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Project Title:	Marsh Landing Generating Station Compliance
TN #:	237301
Document Title:	2020 CEC Annual Compliance Report - Marsh Landing Part 1
Description:	Annual Operations Compliance Report for Marsh Landing Generating Station
Filer:	David Frandsen
Organization:	NRG
Submitter Role:	Applicant
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March 24, 2021

Mr. John Heiser
Compliance Project Manager
California Energy Commission
1516 Ninth Street
Sacramento, CA 95814

Subject: Annual Compliance Report – 2020
(COMPLIANCE-7)
Docket No. 08-AFC-03

Mr. Heiser,

The Marsh Landing Generating Station achieved Commercial Operation status on May 1, 2013. The legal name of the plant was recently changed and is now: Marsh Landing LLC. The plant is now owned by Clearway Energy Inc. and operated and maintained by NRG Energy Services.

Per the requirements of Revised Staff Assessment please find enclosed a copy of the Annual Compliance Report for the Commercial Operations period, January 1st – December 31st, 2020. This includes documents required for the following specific conditions: BIO-2, HAZ-1, HAZ-8, SOIL & WATER-5, SOIL & WATER-6, VIS-1, VIS-2, WASTE-7, and BIO-8.

This information is being submitted to comply with the requirements of the Energy Commission's Final Decision for this project.

Please let me know if you have any questions.
(925-324-3559 or Daniel.Leach@nrg.com)

Sincerely,

Daniel Leach

Daniel Leach
MLGS Compliance Manager

Enclosures:
1 Electronic copy on CD of ACR 2020

MARSH LANDING GENERATING STATION

ANNUAL COMPLIANCE REPORT

Report Period: January 1 – December 31, 2020

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

Annual Compliance Report

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Marsh Landing Generating Station

Annual Compliance Report

1.0 Current Compliance Matrix

Mirant Marsh Landing CEC Compliance Matrix
Based on CEC Final Decision 08 - AFC -03

Color Code Key:

Pre-Const	Construction	Commiss.	Operations	To CEC or Agency	Approved by CEC

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

Mirant Marsh Landing CEC Compliance Matrix
Based on CEC Final Decision 08 - AFC -03

Color Code Key:

Pre-Const	Construction	Commiss.	Operations	To CEC or Agency	Approved by CEC

Sort Code	Cond. #	Description of Project Owner's Responsibilities	Verification/Action/Submittal Required by Project Owner	Timeframe	Date Due to CEC CPM	Lead Party	Date sent to CEC, CBO or agency	CEC Log # and Status	Comments	Date Submitted to GenOn	Date sent to CEC, CBO or agency2	Approved
COMM	AQ-2	At the earliest feasible opportunity in accordance with the recommendations of the equipment manufacturers and the construction contractor, shall tune the S-1, S-2, S-3 and S-4 Gas Turbines combustors to minimize the emissions of carbon monoxide and nitrogen oxides.	A summary of significant operation and maintenance events and monitoring records required shall be included in the quarterly operation report (AQSC8).	Quarterly	30 days after end of quarter	K & N						
COMM	AQ-3	At the earliest feasible opportunity in accordance with the recommendations of the equipment manufacturers and the construction contractor, install, adjust, and operate the A-1, A-3, A-5 and A-7 Oxidation Catalysts and A-2, A-4, A-6 and A-8 SCR Systems to minimize the emissions of carbon monoxide and nitrogen oxides from S-1, S-2, S-3, and S-4 Gas Turbines. (Basis: BACT, Regulation 2, Rule 2, Section 409)	A summary of significant operation and maintenance events and monitoring records required shall be included in the quarterly operation report (AQSC8).	Quarterly	30 days after end of quarter	K&G						
COMM	AQ-4	Submit a plan to the District Engineering Division and the CEC CPM, describing the procedures to be followed during the commissioning of the gas turbines. The plan shall include a description of each commissioning activity, the anticipated duration of each activity in hours, and the purpose of the activity. The activities described shall include, but not be limited to, the tuning of the Dry-Low-NOx combustors, the installation and operation of the required emission control systems, the installation, calibration, and testing of the CO and NOx continuous emission monitors, and any activities requiring the firing of the GT without abatement by their respective oxidation catalysts and/or SCR Systems. Do not fire any of the Gas Turbines sooner than 28 days after the District receives the commissioning plan.	Submit a commissioning plan to the CPM and APCO for approval at least four weeks prior to first firing of the gas turbine describing the procedures to be followed during the commissioning period and the anticipated duration of each commissioning activity.	Four weeks prior to first firing of GT during Commissioning	10/14/12	KIEWIT	10/17/12 Submittal 135					
COMM	AQ-5	During the commissioning period, shall demonstrate compliance with AQ-7, AQ-8, AQ-9, and AQ-10 through the use of properly operated and maintained continuous emission monitors and data recorders for the following parameters and emission concentrations:firing hours, fuel flow rates, stack gas nitrogen oxide emission concentrations, stack gas carbon monoxide emission concentrations, stack gas oxygen concentrations The monitored parameters shall be recorded at least once every 15 minutes (excluding normal calibration periods or when the monitored source is not in operation) for the Gas Turbines (S-1, S-2, S-3, and S-4). The owner/operator shall use District-approved methods to calculate heat input rates, nitrogen dioxide mass emission rates, carbon monoxide mass emission rates, and NOx and CO emission concentrations, summarized for each clock hour and each calendar day. The owner/operator shall retain records on site for at least 5 years from the date of entry and make such records available to District personnel upon request. (Basis: Regulation 2, Rule 2, Section 419)	Submit to the CPM and APCO for approval the commissioning plan as required in AQ-4.	Four weeks prior to first firing of GT during Commissioning	10/14/12	KIEWIT	10/17/12 Submittal 135					
CONS	AQ-6	Install, calibrate, and operate the District-approved continuous monitors specified in AQ-5 prior to first firing of the Gas Turbines (S-1, S-2, S-3 and S-4). After first firing of the turbines, the owner/operator shall adjust the detection range of these continuous emission monitors as necessary to accurately measure the resulting range of CO and NOx emission concentrations. The type, specifications, and location of these monitors shall be subject to District review and approval. (Basis: Regulation 2, Rule 2, Section 419)	make the site available for inspection by representatives of the District, ARB, and the Commission upon request. A summary of significant operation and maintenance events and monitoring records required shall be included in the quarterly operation report.	As Required	As required	KIEWIT			Reports submitted quarterly.			
COMM	AQ-7	Do not fire Gas Turbine without abatement of nitrogen oxide emissions by the corresponding SCR System and/or abatement of carbon monoxide emissions by the corresponding Oxidation Catalyst for more than 232 hours each during the commissioning period. The owner/operator shall operate the facility such that simultaneous commissioning of no more than two gas turbines will occur without abatement of nitrogen oxides and carbon monoxide by its SCR system and oxidation catalyst system. Such operation of any Gas Turbine without abatement shall be limited to discrete commissioning activities that can only be properly executed without the SCR system and/or oxidation catalyst in place. Upon completion of these activities, provide written notice to the District Engineering and Enforcement Divisions and the unused balance of the 232 firing hours without abatement shall expire.	Submit to the CPM and APCO for approval the commissioning plan as required in AQ-4. A summary of significant operation and maintenance events and monitoring records required shall be included in the quarterly operation report (AQ-SC8).	Four weeks prior to first firing of GT during Commissioning	10/14/12	KIEWIT	10/17/12 Submittal 135		Awaiting Approval Per BAAQMD			
OPS	AQ-8	Total mass emissions of nitrogen oxides, carbon monoxide, precursor organic compounds, PM10, and sulfur dioxide that are emitted by the Gas Turbines (S-1, S-2, S-3, and S-4) during the commissioning period shall accrue towards the consecutive twelve-month emission limitations specified in AQ-22.	A summary of significant operation and maintenance events and monitoring records required shall be included in the quarterly operation report (AQSC8).	Quarterly	30 days after end of quarter	NRG			Reports submitted quarterly.			

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OPS	AQ-9	Shall not operate the Gas Turbines (S-1, S-2, S-3, and S-4) in a manner such that the pollutant emissions from each gas turbine will exceed the following limits during the commissioning period. These emission limits shall include emissions resulting from the start-up and shutdown of the Gas Turbines (S-1, S-2, S-3, S-4). NOx (as NO2) 3,063 pounds per calendar day 188 pounds per hour. CO 33,922 pounds per calendar day 2,405 pounds per hour. POC (as CH4) 2,008 pounds per calendar day. PM10 235 pounds per calendar day. SO2 149 pounds per calendar day.	A summary of significant operation and maintenance events and monitoring records required shall be included in the quarterly operation report (AQSC8).	Quarterly	30 days after end of quarter	NRG			Reports submitted quarterly.			
COMM	AQ-10	Within 90 days after startup of each turbine, the Owner/Operator shall conduct District and CEC approved source tests for that turbine to determine compliance with the emission limitations specified in AQ-17. The source tests shall determine NOx, CO, and POC emissions during start-up and shutdown of the gas turbines. The POC emissions shall be analyzed for methane and ethane to account for the presence of unburned natural gas. The source test shall include a minimum of three start-up and three shutdown periods. Thirty working days before the execution of the source tests, the Owner/Operator shall submit to the District and the CEC Compliance Program Manager (CPM) a detailed source test plan designed to satisfy the requirements of this Part. The District and the CEC CPM will notify the Owner/Operator of any necessary modifications to the plan within 20 working days of receipt of the plan; otherwise, the plan shall be deemed approved. The Owner/Operator shall incorporate the District and CEC CPM comments into the test plan. The Owner/Operator shall notify the District and the CEC CPM within seven (7) working days prior to the planned source testing date. The owner/operator shall submit the source test results to the District and the CEC CPM within 60 days of the source testing date. (Basis: Regulation 2, Rule 2, Section 419).	Submit to the CPM and APCO for approval the commissioning plan as required in AQ-4.	Thirty working days before the execution of the source tests	10/14/12	KIEWIT	10/17/12 CEC Submittal 135 Planned Source Testing dates. 2/25/13 CEC Submittal 151 Update of planned Source Testing dates. 6/25/13 CEC Submittal 164 Source Test Report Submitted					
OPS	AQ-11	Fire the Gas Turbines (S-1, S-2, S-3, and S-4) exclusively on PUC-regulated natural gas with a maximum sulfur content of 1 grain per 100 standard cubic feet. To demonstrate compliance with this limit, the operator of S-1, S-2, S-3 and S-4 shall sample and analyze the gas from each supply source at least monthly to determine the sulfur content of the gas. PG&E monthly sulfur data may be used provided that such data can be demonstrated to be representative of the gas delivered to the MLGS.	The result of the natural gas fuel sulfur monitoring data and other fuel sulfur content source data shall be submitted to the District and CPM in the quarterly operation report (AQ-SC8).	Quarterly	30 days after end of quarter	NRG			Reports submitted quarterly.			
OPS	AQ-12	Do not operate the units such that the heat input rate to each Gas Turbine (S-1, S-2, S-3, and S-4) exceeds 2,202 MMBtu (HHV) per hour.	A summary of significant operation and maintenance events and monitoring records required shall be included in the quarterly operation report.	Quarterly	30 days after end of quarter	NRG			Reports submitted quarterly.			
OPS	AQ-13	Do not operate the units such that the heat input rate to each Gas Turbine (S-1, S-2, S-3, and S-4) exceeds 52,848 MMBtu (HHV) per day.	A summary of significant operation and maintenance events and monitoring records required shall be included in the quarterly operation report.	Quarterly	30 days after end of quarter	NRG			Reports submitted quarterly.			
OPS	AQ-14	Do not operate the units such that the combined cumulative heat input rate for the Gas Turbines (S-1, S-2, S-3, and S-4) exceeds 13,994,976 MMBtu (HHV) per year.	A summary of significant operation and maintenance events and monitoring records required shall be included in the quarterly operation report.	Quarterly	30 days after end of quarter	NRG			Reports submitted quarterly.			
OPS	AQ-15	Do not operate S-1, S-2, S-3, and S-4 such that the Combined hours for all four units exceeds 7,008 hours per year (excluding operations necessary for maintenance, tuning, and testing).	A summary of significant operation and maintenance events and monitoring records required shall be included in the quarterly operation report (AQSC8).	Quarterly	30 days after end of quarter	NRG			Reports submitted quarterly.			
OPS	AQ-16	Ensure that the each Gas Turbine (S-1, S-2, S-3,S-4) is abated by the properly operated and properly maintained Selective Catalytic Reduction (SCR) System A-2, A-4, A-6 or A-8 and Oxidation Catalyst System A-1, A-3, A-5, or A-7 whenever fuel is combusted at those sources and the corresponding SCR catalyst bed (A-2, A-4, A-6 or A-8) has reached minimum operating temperature.	Make the site available for inspection by representatives of the District, ARB, and the Commission upon request. A summary of significant operation and maintenance events and monitoring records required shall be included in the quarterly operation report (AQ-SC8).	As Required	As required	NRG			Reports submitted quarterly.			
OPS	AQ-17	ensure that the Gas Turbines (S-1, S-2, S-3, S-4) comply with requirements (a) through (i). Requirements (a) through (f) do not apply during a gas turbine start-up, combustor tuning operation or shutdown.	A summary of significant operation and maintenance events and monitoring records required shall be included in the quarterly operation report.	Quarterly	30 days after end of quarter	NRG			Reports submitted quarterly.			
OPS	AQ-18	Ensure that the regulated air pollutant mass emission rates from each of the Gas Turbines (S-1, S-2, S-3, and S-4) during a start-up or shut down does not exceed the limits established below. Startups shall not exceed 30 minutes. Shutdowns shall not exceed 15 minutes. NOx (as NO2),CO,POC(as CH4) of Maximum Emissions Per Startup: 36.4 ,216.2 , 11.9 Maximum Emissions During Hour Containing a Startup:45.1, 541.3, 28.5 Maximum Emissions Per Shutdown: 15.1, 111.5, 5.4	A summary of significant operation and maintenance events and monitoring records required shall be included in the quarterly operation report (AQSC8).	Quarterly	30 days after end of quarter	NRG			Reports submitted quarterly.			

