussing the specific contents of the plan.

2) Unplanned Temporary Closure

In the event of a temporary closure, security for the facility will be maintained in accordance with the Site Security Plan for the operational phase that was submitted to the CEC on August 22, 2012, under Condition HAZ-8. The CEC as well as other responsible agencies will be notified by telephone, fax or email within 24 hours. If the CEC Compliance Project Manager determines that an unplanned temporary closure is likely to be permanent, or for a duration of more than 12 months, a closure plan consistent with the requirements for a planned closure shall be developed and submitted to the CEC Compliance Project Manager within 90 days of the CEC Compliance Project Manager's determination (or other period of time agreed to by the CEC Compliance Project Manager).

The Site Security Plan includes the following elements:

- Site security plan description
- Site security operating procedures that includes fencing, lighting, security cameras, gates, parking and site access protocol for visitors and plant contractors
- A protocol for contacting law enforcement and the CEC Compliance Project Manager in the event of suspicious activity or emergency endangering the facility, its employees, its contractors, or the public
- IT security of the facility
- Evacuation procedures
- A protocol for hazardous materials vendors to prepare and implement security plans as per 49 CFR 172.802 and to ensure that all hazardous materials drivers are in compliance with personnel background security checks as per 49 CFR Part 1572, subparts A and B
- Measures to conduct site personnel background checks, including employee and routine onsite contractors, consistent with state and federal law regarding security and privacy

Depending on the nature and extent of the temporary closure, subsequent activities will depend on whether or not the temporary closure involves a release of hazardous materials. For a temporary closure in which there is the potential for a release of hazardous materials into the environment, procedures would be followed as per Condition HAZ-2:

- Risk Management Plan
- Spill Prevention Control and Countermeasure Plan
- Hazardous Material Business Plan

The Risk Management Plan includes the following elements:

- Site accidental release prevention program and chemical specific prevention steps
- Off-site consequence analysis for the worst-case scenario (WCS) accidental release of aqueous ammonia

- Emergency response actions that have been coordinated with local emergency planning and response agencies

The Spill Prevention Control and Countermeasure Plan includes the following:

- Inventory and location of oil-containing containers and equipment
- Spill prevention measures in place
- Emergency response

The Hazardous Material Business Plan includes the following:

- Business forms required by the certified unified program agency (CUPA)
- Inventory of all hazardous materials, including chemical composition, amount, and location
- Emergency response contingency plan

Once any hazardous material release is contained and cleaned up, temporary closure would proceed as described below for closure in which there is no release of hazardous materials.

A temporary closure not due to spill/release of hazardous materials can result from a number of unforeseen circumstances. This may include conditions such as significant disruptions to major utilities (natural gas, water or electric transmission delivery systems), equipment failure or other factors that may force the units to be shut-down temporarily. Natural disasters that can result in significant damage to the facility (earthquake, flood, or severe winter storms) may also result in temporary shutdown. For these types of temporary closure, additional security will be added as needed. Appropriate procedures will depend on the expected duration of the temporary closure and the impact involved. These procedures will be implemented in compliance with all laws, ordinances, regulations and standards (LORS), appropriate protection of public health, safety, and the environment. All hazardous and nonhazardous wastes will be collected and disposed as described in the Operation Waste Management Plan.

Any temporary shutdown that does not involve facility damage would be kept "as is" and ready for restart when the unexpected cessation of operations event is rectified or ceases to restrict operations.

The facility will maintain an operational insurance coverage during the entire operations of the facility including during any unplanned temporary closure. The owner will perform normal maintenance activities during the entire operations of the facility.

3) Unplanned Permanent Closure

In the event of an unexpected permanent closure of the facility, the appropriate procedures during a temporary closure will be followed. The CEC as well as other responsible agencies will be notified by telephone, fax or email within 24 hours. The project owner shall keep the CEC Compliance Project Manager informed of the status of all closure activities.

A facility closure plan, consistent with the requirements for a planned closure, will be developed and submitted to the CEC Compliance Project Manager within 90 days of the permanent closure or another

period of time agreed to by the CEC Compliance Project Manager. This plan will be implemented in compliance with LORS, appropriate protection of public health, safety, and the environment.

10.0 Complaints, Notices of Violations, Official Warnings, Citations, and Corrective Actions Taken

No Notices of Violations were issued to the facility during 2020.