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OPS	AQ-19	Do not perform combustor tuning on each Gas Turbine (S-1, S-2, S-3, or S-4) more than twice every consecutive 12 month period. Each tuning event shall not exceed eight hours. Combustor tuning shall only be performed on one gas turbine per day. The owner/operator shall notify the District no later than seven days prior to combustor tuning activity. The emissions during combustor tuning from each gas turbine shall not exceed the limits established below.NOx (as NO2):80, CO:450, POC (as CH4):30	notify both the District and CPM at least 7 days prior to the combustor tuning. A summary of significant operation and maintenance events and monitoring records required shall be included in the quarterly operation report (AQ-SC8) This does not include Initial Construction Tunings	7 days prior to combustor tuning	11/1/12	NRG			Reporting on as needed basis.			
OPS	AQ-20	Do not allow total combined emissions from the Gas Turbines (S-1, S-2, S-3, and S-4), including emissions generated during gas turbine start-ups, and shutdowns to exceed the following limits during any calendar day (except for days during which combustor tuning events occur: (a) 2,468 pounds of NOx (as NO2) per day (Basis: Cumulative Increase) (b) 4,858 pounds of CO per day (Basis: Cumulative Increase) (c) 476 pounds of POC (as CH4) per day (Basis: Cumulative Increase) (d) 864 pounds of PM10 per day (Basis: Cumulative Increase) (e) 596 pounds of SO2 per day (Basis: Cumulative Increase)	A summary of significant operation and maintenance events and monitoring records required shall be included in the quarterly operation report (AQSC8).	Quarterly	30 days after end of quarter	NRG			Reports submitted quarterly.			
OPS	AQ-21	Do not allow cumulative combined emissions from the Gas Turbines (S-1, S-2, S-3, and S-4), including emissions generated during gas turbine start-ups, combustor tuning, shutdowns, and malfunctions to exceed the following limits during any consecutive twelve-month period: (a) 2,941 pounds of NOx (as NO2) per day (Basis: Cumulative Increase) (b) 8,378 pounds of CO per day (Basis: Cumulative Increase)(c) 693 pounds of POC (as CH4) per day (Basis: Cumulative Increase)(d) 864 pounds of PM10 per day (Basis: Cumulative Increase)(e) 596 pounds of SO2 per day (Basis: Cumulative Increase)	A summary of significant operation and maintenance events and monitoring records required shall be included in the quarterly operation report (AQSC8).	Quarterly	30 days after end of quarter	NRG			Reports submitted quarterly.			
OPS	AQ-22	not allow cumulative combined emissions from the Gas Turbines (S-1, S-2, S-3, and S-4), including emissions generated during gas turbine start-ups, combustor tuning, shutdowns, and malfunctions to exceed the following limits during any consecutive twelve-month period: (a) 78.57 tons of NOx (as NO2) per year (Basis: Offsets)(b) 138.57 tons of CO per year (Basis: Cumulative Increase)(c) 14.21 tons of POC (as CH4) per year (Basis: Offsets)(d) 31.54 tons of PM10 per year (Basis: Cumulative Increase)(e) 4.94 tons of SO2 per year (Basis: Cumulative Increase)	A summary of significant operation and maintenance events and monitoring records required shall be included in the quarterly operation report (AQSC8).	Quarterly	30 days after end of quarter	NRG			Reports submitted quarterly.			
OPS	AQ-23a	Do not allow the maximum projected annual toxic air contaminant emissions (per AQ-26) from the Gas Turbines combined to exceed the following limits: formaldehyde 7,785 pounds per year, benzene 202 pounds per year, Specified polycyclic aromatic hydrocarbons (PAHs) 1.98 pounds per year unless the following requirement is satisfied: (1)Perform a health risk assessment to determine the total facility risk using the emission rates determined by source testing and the most current Bay Area Air Quality Management District approved procedures and unit risk factors in effect at the time of the analysis. Submit the risk analysis to the District and the CEC CPM . May request that the District and the CEC CPM revise the carcinogenic compound emission limits specified above. Demonstrates to the satisfaction of the APCO that these revised emission limits will not result in a significant cancer risk, the District and the CEC CPM may, at their discretion, adjust the carcinogenic compound emission limits listed above.	Source test results obtained through compliance with AQ-26 and AQ-30 shall confirm the toxic air contaminant emission rates or submit an updated health risk assessment.	With/in 60 days of initial source testing and Annually.	4/1/11	NRG			Iniitial Source Test submitted 6/18/13. Annual testing required.			
OPS	AQ-23b	Perform a health risk assessment to determine the total facility risk using the emission rates determined by source testing and the most current Bay Area Air Quality Management District approved procedures and unit risk factors in effect at the time of the analysis.	Submit the risk analysis to the District and the CEC CPM . May request that the District and the CEC CPM revise the carcinogenic compound emission limits specified above. Demonstrates to the satisfaction of the APCO that these revised emission limits will not result in a significant cancer risk, the District and the CEC CPM may, at their discretion, adjust the carcinogenic compound emission limits listed above.	Every 24 months submit with/in 60days of test	As required	NRG						
OPS	AQ-24	Demonstrate compliance with AQ-12 through AQ-15, AQ-17(a) through AQ-17(e), AQ-18 (NOx, and CO limits), AQ-19 (NOx and CO limits), AQ-20(a), AQ-20(b), AQ-21(a), AQ-21(b), AQ-22(a) and AQ- 22(b) by using properly operated and maintained continuous monitors (during all hours of operation including gas turbine start-up, combustor tuning, and shut down periods). The owner/operator shall monitor for all of the following a. through k.	Make the site available for inspection by representatives of the District, ARB and the Commission to verify the continuous monitoring and recordkeeping system is properly installed and operational.	As Required	As required	NRG						

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OPS	AQ-25	Demonstrate compliance with AQ-17(f), AQ-17(g), AQ-17(h), AQ-17(i), AQ-20(c), AQ-20(d), AQ-20(e), AQ-21(c), AQ-21(d), AQ-21(e), AQ-22(c), AQ-22(d), AQ-22(e), the owner/operator shall calculate and record on a daily basis, the precursor organic compound (POC) mass emissions, fine particulate matter (PM10) mass emissions (including condensable particulate matter), and sulfur dioxide (SO2) mass emissions from each power train. The owner/operator shall use the actual heat input rates measured pursuant to AQ-24, actual Gas Turbine start-up times, actual Gas Turbine shutdown times, and CEC and District-approved emission factors developed pursuant to source testing under AQ-28 to calculate these emissions. The owner/operator shall present the calculated emissions in the following format:(a) For each calendar day, POC, PM10, and SO2 emissions, summarized for each power train (Gas Turbine) and S-1, S-2, S-3, and S-4 combined. (b) on a monthly basis, the cumulative total POC, PM10, and SO2 mass emissions, for each year (12-month rolling average) for S-1, S-2, S-3, and S-4 combined.(Basis: Offsets, Cumulative Increase)	Make the site available for inspection by representatives of the District, ARB and the Commission to verify the calculation and record keeping system is properly installed and operational.	As Required	As required	NRG						
OPS	AQ-26	Demonstrate compliance with AQ-23, the owner/operator shall calculate and record on an annual basis the maximum projected annual emissions of: Formaldehyde, Benzene, and Specified PAHs. The owner/operator shall calculate the maximum projected annual emissions using the maximum annual heat input rate of 13,994,976 MMBtu/year for S-1, S-2, S-3, and S-4 combined and the highest emission factor (pounds of pollutant per MMBtu of heat input) determined by the most recent of any source test of the S-1, S-2, S-3, or S-4 Gas Turbines. If the highest emission factor for a given pollutant occurs during minimum-load turbine operation, a reduced annual heat input rate may be utilized to calculate the maximum projected annual emissions to reflect the reduced heat input rates during gas turbine start-up and minimum load operation. The reduced annual heat input rate shall be subject to District review and approval.	Make the site available for inspection by representatives of the District, ARB and the Commission to verify the calculation and recordkeeping system is properly installed and operational.	As Required	As required	NRG						
COMM	AQ-27a	Conduct a District-approved source test on each corresponding exhaust pointS to determine the corrected ammonia (NH3) emission concentration to determine compliance with AQ-17(e). The source test shall be conducted over the expected operating range of the turbine (including, but not limited to, minimum and full load modes) to establish the range of ammonia injection rates necessary to achieve NOx emission reductions while maintaining ammonia slip levels.	Submit the results and field data collected during source tests to the District and CPM within 60 days of testing and according to a preapproved protocol (AQ-29).	Within 60 days of intial source testing	4/1/11	KIEWIT	6/25/13 CEC Submittal 164 Source Test Report					
OPS	AQ-27b	Repeat the source testing(AQ-27a) on an annual basis thereafter. Ongoing compliance with AQ-17(e) shall be demonstrated through calculations of corrected ammonia concentrations based upon the source test correlation and continuous records of ammonia injection rate.	Testing for steady-state emissions shall be conducted upon initial operation and at least once every 12 months.	With in 60 days of test every 12 months	As required	NRG						
OPS	AQ-28a	Testing for steady-state emissions shall be conducted upon initial operation and at least once every 12 months.	Submit the results and field data collected during source tests to the District and CPM within 60 days of testing	Annually	Include in ACR	NRG						

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COMM &OPS	AQ-28b	conduct a District-approved source test on each corresponding exhaust point P-1, P-2, P-3 and P-4 while each Gas Turbine is operating at maximum load to determine compliance with AQ-17(a), AQ-17(b), AQ-17(c), AQ-17(d), AQ-17(f), AQ-17(g), AQ- 17(h), AQ-17(i), and while each Gas Turbine is operating at minimum load to determine compliance with AQ-17(c), and AQ-17(d) and to verify the accuracy of the continuous emission monitors required in AQ-24. The owner/operator shall test for (as a minimum): water content, stack gas flow rate, oxygen concentration, precursor organic compound concentration and mass emissions, nitrogen oxide concentration and mass emissions (as NO2), carbon monoxide concentration and mass emissions, sulfur dioxide concentration and mass emissions, methane, ethane, and total particulate matter emissions including condensable particulate matter. The owner/operator shall submit the source test results to the District and the CEC CPM within 60 days of conducting the tests.	0	Upon initial operation / annually	4/1/11	KIEWIT							
COMM &OPS	AQ-29	Obtain approval for all source test procedures from the District's Source Test Section and the CEC CPM prior to conducting any tests. Comply with all applicable testing requirements for continuous emission monitors as specified in Volume V of the District's Manual of Procedures. Notify the District's Source Test Section and the CEC CPM in writing of the source test protocols and projected test dates at least 7 days prior to the testing date(s).	Submit the proposed source test plan or protocol for the source tests seven days prior to the proposed source test date to both the District and CPM for approval. The project owner shall notify the District and CPM no later than seven days prior to the proposed source test date and time.	No later than seven days prior to the proposed source test date and time	1/24/11	NRG	2/25/13 CEC Submittal 151 Update of planned Source Testing dates.					
COMM	AQ-30a	conduct a District-approved source test on one of the following exhaust points P-1, P-2, P-3 or P-4 while the Gas Turbine is operating at maximum allowable operating rates to demonstrate compliance with AQ-23. The owner/operator shall also test the gas turbine while it is operating at minimum load. If three consecutive biennial source tests demonstrate that the annual emission rates calculated pursuant to AQ-26 for any of the compounds listed below are less than the BAAQMD trigger levels, pursuant to Regulation 2, Rule 5, shown, then the owner/operator may discontinue future testing for that pollutant: Benzene ≤ 3.8 pounds/year and 2.9 pounds/hour, Formaldehyde < 18 pounds/year and 0.12 pounds/hour, Specified PAHs ≤ 0.0069 pounds/year	The results and field data collected during source tests shall be submitted to the District and CPM within 60 days of testing and according to a preapproved protocol (AQ-29).	Within 60 days of initial source testing	4/1/11	KIEWIT	6/25/13 Submittal 164 Source Test Report Submitted					
OPS	AQ-30b	Testing for toxic air contaminant emissions shall be conducted upon initial operation and at least once every 24 months.	The results and field data collected during source tests shall be submitted to the District and CPM within 60 days of testing	with in 60 days of test every 24 months thereafter	As required	NRG	6/25/13 Submittal 164 Source Test Report Submitted					
OPS	AQ-31	Calculate the sulfuric acid mist (SAM) emission rate using the total heat input for the sources and the highest results of any source testing conducted pursuant to AQ-32. If this SAM mass emission limit of AQ- 33 is exceeded, the owner/operator must utilize air dispersion modeling to determine the impact (in µg/m3) of the sulfuric acid mist emissions pursuant to Regulation 2, Rule 2, Section 306.	Make the site available for inspection by representatives of the District, ARB and the Commission to verify the calculation and recordkeeping system is properly installed and operational. The quarterly operation report (AQ-SC8) shall include a determination of the impact if triggered by this condition.	As Required & Quarterly	30 days after end of quarter	NRG			Reports submitted quarterly.			
COMM	AQ-32a	Conduct a District-approved source test on two of the four exhaust points while each gas turbine is operating at maximum heat input rates to demonstrate compliance with the SAM emission rates specified in AQ-33. Test for (as a minimum) SO2, SO3, and H2SO4. Submit the source test results to the District and the CEC CPM within 60 days of conducting the tests.	Submit the results and field data collected during source tests to the District and CPM within 60 days of testing and according to a preapproved protocol (AQ-29).	Within 60 days of initial source testing and	4/1/11	KIEWIT	6/25/13 Submittal 164 Source Test Report Submitted					
OPS	AQ-32b	Testing for steady-state emissions shall be conducted upon initial operation and at least once every 12 months	Submit the results and field data collected during source tests to the District and CPM within 60 days of testing and according to a preapproved protocol (AQ-29).	with in 60 days of test every 12 months thereafter	As required	NRG	6/25/13 Submittal 164 Source Test Report Submitted					

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OPS	AQ-33	Do not allow sulfuric acid emissions (SAM) from stacks combined to exceed seven tons in any consecutive 12 month period	A summary of significant operation and maintenance events and monitoring records required shall be included in the quarterly operation report (AQSC8).	Quarterly	30 days after end of quarter	NRG			Reports submitted quarterly.			
CONS	AQ-34	Ensure that the stack height of emission points are each at least 165 feet above grade level at the stack base	Make the site available for inspection by representatives of the District, ARB and the Commission	As Required	As required	GenOn			Kiewit to provide per email from jason Lockwood 10.19.12			
OPS	AQ-35	Submit all reports (including, but not limited to monthly CEM reports, monitor breakdown reports, emission excess reports, equipment breakdown reports, etc.) as required by District Rules or Regulations and in accordance with all procedures and time limits specified in the Rule, Regulation, Manual of Procedures, or Enforcement Division Policies & Procedures Manual	Ensure that notifications and reports, including the quarterly operation report (AQ-SC8), are prepared and submitted in compliance with this condition	As Required	As required	NRG						
OPS	AQ-36	Maintain all records and reports on site for a minimum of five years. These records shall include but are not limited to: continuous monitoring records (firing hours, fuel flows, emission rates, monitor excesses, breakdowns, etc.), source test and analytical records, natural gas sulfur content analysis results, emission calculation records, records of plant upsets and related incidents. The owner/operator shall make all records and reports available to District and the CEC CPM staff upon request.	Make the site available for inspection by representatives of the District, ARB and the Commission.	As Required	As required	NRG						
OPS	AQ-37	notify the District and the CEC CPM of any violations of these permit conditions. Notification shall be submitted in a timely manner, in accordance with all applicable District Rules, Regulations, and the Manual of Procedures. Notwithstanding the notification and reporting requirements given in any District Rule, Regulation, or the Manual of Procedures, the owner/operator shall submit written notification (facsimile is acceptable) to the Enforcement Division within 96 hours of the violation of any permit condition.	A summary of significant operation and maintenance events and monitoring records required shall be included in the quarterly operation report.	Quarterly	30 days after end of quarter	NRG			Reports submitted quarterly.			
CONS	AQ-38	Provide adequate stack sampling ports and platforms to enable the performance of source testing. The location and configuration of the stack sampling ports shall comply with the District Manual of Procedures, Volume IV, Source Test Policy and Procedures, and shall be subject to BAAQMD review and approval, except that the facility shall provide four sampling ports that are at least 6 inches in diameter in the same plane of each gas turbine stack.	The project owner shall make the site available for inspection by representatives of the District, ARB and the Commission.	As Required	As required	GenOn			Kiewit to provide per email from jason Lockwood 10.19.12			
CONS	AQ-39	Contact the BAAQMD Technical Services Division regarding requirements for the continuous emission monitors, sampling ports, platforms, and source tests required by AQ-10, AQ-27, AQ-28, AQ-30 and AQ-32. Conduct all source testing and monitoring in accordance with the District approved procedures.	Contact the District for specifications on monitors, ports, platforms and source tests and shall submit verification of this contact to the District and CPM with the initial source test protocol	With in 180 days of Issuance of the Authority to Construct	9/25/11	KIEWIT	9/13/2011 Submittal 061 Approved by CEC 10/7/2011 Additional submittal 10/11/2011 Submittal 068		Approval received from BAAQMD bt letter from Ken Kunaniec Air Quaklity Engineering Manager Dated 4/21/2011			10/11/2012 Submittal of BAAMD Letter only . No CEC Approval required.
OPS	AQ-40	Ensure that the MLGS complies with the continuous emission monitoring requirements of 40 CFR Part 75	Submit to the CPM and District the results of audits of the monitoring system demonstrating compliance with this condition as part of the quarterly operation report.	Quarterly	30 days after end of quarter	NRG			Kiewit to provide per email from jason Lockwood 10.19.12			
OPS	AQ-41	The project owner shall not exceed 50 hours per year per engine for reliability related testing on the diesel emergency generator and diesel fire pump engines. (Basis: Title 17, California Code of Regulations, Section 93115, ATCM for Stationary CI Engines)	The project owner shall verify compliance with this Condition of Certification in each quarterly report required by COC AQ-SC8.	Quarterly	30 days after end of quarter	NRG			AQ-41 added with petition to amend approved 11/17/2014.			
OPS	AQ-42	The project owner shall operate each emergency standby engine only for the following purposes: to mitgate emergency conditions, for emission testing, or for reliability related testing on the diesel emergency generator and diesel fire pump engines. (Basis: Title 17, California Code of Regulations, Section 93115, ATCM for Stationary CI Engines)	The project owner shall verify compliance with this Condition of Certification in each quarterly report required by COC AQ-SC8.	Quarterly	30 days after end of quarter	NRG			AQ-42 added with petition to amend approved 11/17/2014.			
OPS	AQ-43	The project owner shall operate each emergency standby engine only when a non-resettable totalizing meter (with a minimum display capability of 9,999 hours) that measures the hours of operation for the engine is installed, operated and properly maintained. (Basis: Title 17, California Code of Regulations, Section 93115, ATCM for Stationary CI Engines)	The project owner shall make the site available for inspection by representatives of the District, ARB and the Commission.	As Required	As Required	NRG			AQ-43 added with petition to amend approved 11/17/2014.			

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OPS	AQ-44	Records: The project owner shall maintain the following monthly record in a District-approved log for at least 36 months from the date of entry (60 months if the facility has been issued a Titile v Major Facility Review Permit or a Synthetic Minor Operating Permit). Log entries shall be retained on-site, either at a central location or at the engine's location, and made immediately available to the District staff and CPM upon request. a) Hours of operation for reliability testing. b) Hours of operation for emissioin testng. c) Hours of operation for emergencies. d) For each emergency, the nature of the emergency condition. e) Fuel usage for each engine(s). (Basis: Title 17, California Code of Regulations, Section 93115, ATCM for Stationary CI Engines)	The project owner shall make the site and records available for inspection by representatives of the District, ARB and the Commission.	As Required	As Required	NRG			AQ-44 added with petition to amend approved 11/17/2014.			
OPS	AQ-45	If the emergency standby engine is located on school grounds or within 500 feet of any school ground, the following requirements shall apply. MLGS is NOT within 500 feet of any school grounds.	The project owner shall make the site and records available for inspection by representatives of the District, ARB and the Commission.	As Required	As Required	NRG			AQ-45 added with petition to amend approved 11/17/2014.			
PC-1	BIO-1	Assign a Designated Biologist to the project. The DB must meet the specified qualifications. No site or related facility activities shall commence until an approved Designated Biologist is available to be on site. Adhere to condition specification if the DB needs to be replaced	Submit the resume of the proposed DB, with at least 3 references and contact information, to the (CPM) for approval.	At least 90 days prior to the start of any site (or related facilities) mobilization	11/17/10	GenOn	9/21/2010 Submission 002 Submission 006 &012&020 2/2/2012 Submittal 088	2010-1221 Returned 10/6/2010	Approved 10/20/2010 Addntl resumes submitted 2/2/2012 Approved addntl monitors 2/24/12		9/21/2010	CEC approval per CEC Blue sheet report dated 10-06-10 (on file) Additional Verifications per implied acceptance of MCR No.2 & MCR No. 14 & MCR No.18
CONS	BIO-2	Ensure that the DB performs the specified 1. through 9. of the condition during any site (or related facilities) mobilization, ground disturbance, grading, construction, operation, and closure activities. The DB may be assisted by the approved Biological Monitor(s), but remains the contact for the project owner and CPM.	Designated Biologist must maintain written records of the tasks described in condition and provide summaries for inclusion in the MCR.	Monthly	Include in MCR	BIOLOGIST					Monthly 10th Busness day of each month	Currently No noted issues with any Monthly report
CONS	BIO-3	Construction/Operation Manager shall act on the advice of the DB to ensure conformance with the biological resources Conditions of Certification. If required by the DB, Construction/ Operation Manager shall halt all activities in areas specified by the DB. The Designated Biologist shall follow the process 1. through 3 in the condition if construction is halted	Designated Biologist must notify the CPM immediately of any non-compliance activity or halt of any site mobilization, ground disturbance, grading, construction, and ops activities.	As Required	As required	BIOLOGIST						
PC-1	BIO-4a	Develop and implement a CPM-approved Worker Environmental Awareness Program (WEAP) in which each of its employees, as well as employees of contractors and subcontractors who work on the project site or any related facilities during site mobilization, ground disturbance, grading, construction, operation, and closure are informed about sensitive biological resources associated with the project. The WEAP must have the specified 1. through 6. of the condition.	Provide to the CPM the proposed WEAP and all supporting written materials and electronic media prepared or reviewed by the DB and a resume of the person(s) administering the program.	60 days prior to the start of any site (or related facilities) mobilization	12/17/10	BIOLOGIST	10/26/2010 Submittal 009 Resubmit WEAP Handout 12/21/2010 Submittal 023 Submittal 029 Submittal 030 1/26/2011	2010-1490 2010-1790 12/3/2010	Additional Information Submitted 12/3/2010 WEAP handbook revised 1/24/2011 Submitted WEAP training video 1/26/2011 Approved (No Date Given)		10/26/10	2/4/2011 Verified MCR No.5 2/11/2011
CONS	BIO-4b	Report the number of persons who have completed the training in the prior month and a running total of all persons who have completed the training to date.	Include a running total in MCR.	Monthly	Include in MCR	KIEWIT			Current as of MCR 24		Monthly 10th Busness day of each month	Currently No noted issues with any Monthly report
PC-1	BIO-4c	Deliver copies of final CPM approved WEAP materials to site.	Submit two copies of the CPM approved materials.	At least 10 days prior to site or related facilities mobilization	2/5/11	BIOLOGIST	1-28-11 Submittal 030 Submittal 032	2010-1490	Additional Information Submitted 12/3/2010 Approved 1/11/2011 Additional copies sent per request of Ann Crisp 1/28/2011		10/26/2010	1/11/2011 Delivery to site Verified by Project delivery records submittal to CEC no approval required
OPS	BIO-4d	Keep signed WEAP statements in project files.	During project operation, signed statements for active project operational personnel shall be kept on file for six months following the termination of an individual's employment.	As required	As required	NRG						Verified Monthly in MCR's in sections 2.05

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PC-1	BIO-5	Prepare the proposed BRMIMP (see BIO-6 for detailed requirements of the BRMIMP).	Submit two copies of the BRMIMP to the CEC CPM for review and approval and to USFWS/CDFG for review and comment	At least 60 days prior to site or related facilities mobilization	12/17/10	BIOLOGIST	10/13/2010 Submittal 006 Resub 11/18/2010 Submittal 014 & Submittal 020 Submittal 030	21010-1362 11/3/10 2010-1679 11/18/2010	Additional Information Submitted 12/3/2010 Additional copy sent per request of Ann Crisp 1/28/2011 Approved (No Date Given)		10/13/10	2/4/2011 Verified MCR No.5 2/11/2011
CONS	BIO-5b	Revise or supplement the BRMIMP to reflect any BIO permit conditions received after the original BRMIMP is accepted.	Submit any bio permits not yet received when the BRMIMP is first submitted to the CPM and HTAC	Within 5 days of receipt	As required	BIOLOGIST	Submittal 020 Submittal 030					Verified Monthly in MCR's in sections 2.04 and 2.06
CONS	BIO-5c	Any changes to the approved BRMIMP must also be approved by the CPM and submitted to the HTAC to ensure no conflicts exist.	Notify the CPM before implementing any modifications to the approved BRMIMP	Within 5 days	As required	BIOLOGIST						Verified Monthly in MCR's in sections 2.04 and 2.06
CONS	BIO-5d	Implementation of BRMIMP measures will be reported in the MCR by the DB.	Provide report for inclusion in MCR.	Monthly	Include in MCR	BIOLOGIST					Monthly 10th Busness day of each month	Currently No noted issues with any Monthly report
CONS	BIO-5e	Prepare a written construction closure report identifying which items of the BRMIMP have been completed, a summary of all modifications to mitigation measures made during the project's site mobilization, ground disturbance, grading, and construction phases, and which mitigation and monitoring items are still outstanding.	Provide construction closure report to the CPM for review and approval.	Within 30 days after completion of construction	1/28/12	BIOLOGIST			Submittal #172		8/14/2013	
CONS	BIO-6a	Implement measures set forth in condition in a manner to avoid or minimize impacts to the local biological resources.	Provide report for inclusion in MCR.	Monthly	Include in MCR	BIOLOGIST					Monthly 10th Busness day of each month	Currently No noted issues with any Monthly report
CONS	BIO-6b	Submit a written construction termination report identifying how bio mitigation measures have been completed.	Provide construction termination report to the CPM for review and approval. Provide additional copies to the CDFG and USFWS.	Within 30 days after completion of construction	1/28/12	BIOLOGIST			Submittal #172		8/14/2013	
PC-2	BIO-7	Conduct migratory bird pre-construction nest surveys as required by condition. If active nests are detected during the survey, the report shall include a map or aerial photo identifying the location of the nest and shall depict the boundaries of the no-disturbance buffer zone around the nest.	Provide the CPM a letter-report describing the findings of the pre-construction nest surveys, including the time, date, and duration of the survey; identity and qualifications of the surveyor(s); and a list of species observed. Additional copies shall be provided to CDFG.	At least 10 days prior to site or related facilities mobilization	2/5/11	BIOLOGIST	3/8/2011 Submission 038 3/13/2012 Submission 041 5/21/2013 Submittal 105 7/13/12 Submittal 112		Approved, but ongoing review required. Request to remove hawk nest submitted 3/13/2012	3/8/2011	3/8/2011	3/28/2011
OPS	BIO-8	Provide an annual Payment to Friends of San Pablo Bay. The First Annual Payment shall be at least equal to $2,693.00 + $20,000 payment of good faith	Provide written verification to the CPM, USFWS, and CDFG that first annual payment was made. Thereafter within 30 days of the each commencement anniversary date provide written verification of payment to parties above	30 days after the start of project operation	1/22/12	NRG	9/10/12 Submittal 124 Submittal 138			9/10/2012		Proof of payment submitted 9/10/2012 - No acceptance is required Email verification to C stora on 9/18/12
OPS	BIO-8 2013	Provide an annual Payment to Friends of San Pablo Bay. The First Annual Payment shall be at least equal to $2,693.00 + $20,000 payment of good faith	Provide written verification to the CPM, USFWS, and CDFG that first annual payment was made. Thereafter within 30 days of the each commencement anniversary date provide written verification of payment to parties above	30 days after the COD anniversary	1/22/12	NRG						Proof of payment submitted 5/29/2014 - via Email to C stora on 7/15/13.

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OPS	BIO-8 2014	Provide an annual Payment to Friends of San Pablo Bay. The First Annual Payment shall be at least equal to $2,693.00 + $20,000 payment of good faith	Provide written verification to the CPM, USFWS, and CDFG that first annual payment was made. Thereafter within 30 days of the each commencement anniversary date provide written verification of payment to parties above	30 days after the COD anniversary	5/31/14	NRG						Proof of payment submitted 5/30/2014 - via Email to C Remy-Obad on 9/16/16.
OPS	BIO-8 2015	Provide an annual Payment to Friends of San Pablo Bay. The First Annual Payment shall be at least equal to $2,693.00 + $20,000 payment of good faith	Provide written verification to the CPM, USFWS, and CDFG that first annual payment was made. Thereafter within 30 days of the each commencement anniversary date provide written verification of payment to parties above	30 days after the COD anniversary	5/31/15	NRG						Proof of payment submitted 5/29/2015 - via Email to C Remy-Obad on 9/16/16.
OPS	BIO-8 2016	Provide an annual Payment to Friends of San Pablo Bay. The First Annual Payment shall be at least equal to $3,036 + $20,000 payment of good faith	Provide written verification to the CPM, USFWS, and CDFG that first annual payment was made. Thereafter within 30 days of the each commencement anniversary date provide written verification of payment to parties above	30 days after the COD anniversary	5/31/16	NRG						Proof of payment submitted 5/31/2016 - via Email to C Remy-Obad on 8/11/16.
OPS	BIO-8 2017	Provide an annual Payment to Friends of San Pablo Bay. The First Annual Payment shall be at least equal to $3115 + $20,000 payment of good faith	Provide written verification to the CPM, USFWS, and CDFG that first annual payment was made. Thereafter within 30 days of the each commencement anniversary date provide written verification of payment to parties above	30 days after the COD anniversary	5/31/17	NRG						
OPS	BIO-8 2018	Provide an annual Payment to Friends of San Pablo Bay. The First Annual Payment shall be at least equal to $3,218 + $20,000 payment of good faith	Provide written verification to the CPM, USFWS, and CDFG that first annual payment was made. Thereafter within 30 days of the each commencement anniversary date provide written verification of payment to parties above	30 days after the COD anniversary	5/31/18	NRG						
OPS	BIO-8 2019	Provide an annual Payment to Friends of San Pablo Bay. The Annual Payment shall be at least equal to $3,311.00 (inflation adjusted)+ $20,000 payment of good faith.	Provide written verification to the CPM, USFWS, and CDFG that first annual payment was made. Thereafter within 30 days of the each commencement anniversary date provide written verification of payment to parties above	30 days after the COD anniversary	5/31/19	NRG						
OPS	BIO-8 2020	Provide an annual Payment to Friends of San Pablo Bay. The Annual Payment shall be at least equal to $3,311.00 (inflation adjusted)+ $20,000 payment of good faith.	Provide written verification to the CPM, USFWS, and CDFG that first annual payment was made. Thereafter within 30 days of the each commencement anniversary date provide written verification of payment to parties above	30 days after the COD anniversary	5/31/20	NRG						
OPS	BIO-8 2021	Provide an annual Payment to Friends of San Pablo Bay. The Annual Payment shall be at least equal to **$3,311.00?** (inflation adjusted)+ $20,000 payment of good faith.	Provide written verification to the CPM, USFWS, and CDFG that first annual payment was made. Thereafter within 30 days of the each commencement anniversary date provide written verification of payment to parties above	30 days after the COD anniversary	5/31/21	NRG						
PC-2	CIV-1a	Submit design of the proposed drainage structures and the grading plan.	Submit documents to the CBO for review and approval.	At least 30 days prior to the start of site grading	2/23/11	KIEWIT	2/19/2011 to CEC and CBO Submittal 37		CBO comments 3/10/11 Approved 3/29/2011	2/19/2011	To the CBO 2/18/11	3/29/2011 Verified MCR No.7 4/16/2011

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Sort Code	Cond. #	Description of Project Owner's Responsibilities	Verification/Action/Submittal Required by Project Owner	Timeframe	Date Due to CEC CPM	Lead Party	Date sent to CEC, CBO or agency	CEC Log # and Status	Comments	Date Submitted to GenOn	Date sent to CEC, CBO or agency2	Approved
PC-2	CIV-1b	Submit the erosion and sedimentation control plan.	Submit documents to the CBO for review and approval.	At least 30 days prior to the start of site grading	2/23/11	KIEWIT	2/19/2011 to CEC and CBO Submittal 37		Approved 3/28/2011	2/19/2011	To the CBO 2/18/11	3/28/2011 Verified MCR No.7 4/16/2011
PC-2	CIV-1c	Submit the storm water pollution prevention plan (SWPPP).	Submit documents to the CBO for review and approval.	At least 30 days prior to the start of site grading	3/20/11	KIEWIT	2/19/2011 to CEC and CBO Submittal 37		CBO comments 3/10/11 Approved 3/28/2011	2/19/2011	To the CBO 3/2/11	3/28/2011 Verified MCR No.7 4/16/2011
PC-2	CIV-1d	Submit related calculations and specifications, signed and stamped by the responsible civil engineer.	Submit documents to the CBO for review and approval.	At least 30 days prior to the start of site grading	2/23/11	KIEWIT	2/19/2011 to CEC and CBO Submittal 37		CBO comments 3/10/11 Approved 3/28/2011	2/19/2011	To the CBO 2/21/11	3/28/2011 Verified MCR No.7 4/16/2011
PC-2	CIV-1e	Submit the soils, geotechnical, or foundation investigations reports required by the 2007 CBC.	Submit documents to the CBO for review and approval.	At least 30 days prior to the start of site grading	2/23/11	KIEWIT	2/19/2011 to CEC and CBO Submittal 037 Submittal 039		CBO comments 3/10/11 Approved 3/28/2011	2/19/2011	To the CBO 2/18/11	3/28/2011 Verified MCR No.7 4/16/2011
CONS	CIV-2	RE shall stop all earthwork and construction in the affected areas when the responsible soils, geotechnical, or civil engineer experienced and knowledgeable in the practice of soils engineering identifies unforeseen adverse soil or geologic conditions. Submit modified plans, specifications and calculations to the CBO based on these new conditions. Obtain approval from the CBO before resuming earthwork and construction in affected area.	Notify the CPM within 24 hours when earthwork and construction are stopped as a result of unforeseen adverse geological conditions. Within 24 hours of the CBO's approval to resume earthwork and construction in the affected areas, provide to the CPM a copy of the CBO's approval.	Within 24 hours of construction halt due to geologic conditions	As required	KIEWIT						
CONS	CIV-3	Perform inspections in accordance with this condition (see codes referenced). If work is not being performed in accordance with approved plans, the discrepancies shall be reported immediately to the RE, CBO and CPM. EPC must prepare a written report detailing all discrepancies, non-compliance items, and proposed corrective action to the CBO/CPM.	RE shall transport to the CBO and CPM a NCR and the proposed corrective action for review and approval. Within 5 days of resolution, EPC must submit details of correction action to the CBO and CPM.	Within 5 days of discovery of any discrepancies	As required	KIEWIT	9/2/2011 Submittal 059 Submittal 060 9/13/2011 Submittal 061 9/23/2011 Submittal 063 10/14/2011 Submittal 070 10/17/2011 Submittal 071 10/24/2011 Submittal 073 2/10/2012 Submittal 089a 2/17/12 Submittal 092		9/2/2011 Submitted NCT-001, 9/13/2011 Submitted NCR-2,3,4 9/23/2011 Submitted NCR-5 Submitted additional information for NCR 3&4 10/14/2011 Submitted additional information for NCR 2 10/17/2011 Additional information for NCR 5 10/24/2011			All relavent NCR's are closed(Verified on NCR log) and submitted. No approvals are required from CEC
CONS	CIV-4	After completion of finished grading and erosion and sedimentation control and drainage facilities, the Project Owner shall obtain the CBO's approval of the final "as-graded" grading plans and final "as-built" plans for the erosion and sedimentation control facilities.	Submit to the CBO for review and approval the final grading plans (including final changes) and the responsible civil engineer's signed statement that the installation of the facilities and all erosion control measures were completed in accordance with final approved plans.	Within 30 days of completion of work	1/28/12	KIEWIT			Submittal # 175		10/23/013	
PC-1	CUL-1a	Obtain the services of a Cultural Resources Specialist (CRS), and one or more alternate CRSs, if alternates are needed	Submit resumes to the CEC CPM for review and approval.	At least 30 days prior to start of ground disturbance	2/23/11	GenOn	9/29/2010 Submittal 003	2010-1261 returned 10/4/10	Approved 10/4/2010 Approved Karin Beck as ACRS 2/24/12		9/29/2010	CEC Acceptance resumes on10/5/2010 verified by email from J Caswell (On File) Additionally verified by implied acceptance of section 4.0 of MCR's No.2 No. 14 &MCR No.18
CONS	CUL-1b	Submit the resume of the proposed new CRS to the CPM for review and approval. Also provide the new CRS with copies of the AFC, data responses, confidential reports, and maps and drawings showing the footprint of the power plant and all linear facilities.	Provide the required written documentation to the CPM.	At least 10 days prior to a termination or release of the CRS or within 10 days after the resignation of a CRS	As required	GenOn	9/20/12 Submittal 129		10/4/2010 Approval 10/12/2011 Approval of Ms. Karin Beck as an Alternate 2/14/2012		Revision submitted 9/20/2012	CEC Acceptance resumes on10/5/2010 verified by email from J Caswell (On File) Additionally verified by implied acceptance of section 4.0 of MCR's No.2 No. 14 &MCR No.19

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PC-1	CUL-1c	Provide a letter naming anticipated CRMs for the project and stating that the identified CRMs meet the minimum qualifications for cultural resources monitoring required by this Condition.	Provide the required written documentation to the CPM.	At least 20 days prior to ground disturbance	3/5/11	GenOn	10/7/2010 Submittal 004 3/30/2012 Submittal 042 8/31/11 9/13/2011 11/14/2100 Submittal 075 11/30/2011 Submittal 079 2/8/12 Submittal 089 2/10/12 Submittal 090	10/12/2010	Approved 10/12/2010 Submitted Ms. Kathleen Kubal 8/31/2011 Submitted Mr. Jay Baker 9/13/2011Submitted Alexandra Greenwald 11/14/2011,Submitted Joseph Belk 11/30/2011 Approval 10/12/2011		10/7/2010	CEC Acceptance resumes on10/5/2010 verified by email from J Caswell (On File) Additionally verified by implied acceptance of section 4.0 of MCR's No.2 No. 14 &MCR No.20
CONS	CUL-1d	Submit the resumes of the technical specialists to the CPM for review and approval.	Provide the required written documentation to the CPM.	At least 10 days prior to technical specialists beginning new tasks	As required	CULTURAL SPECIALIST	9/13/2011 Submittal 061 Approved by CEC 10/7/2011 Additional submittal 10/11/2011					CEC Acceptance resumes on 10/5/2010 verified by email from J Caswell (On File) Additionally verified by implied acceptance of section 4.0Verified MCR No.5 2/11/2011
PC-1	CUL-1e	Confirm in writing to the CPM that the approved CRS will be available for onsite work and is prepared to implement cultural resources conditions.	Provide the required written documentation to the CPM.	At least 10 days prior to the start of ground disturbance	3/15/11	GenOn	10/7/2010 Submittal 004	2010-1261	Approved (No Date Given)		10/7/10	CEC Acceptance resumes on 10/5/2010 verified by email from J Caswell (On File) Additionally verified by implied acceptance of section 4.0Verified MCR No.5 2/11/2011
PC-1	CUL-2a	Provide to the CRS, if the CRS has not previously worked on the project, copies of the AFC, data responses, confidential cultural resources reports, all supplements and the SA for the project. Also provide site maps and drawings for cultural resource planning activities.	Provide requested into to the CRS.	At least 30 days prior to the start of ground disturbance	2/23/11	GenOn	12/10/2010 Submittal 21	2010-1831	Approved (No Date Given)		12/10/10	2/4/2011 Verified MCR No.4
CONS	CUL-2b	Provide to the CRS and CPM a schedule of project activities for the following week, including the identification of area(s) where ground disturbance will occur during that week.	On a weekly basis during ground disturbance, a current schedule of anticipated project activity shall be provided to the CRS and CPM by letter, e-mail, or fax.	Weekly during construction	Weekly	KIEWIT			Current as of MCR 25			Verified by weekly Email notices
PC-1	CUL-3a	Submit the Cultural Resources Monitoring and Mitigation Plan (CRMMP), as prepared by the CRS. (See condition for specific requirements.)	Submit the entire CRMMP to the CEC CPM for review and approval.	At least 30 days prior to ground disturbance	2/23/11	CULTURAL SPECIALIST	10/26/2010 Submittal 010 Revised 11/2/2010 Submittal 030	2010-1485 2010-1566	Approved 1/11/2011		10/26/10	1/11/2011 Verified MCR No.5 2/11/2011
PC-1	CUL-3b	Agree to pay curation fees for any materials collected as a result of the archaeological investigations (survey, testing, data recovery)	Provide the required written documentation to the CPM.	At least 30 days prior to ground disturbance	2/23/11	GenOn	10/26/2010 Submittal 007	2010-1485	Approved 1/11/2011		10/26/10	1/11/2011 Verified MCR No.5 2/11/2011
CONS	CUL-4a	If any archaeological monitoring or data recovery activities are conducted during project construction, submit a final Cultural Resources Report (CRR).	Provide the required written documentation to the CPM for review and approval.	Within 90 days after completion of landscaping	3/28/12	CULTURAL SPECIALIST			Submittal # 173		9/4/2013	
CONS	CUL-4b	If cultural materials requiring curation were collected, provide to the CPM a copy of an agreementor other written commitment form.	Provide the required written documentation to the CPM.	Within 90 days after completion of landscaping	3/28/12	CULTURAL SPECIALIST			Confirmation email		9/4/2013	
CONS	CUL-4c	Provide documentation to the CPM confirming that copies of the final CRR have been provided to the SHPO, the CHRIS, the curating institution, if archaeological materials were collected, and to the Tribal Chairpersons of any Native American groups requesting copies of project-related reports.	Provide the required written documentation to the CPM.	Within 10 days after CPM approval of CRR	CEC Dependant	CULTURAL SPECIALIST						
CONS	CUL-4d	If the project is suspended, submit a draft CRR to the CPM for review and approval.	Provide the required written documentation to the CPM for review and approval.	Within 30 days after requesting a suspension	As required	CULTURAL SPECIALIST			Project is not suspended			Nothing required at this time

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PC-1	CUL-5a	The CRS shall prepare a WEAP that addresses all issues specified in Condition and provided training to all new workers within their first week of employment at the project site, laydown areas, and along the linear facilities routes.	Provide the draft text and graphics for the training program to the CPM for review and approval.	At least 30 days prior to ground disturbance	2/23/11	CULTURAL SPECIALIST	10/26/2010 Submittal 007 Submittal 023 Submittal 029 Submittal 032 1/26/2011	2010-1362	Approved 12/10/2010 Submitted WEAP training Video 1/26/2010 Final version sent with the word DRAFT removed 1/28/2011		10/26/2010	12/10/2010 Approved by Email (on file) from J Caswell CEC
CONS	CUL-5b	Provde the WEAP Training Acknowledgement forms of workers who have completed the training in the prior month and a running total of all persons who have completed training to date.	Include a running total in MCR.	Monthly	Include in MCR	KIEWIT					Monthly 10th Busness day of each month	Currently No noted issues with any Monthly report
CONS	CUL-6a	Ensure that CRS, alternate CRS or CRMs monitor full time all ground disturbances at project site along the linear facilites routes, and laydown areas, roads, and other ancillary areas. And Ensure that the CRMs kee a daily log of any monitering	As long as no cultural resources are found, Provide daily a statement that "no cultural resources over 50 years of age were discovered" to the CPM as an e-mail	Daily	Daily	CULTURAL SPECIALIST						Verified in Monthly reports in section 2.12. Requirement complete with suspension Approval received per teleconferance and verified by email 9.14.12
CONS	CUL-6b	Submit monthly monitoring summary reports of cultural resources related monitoring, created by the CRS as required by the condition.	Include in each MCR a copy of the monthly summary report of cultural resources-related monitoring prepared by the CRS and attach any new DPR 523 A forms completed	Monthly	Include in MCR	CULTURAL SPECIALIST					Monthly 10th Busness day of each month	Currently No noted issues with any Monthly report
CONS	CUL-6c	Notify CEC prior to changing or eliminatinating monitoring.	Provide letter or email to CPM for review and approval detailing justification for changing or eliminating monitoring.	At least 24 hours prior to changing level	As required	CULTURAL SPECIALIST	9/10/12 Submittal 123		Notice given Submittal 123			Requirement complete with suspension Approval received per teleconferance and verified by email 9.14.12
CONS	CUL-6d	A Native American monitor shall be obtained to monitor ground disturbance in areas and at depths, if any, where the CUL-1 geoarchaeological study identified the potential for buried prehistoric archaeological deposits and anywhere else that if Native American artifacts are encountered during ground disturbance.	Provide the required written documentation to the CPM.	No later than 30 days after discovery	As required	CULTURAL SPECIALIST			As Required in Monthly Reports included in section 2.12		As Required in Monthly Reports included in section 2.12	Requirement complete with suspension Approval received per teleconferance and verified by email 9.14.12
CONS	CUL-6e	Submit any comments or information provided by Native Americans in response to the project owner's transmittals of information.	Provide the required written documentation to the CPM.	Within 15 days of receipt	As required	GenOn			As Required in Monthly Reports included in section 2.12		As Required in Monthly Reports included in section 2.12	Requirement complete with suspension Approval received per teleconferance and verified by email 9.14.12
PC-1	CUL-7a	Grant authority to halt construction to the CRS, alternate CRS and the CRMs in the event previously unknown cultural resource sites or materials are encountered, or if known resources may be impacted in a previously unanticipated manner (discovery).	Provide the CPM and CRS with a letter confirming that the CRS, alternate CRS and CRMs have the authority to halt construction activities in the vicinity of a cultural resource discovery, and that the project owner shall ensure that the CRS notifies the CPM within 24 hours of a discovery, or by Monday morning if the cultural resources discovery occurs between 8:00 AM on Friday and 8:00 AM on Sunday morning.	At least 30 days prior to ground disturbance	2/23/11	GenOn	10/26/2010 Submittal 007	2010-1487	Approved 1/11/2011		10/26/10	1/11/11
CONS	CUL-7b	Ensure the CRS notifies all Native American groups that expressed a desire to be notified in the event of a discovery and complete a DPR 523 forms as specified in the condition	Unless discovery is treated presciptiibley, Submitt completed DPR 523 forms to CPM for review and approval	Within 24 hours of discovery (48 to notify Native American groups)	As required	CULTURAL SPECIALIST			Nothing required at this time			Verified in Monthly reports in section 2.12. Requirement complete with suspension Approval received per teleconferance and verified by email 9.14.12
CONS	CUL-8	If soils must be acquired from a non commercial borrow site, the CRS shall survey the borrow site for cultural resources and record on DPR 523 forms and that are identified and convey the results and recommendation for further action to the CPM	Notify the CRS and CPM as soon as it is known that non commercial borrow site will be used and provide documentation of previous archaeological surveys. If none available site must be surveyed 30 days before any soil borrow activates and submit the survey and recommendation to the CPM.	At least 30 days prior to and non commercial site borrow activities	As required	CULTURAL SPECIALIST			Nothing required at this time			Verified in Monthly reports in section 2.12. Requirement complete with suspension Approval received per teleconferance and verified by email 9.14.12

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CONS	ELEC-1	Prior to the start of any increment of electrical construction for electrical equipment and systems 480 volts and higher, with the exception of underground duct work and any physical layout drawings and drawings not related to code compliance and life safety, submit for CBO design review and approval the proposed final design, specifications and calculations.	Submit to the CBO for design review and approval the items listed in this condition	At least 30 days prior to start of construction of each increment of electrical construction	As required	KIEWIT			Nothing required at this time			Verified in Monthly reports in section 2.13.
CONS	GEN-1	Design, construct, and inspect the project in accordance with the codes listed in the condition.	The project owner shall submit to the CPM and the CBO a statement of verification, signed by the responsible design engineer, attesting that all designs, construction, installation, and inspection requirements of the applicable LORS and the Energy Commission's decision have been met in the area of facility design. The project owner shall provide the CPM a copy of the certificate of occupancy within 30 days of receipt from the CBO.	Five (5) days prior to requesting the issuance of the certificate of occupancy	2/24/13	KIEWIT						
PC-2	GEN-2a	Furnish the CPM and the CBO with a schedule of facility design submittals, and master drawings and master specifications list. The master drawings and master specifications list shall contain a list of proposed submittal packages of designs, calculations, and specifications for major structures, systems, and equipment. The schedule shall contain the planned date of each submittal to the CBO.Provide specific packages to the CPM upon request. Also plans and calculations for all construction work shall be submitted to the CBO for approval.	Submit to the CBO and to the CPM the schedule, and the master drawings and master specifications list of documents to be submitted to the CBO for review and approval.	At least 60 days prior to the start of rough grading	1/24/11	KIEWIT	11/19/2010 Submittal 016 1/4/11 to the CBO	2010-1726	Approved 12/15/2010	11/18/2010	11/19/2010	CEC Acceptance Per email from J Caswell on 12/15/10 (TN2010-1726) Additionaly Verified on MCR No. 4
CONS	GEN-2b	Furnish the CPM and the CBO with an updated schedule of facility design submittals	Provide schedule updates in the monthly compliance report	Monthly	Include in MCR	KIEWIT					Monthly 10th Busness day of each month	Currently No noted issues with any Monthly report
CONS	GEN-3	Make payments to the CBO for design review, plan check and construction inspections based upon a reasonable fee schedule to be negotiated between NCPA and the CBO.	Send copy of CBO's receipt of payment to CPM in next MCR indicating applicable fees have been paid.	Monthly	Include in MCR	GenOn					Monthly 10th Busness day of each month	Currently No noted issues with any Monthly report
PC-2	GEN-4	Assign a California registered architect, or a structural or civil engineer as the resident engineer (RE) in charge of the project.	Submit to the CBO for review and approval, the resume and registration number of the RE and any other delegated engineers assigned to the project. Notify the CPM of the CBO's approvals of the RE and other delegated engineer(s) within five days of the approval.	At least 30 days prior to start of rough grading	2/23/11	KIEWIT	12/3/2010; To CBO 1-26-11 Submittal 019 Submittal 036	2010-1785	Approved (No Date Given)	11/19/10	12/3/10	2/4/2011 Verified on MCR No. 5 2/11/2011
PC-2	GEN-5	Assign at least one of each of the following California registered engineers to the project: a civil engineer; a soils, geotechnical, or civil engineer experienced and knowledgeable in the practice of soils engineering; and an engineering geologist, a design engineer who is either a structural engineer or a civil engineer fully competent and proficient in the design of power plant structures and equipment supports; a mechanical engineer; and an electrical engineer.	Submit to the CBO for review and approval, resumes and registration numbers of the responsible engineers. Notify the CPM of the CBO's approvals of the responsible engineers within five days of the approval.	At least 30 days prior to start of rough grading	2/23/11	KIEWIT	To CBO 1/17/11 To CEC 2/16/2011 Submittal 036 6/28/2011 addtnl Submittal 052 Submittal 057		CBO Approved 2-16-11 CEC Approved 3/16/2011 Submitted Tharu Nadaraj (Electrical) and Chad Enders (Civil) for approval 6/28/2011 Mr. Nadaraj and Mr. Enders resumes approved 8/12/11 Submitted Gen Amrhein, Chad Enders and Shong Liu for Design Engineer 8/15/2011	11/30/10	1/17/11	2/16/2011 Verified through CBO Returns and MCR No.7 4/16/2011
CONS	GEN-6	Assign to the project, qualified and certified special inspector(s) who shall be responsible for the special inspections required by the 2007 CBC.	Submit to the CBO for review and approval, with a copy to the CPM, the name(s) and qualifications of the certified weld inspector(s), or other certified special inspector(s) assigned to the project	At least 15 days prior to start of an activity requiring special inspection	As required	KIEWIT	To CBO 2/2/11 Sent to CE 9/23/2011 Submittal 064 Submittal 065		CBO Approved 2-24-11 9/23/2011 Sent Quals to CEC for Jay Locatelli, Micah Ek, Jeffrey Brooks, Jason Burris, Ryan Doyel, and Laura Johnson. Also sent CBO approvals for Jahn Sasser, Stanley Silva, and Anselmo De Haro. CEC approval 10/5/11.		2/2/11	2/24/2011 Verified MCR No.7 4/16/2011
CONS	GEN-7	If any discrepancy in design and/or construction is discovered in any engineering work that has undergone CBO design review and approval, the project owner shall document the discrepancy and recommend required corrective actions.	Transmit a copy of the CBO's approval of any corrective action taken to resolve a discrepancy to the CPM in the next monthly compliance report. If any corrective action is disapproved, the project owner shall advise the CPM, within five days, of the reason for disapproval and the revised corrective action to obtain CBO's approval.	Monthly	Include in MCR	KIEWIT					Monthly 10th Busness day of each month	Currently No noted issues with any Monthly report

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CONS	GEN-8	Obtain the CBO's final approval of all completed work that has undergone CBO design review and approval. Request the CBO to inspect the completed structure and review the submitted documents. Notify the CPM after obtaining the CBO's final approval. Retain one set of approved engineering plans, specifications, and calculations (including all approved changes) at the project site or at another accessible location during the operating life of the project. Electronic copies of the approved plans, specifications, calculations, and marked-up as-builts shall be provided to the CBO for retention by the CPM.	Submit to the CBO, with a copy to the CPM, in the next monthly compliance report, (a) a written notice that the completed work is ready for final inspection, and (b) a signed statement that the work conforms to the final approved plans.	Within 15 days of completion of any work	As required Include in MCR	KIEWIT			Submittal as available in Monthly reports in Section 2.20			Currently No noted issues with any Monthly report
PC-2	GEO-1	Specifically include in the Soils and Engineery Report, laboratory test data, associated geotechnical engineering analyses, and a thorough discussion of the potential for liquefaction and associated lateral spread, and dynamic compaction. The report should also include recommendations for ground improvement and/ or foundation systems necessary to mitigate these potential geologic hazards, if present.	Include in the application for a grading permit a copy of the Soils Engineering Report which address the potential for liquefaction and associated lateral spread; settlement due to compressible soils, dynamic compaction; and the possible presence of expansive clay soils, and a summary of how the results of the analysis were incorporated into the project foundation and grading plan design of review and comment by the Chief Building Official (CBO)	At least 30 days prior to the start of grading	2/23/11	KIEWIT	2/19/2011 to CEC and CBO Submittal 037		Approved 3/28/2011	2/18/11	2/19/11	3/28/2011 CEC agrees that all HAZ submittals made to date have been approved excepting HAZ-8 per email verification 8/24/12
OPS	HAZ-1	Do not use any hazardous material in any quantity or strength not listed in Appendix B unless approved in advance by the CEC CPM.	Provide to the CPM, in the Annual Compliance Report, a list of hazardous materials contained at the facility.	Annually	Include in the ACR	NRG	6/25/13 Submittal 165 O&M HMBP to the CEC					
CONS	HAZ-2	Concurrently provide and updated Business Plan, and updated Spill Prevention Control, and Countermeasure Plan, and an updated Risk Management Plan to CCCHSD-HMP) and the CPM for review. Reflect all changes in doc and provide copies to CCCHSD-HMP, CCCFPD and the CPM	Provide a copy of the final updated Business Plan and Updated SPCC plan to CPM for approval. Provide the final RMP to CCHSD-HMP and the CCFPD for information and to the CPM for approval	At least 30 days prior to receiving any hazardous material on site	10/14/12	GenOn	7/11/12 Submittal 111 8/17/12 Submittal 118 9/17/12 Submittal 126		Draft RMP sent to the CEC on 7/11/2012 Updated construction SPCC and HMBP plans submitted to the CEC. 8/17/2012	9/17/12		Per teleconferance on 8/23/12 Kiewit plan is acceptable through construction CEC agrees that all HAZ submittals made to date have been approved excepting HAZ-8 per email verification 8/24/12
CONS	HAZ-3	Develop and implement a Safety Management Plan (SMP) for the delivery of aqueous ammonia and other liquid hazmat by tanker truck.	Submit the plan to the CPM for review and approval.	At least 30 days prior to delivery of any hazardous material to the facility	9/30/12	GenOn	10/9/2012 Submittal 131					CEC agrees that all HAZ submittals made to date have been approved excepting HAZ-8 per email verification 8/24/12
CONS	HAZ-4	Design ammonia storage facility to either ASME Pressure Vessel Code and ANSI K61.6 or to API 620. Tanks shall be protected by a secondary containment basin capable of holding 125% of the storage volume	Submit final design drawings and specifications for the ammonia storage tank and secondary containment basin to the CPM for review and approval	At least 60 days prior to delivery of aqueous ammonia	8/31/11	GenOn - Tank Kiewit- Secondary containment	6/19/2012 Submittal 108 110					Verified as accepted per Email notice from CEC MS. C Stora on 9/4/2012
CONS	HAZ-5	Direct all vendors delivering aqueous ammonia to the site to use only tanker truck transport vehicles that meet or exceed the specifications of DOT Code MC-307.	Submit copies of notification letter to supply vendors indicating the transport vehicle specs to the CPM for review and approval.	At least 30 days prior to reciept of aqueous ammonia on site	10/1/12	GenOn	8/3/2012 Submittal 113					Verified as accepted per Email notice from CEC MS. C Stora on 9/4/2012
CONS	HAZ-6	Direct all vendors delivering any hazardous material to the site to use only the route approved by the CPM.Obtain approval of the CPM if an alternate route is desired.	Submit copies of the required transportation route limitation direction to the CPM for review and approval.	At least 60 days prior to reciept of any hazardous material on site	9/1/13	GenOn	8/3/2012 Submittal 113					Verified as accepted per Email notice from CEC MS. C Stora on 9/4/2012
PC-2	HAZ-7	Prepare a site-specific construction security plan for the construction phase which addresses the items in the Condition.	Notify the CPM that a site-specific construction security plan is available for review and approval.	At least 30 days prior to start of construction	4/1/13	KIEWIT	11/24/2010 Submittal 017	2010-1731	Approved (No Date Given)	11/30/10	11/24/10	2/4/2011 CEC agrees that all HAZ submittals made to date have been approved excepting HAZ-8 per email verification 8/24/12
CONS	HAZ-8a	Prepare a site-specific security plan for the commissioning and operational phases which addresses all the items in the Condition.	Notify the CPM that a site-specific operations site security plan is available for review and approval.	At least 30 days prior to reciept of hazardous materials on site	10/1/12	GenOn	8/23/2012 Submittal 121 9/17/12 Submittal 126		Letter only due to security needs and FOI requests.		8/22/12	August 22 2012 letter submitted and plan is on file
OPS	HAZ-8b	Include a statement that all current project employee and appropriate contractor background investigations have been performed, and that updated certification statements have been appended to the operations security plan. Also include a statement that the operations security plan includes all current hazardous materials transport vendor certifications for security plans and employee background investigations.	Provide information for inclusion in annual compliance report.	Annually	Include in the ACR	NRG			Reports submitted annually.			

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CONS	MECH-1a	MAJOR PIPING & PLUMBING SYSTEMS: Submit for CBO design review and approval the proposed final design, specifications and calculations for each plant major piping and plumbing system listed in the CBO approved master drawing and master specification list.	Submit to the CBO for design review and approval the final plans, specs, and calcs for each major plant piping and plumbing system listed in Facility Design Table 2. including a copy of the signed and stamped statement from the responsible mechanical engineer certifying compliance with LORS	At least 30 days prior to the start of any piping or plumbing construction	As required	KIEWIT					MCR	Approved in monthly installments included in Monthly reports under section 2.21
CONS	MECH-1b	Upon completion of construction of any such major piping or plumbing system, the project owner shall request the CBO's inspection approval of that construction.	Provide the required written documentation to the CPM.	Monthly	Include in MCR	KIEWIT					Monthly 10th Busness day of each month	Currently No noted issues with any Monthly report
CONS	MECH-2a	PRESSURE VESSELS: Submit for CBO design review and approval the proposed final design, specifications and calculations for each plant pressure vessel listed in the CBO approved master drawing and master specification list.	Submit to the CBO for design review and approval the final plans, specs, and calcs, including a copy of the signed and stamped statement from the responsible mechanical engineer certifying compliance with LORS	At least 30 days prior to start of onsite fabrication or installation of any pressure vessel	As required	KIEWIT					MCR	Approved in monthly installments included in Monthly reports under section 2.22
CONS	MECH-2b	Upon completion of construction of pressure vessels, the project owner shall request the CBO's inspection approval of that construction.	Provide the required written documentation to the CPM.	Monthly	Include in MCR	KIEWIT					Monthly 10th Busness day of each month	Currently No noted issues with any Monthly report
CONS	MECH-3	HVAC SYSTEMS: Submit for CBO design review and approval the proposed final design, specifications and calculations for each HVAC system listed in the CBO approved master drawing and master specification list.	Submit the calcs, plans, and specs to the CBO, including a copy of the signed and stamped statement from the responsible mech engr certifying compliance with CBC and other applicable codes, with a copy of transmittal to CPM.	At least 30 days prior to start of construction of any HVAC or refrig system	As required	KIEWIT					MCR	Approved in monthly installments included in Monthly reports under section 2.22
PC-1	NOISE-1	Notify all residents within one mile of the site and one-half mile of the linear facilities, by mail or other effective means, of the commencement of project construction. Establish a telephone number for use by the public to report any undesirable noise conditions associated with the construction and operation of the project and include that telephone number in the above notice. The telephone number shall be posted at the project site during construction in a manner visible to passersby and maintained until project has been operational for one year.	Transmit to the CPM a statement, signed by the project owner's project manager, stating that the above notification has been performed and describing the method of that notification, verifying that the telephone number has been established and posted at the site, and giving that telephone number.	At least 15 days prior to the start of ground disturbance	3/10/11	GenOn	12/14/2010 Submittal 22	2010-1903	Approved (No Date Given)		12/14/10	2/4/2011 Verified as accepted in MCR MCR No.4 MCR 17 MCR No. 21
CONS	NOISE-2	Throughout the construction and operation of the project, document, investigate, evaluate, and attempt to resolve all project-related noise complaints. Noise Complaint Resolution process will be used.	File a Noise Complaint Resolution Form with the City and the CPM documenting resolution of the compliant.	Within 5 days of receiving a noise compliant	As required	K&G	2/4/2011 Submittal 034		Received noise complaint 1/31/2011. Submited form to the CEC 2/4/2011			
PC-1	NOISE-3	Submit a noise control program and statement signed by project manager verifying that noise control program will be implemented throughout construction of the project. The noise control program must comply with applicable OSHA and Cal-OSHA standards.	Submit a noise control program and project manager's verification letter to the CEC CPM for review and approval.	At least 30 days prior to ground disturbance	2/23/11	KIEWIT	11/19/2010 Submittal 016 1/4/11 to the CBO	2010-1727	Approved 12/15/2010		11/19/2010	CEC acceptance per email (TN2010-1727) 12/15/2010 Also Verified as accepted MCR No.4
COMM	NOISE-4a	Project design will include noise mitigation measures to ensure that noise levels due to operation of the project alone will not exceed an hourly average of 54 dBA at or near LT-1 and 45 dBA at or near LT-2; No single piece of equipment shall be allowed to stand out as a source of noise that draws legitimate complaints.	Conduct a community noise survey at monitoring location LT-1, LT-2, or at a closer location acceptable to the CPM. This survey during the power plant's full-load operation shall also include measurement of one-third octave band sound pressure levels.Conduct a survey of noise at monitoring locations.	Within 30 days of project's first achieving a sustained output of 85% or greater of rated capacity	1/22/12	KIEWIT	7/8/13 CEC Submittal 167					
COMM	NOISE-4b	Submit a summary report of the survey to the CPM. Included in the survey report shall be a description of any additional mitigation measures necessary to achieve compliance with the above listed noise limit, and a schedule, subject to CPM approval, for implementing these measures. When these measures are in place, the project owner shall repeat the noise survey.	Submit required info to the CPM.	Within 15 days after completing noise survey	2/6/12	KIEWIT	7/8/13 CEC Submittal 167					
COMM	NOISE-5	Conduct an occupational noise survey to identify the noise hazardous areas in the facility when plant reaches 85% of rated capacity or greater	Prepare a report of the survey results and, if necessary, identify proposed mitigation measures that will be employed to comply with the applicable California and federal regulations.	Within 30 days after completing survey	2/21/12	KIEWIT	7/8/13 CEC Submittal 168					

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PC-1	NOISE-6	Heavy equipment operation and noisy construction work relating to any project features, including pile driving, shall be restricted to the times delineated below, unless a waiver has been issued by the City of Antioch for alternative construction hour limitations (specified to be Monday through Saturday 6:00 a.m. to 7:00 p.m., and Sundays and holidays 9:00 a.m. to 5:00p.m.): Mondays through Fridays: 7:00 a.m. to 6:00 p.m. Weekends and holidays: 9:00 a.m. to 5:00 p.m. Haul trucks and other engine-powered equipment shall be equipped with adequate mufflers. Haul trucks shall be operated in accordance with posted speed limits. Truck engine exhaust brake use shall be limited to emergencies.	Transmit to the CPM a statement, signed by the project owner's project manager, acknowledging that the above restriction will be observed throughout the the constucito of the project. If waiver is issued by the city it should be provided to the CPM for review and approval. also verified MCR No.4 MCR 17 MCR No. 21	Prior to Ground Distrubance	2/23/11	KIEWIT	11/19/2010 Submittal 016 5/5/2011 Submittal 047 5/19/2011 Submittal 049 12/29/2011 Submittal 083 April 27, 2012 Submittal 099	2010-1728	Approved 12/15/2010 4/22/2011 Submitted request for Waiver for well drilling and foundation pours. 5/19/2011 Submitted request for waiver for well drilling in July and Aug. Submitted hours for 0700-2400 12/29/2011 Apprvd 1/9/12. Submitted Addntl work hour request 4/27/2011. Approved 5/4/2012.		11/19/2010	Approved by CEC 12/15/10 by email from J Caswell (TN2010-1728) also 5/4/2012. with suspension Approval received per teleconferance and verified by email 9.14.12 Also verified MCR No.4 MCR 17 MCR No. 21
PC-1	PAL-1a	Provide the CPM with the resume and qualifications of the Paleontological Resource Specialist (PRS) for review and approval.	Submit the resume, references, and statement of availability to the CPM for review and approval.	At least 60 days prior to ground disturbance	1/24/11	GenOn	9/29/2010 Submittal 003 4/22/2011	2010-1260 10/5/2010	Approved 9/30/2010 New Monitor Annette Conrelius 8/12/2011 submitted resume for Teresa Butler.		9/29/2010	11/29/2010 Email acceptance from CEC (On File) Also Verified as accepted per Section 4.0 in MCR No.2 with suspension Approval received per teleconferance and verified by email 9.14.12
PC-1	PAL-1b	Provide a letter with resumes naming anticipated monitors stating they meet mimimum quals for monitoring.	Submit the requested info to the CPM .	At least 20 days prior to ground disturbance	3/5/11	GenOn	11/2/2010 Submittal 003 Submittal 010 Submittal 045 Submittal 056	2010-1565	Approved (No Date Given)		11/2/2010	11/29/2010 Email acceptance from CEC (On File) also per section 4.0 MCR No.5 on 2/4/2011 & 2/11/2011 with suspension Approval received per teleconferance and
PC-1	PAL-2	Provide to the PRS and the CPM, for approval, maps and drawings showing the footprint of the power plant, construction laydown areas and all related facilities.	Provide maps and drawings to the PRS and CEC CPM	At least 30 days prior to ground disturbance	2/23/11	GenOn	12/2/2010 Sumbittal 21		Approved (No Date Given)		12/2/2010	2/4/2011 Verified as accepted MCR No.5 2/11/2011 with suspension Approval received per teleconferance and verified by email 9.14.12
PC-1	PAL-3	The PRS shall prepare and submit a Paleontological Resources Monitoring and Mitigation Plan (PRMMP) to identify general and specific measures to minimize potential impacts to significant paleontological resources.	Provide the PRMMP to the CEC CPM, including an affidavit of authorship by the PRS and acceptance of the PRMMP by the project owner evidenced by a signature.	At least 30 days prior to ground disturbance	2/23/11	PRS	11/4/2010 Submittal 011 Final 12/14/2010 Submittal 022	2010-1577	Ammended 7/26/10 Affidavit not required. Approved 12/21/2010		11/4/2010	CEC Acceptance by Email from J Caswell 11/29/2010 (On File) Additional Verificationper acceptances of section 4.0 of MCR No. 3 with suspension Approval received per teleconferance and verified by email 9.14.12
PC-1	PAL-4	If deemed needed, the PRS shall prepare and conduct weekly CPM-approved training for all project managers, construction supervisors and workers who are involved with or operate ground disturbing equipment or tools.	Provide the WEAP materials to the CPM including: brochure, reporting procedures, script, and final video.	At least 30 days prior to ground disturbance	2/23/11	PRS	10/26/2010 Submittal 008 Submittal 023 Submittal 029 Submittal 032 1/26/2011	2010-1489	APPROVED ON GOING 11/29/2010 Submitted WEAP training video 1/26/2011 Unapproved with combination of all 3 ology sections into one booklet. 2/1/2011 Returned for uniformity reasons and a request to include section on local laws and ordinances. Approved 2/8/2011		10/26/2010	CEC Acceptance by Email from J Caswell 11/29/2010 (On File) Additional Verificationper acceptances of section 4.0 of MCR No. 3 with suspension Approval received per teleconferance and verified by email 9.14.12

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CONS	PAL-5	Ensure that the PRS and PRM(s) monitor consistently with the PRMMP, all construction-related grading, excavation, trenching, and auguring in areas where potentially fossil-bearing materials have been identified.	Paleo monitors shall provide monthly summaries for inclusion in MCR.	Monthly	Include in MCR	PRS	8/9/12 Submittal 117		Letter Submitted 8/15/2012 requesting closure to monitoring due to age of fossils already recovered.		Monthly 10th Busness day of each month	Currently No noted issues with any Monthly report
CONS	PAL-6	Through the designated PRS, ensure that all components of the PRMMP are adequately performed (see list of activities included in Condition).	Maintain in compliance file copies of signed contracts or agreements with the designated PRS and other qualified research specialists. Maintain these files for a period of three years after completion and approval of the CPM-approved PRR required bu PAL-07.	As required	As required	PRS						Verified as accepted per Email notice from CEC MS. C Stora on 9/4/2012
CONS	PAL-7	Ensure preparation of a Paleontological Resources Report (PRR) by the designated PRS to be completed following completion of ground disturbing activities.	Submit the PRR under confidential cover to the CPM.	Within 90 days after completion of ground disturbing activities	3/28/12	PRS			Submittal # 174		9/4/2013	
PC-2	SOCIO-1	Pay the one-time statutory school development fee to the Antioch Unified School District as required by Education Code Section 17620	Provide the CPM proof of payment of the fee	At least 30 days prior to start of project construction	4/1/13	GenOn	2/4/2011 Submittal 034 2/2/2012 Submittal 087		Approved (No Paperwork Given) Submited additional payment 2/2/2012	2/4/2011	2/4/2011	2/9/2011 Verified MCR No.6 3/14/2011
PC-1	Soil & Water 1a	Coordinate with the Water Board as necessary develop and implement a construction SWPPP	Submit to the CPM copies of all correspondence with the Water Control Board regarding the SWPPP within 10 days of receipt.	No later than 30 days prior to start of site mobilization	1/16/11	KIEWIT	1/5/2011 Submittal 025		Approved (No Date Given)		1/5/2011	2/4/2011 Verified MCR No.6 3/14/2011
PC-1	Soil & Water 1b	Develop and implement a Storm Water Pollution Prevention Plan (construction SWPPP) for the LEC site, laydown areas, and on-site linear facilities. Submit to the CPM a copy of the construction SWPPP. Info should include a copy of the Notice of Intent for Compliance with the General NPDES permit	Submit to the CPM a copy of the NOTICE OF INTENT FOR COMPLIANCE with the General NPDES permit.	No later than 60 days prior to site mobilization	12/17/10	KIEWIT	1/5/11		Approved (No Date Given)	12/1/2010	1/5/2011	2/4/2011 Verified MCR No.6 3/14/2011
PC-1	Soil & Water 2a	Obtain CPM approval for a site- specific Drainage, Erosion, and Sedimentation Control Plan (DESCP)	Submit a copy of the DESCP to the CPM along with evidence from Contra Costa County that the DESCP meets the requirements of Contra Costa Clean Water Program.	No later than 30 days prior to the start of site mobilization	1/16/11	KIEWIT	1/24/2011 Submittal 028	2011-0158	Approved (No Paperwork Given)	12/1/2010	1/24/2011	2/4/2011 Verified MCR No.6 3/14/2011
PC-2	Soil & Water 2b	Coordinate with Contra Costa County to ensure that the DESCP meets local requirements for a post-construction Storm Water Control Plan.	The DESCP shall meet local requirements for a post-construction Storm Water Control Plan.	No later than 30 days prior to the start of construction.	3/20/11	KIEWIT	2/19/2011 Submittal 37		Approved 3/28/2011	11/29/2010	2/19/2011	3/28/2011 Verified MCR No.7 4/16/2011
CONS	Soil & Water 2c	Monitor and Maintain effective drainage, erosion and sediment control measures during construction	Provide Analysis of effectiveness of drainage, erosion and sediment control measures and the results of monitoring and maintain activities in MCR	Monthly	Include in MCR	KIEWIT					Monthly 10th Busness day of each month	Currently No noted issues with any Monthly report
CONS	Soil & Water 3	If groundwater is encountered during construction or operation: comply with the requirements of the CVRWQCB Order NO. R5-2008-0081 for Waste Discharge Requirements for Dewatering and Other Low threat Discharges to Surface Waters.	Submit a complete Notice of Intent (NOI) to obtain coverage under CVRWQCB Order No. R5-2008-0081. Submit copies to the CPM of all correspondence between the project owner and the CVRWQCB regarding Order No. R5-2008-0081 within 10 days of its receipt or submittal.	Prior to any groundwater discharge or dewatering activities	As required	KIEWIT	11/9/2011 Submittal 074 11/23/2011 Submittal 077 1/5/2012 Submittal 084 5/10/12 Submittal 101		Provided NOI from RWB 11/9/2011. Addnl 11/23/2011		11/9/11, 11/23/11, 5/10/12	Verified as accepted per Email notice from CEC MS. C Stora on 9/4/2012
CONS	Soil & Water 4	Comply with the requirements of the General National Pollutant Discharge Elimination System (NPDES) Permit for Discharges of Storm Water Associated with Industrial Activity (WQO 97-03-DWQ).	Develop andsubmit an Industrial SWPPP for the operation of the MLGS. Submit copies to the CPM of all correspondence between the project owner and the Central Valley Regional Water Quality Control Board regarding the industrial SWPPP within 10 days of its receipt or submittal.	Prior to commercial ops	12/23/11	GenOn	4/25/2013 Submittal 161					

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CONS	Soil & Water-5a	Provide 2 copies of the executed Waste Water Discharge Agreement with DDSD for the long term discharge of all watewater streams for the MLGS to DDSD wastewater treatment facilites. Shall specify Peak dischage rate of 118 gpm. Do not connect to City of Antioch's wastewater pipline along Wilbur Ave w/o the final agreement in place and submitted to CPM	Submit 2 copies of the of the executed agreement for the discharge of wastewater form the MLGS	No later than 60 days prior to connection the DDSD wastewater pipline	9/1/11	GenOn	3/12/2012 Submittal 094 3/20/2013 Submittal 154		Approved by CEC per email response	3/12/2012	3/12/2012 Submitted 2 copies of signed Permit on 3/20/2013	Verified as accepted per Email notice from CEC MS. C Stora on 9/4/2012
OPS	Soil & Water-5b	During operation an monitoring reports providied to DDSD shall also be provided to the CPM.	Submit any wasterwater quality monitoring reports required by DDSD, and a full explanation of corrective actions taken if a violation occurs to the CPM in the annual compliance report	Annually	Include in the ACR	NRG			Reports submitted annually.			
OPS	Soil & Water-5c	Notify the CPM of any violations of discharge limits	Submit any notice of violations from DDSD to the CPM and fully explain the corrective actions taken in the annual compliance report	Within 10 days of receipt of violation	As required	NRG						
CONS	Soil & Water-6a	Install and Maintain metering devices as part of the water supply and distribution system to monitor and record in gallons per the volume of ground water and potable water supplied to the MLGS.	Submit Evidence to the CPM that metering devices have been installed and are operational on groundwater wells, potable eater and recycled water (if applicable) pipelines serving the project.	At least 60 days prior to use of any water source for operation	9/30/11	KIEWIT	9/21/12 Submittal 130					Submittal evidentury only no approval required
OPS	Soil & Water-6b	Monitor and track the water use by operating the water metering devices for the life of the project. Differentiate between groundwater, potable water, and recycled water. Water use should not exceed 50 AFY from any source	Provide (1)a report on the service testing and calibration of the metering devices, (2)a water use summary report which is based on and distinguished between groundwater, potable water and recycled water, (3) Copies of meter records for the City of Antioch documented the volume of potable water supplied over the previous year as specified (4) Brackish groundwater sample laboratory test results (in years where ground water is used) (5) data or info describing the water conservation program w/ estimates of the annual water saved in the ACR	Annually	Include in the ACR	NRG			Reports submitted annually.			
CONS	Soil & Water-6c	Provide evidence to the CPM that the City has agreed to supply emergency backup water to the project in sufficient quantities to meet the projects needs at a flow rate comparable with the flow rate provide by one on site well	Submit to the CPM evidence that city water meters are installed and are operational. And proof that the City can deliver alternative water the site in the event of an emergency interruption at a flow rate of 420gpm	No later than 30 days prior to installing a connection to the City of Antioch potable water main	9/1/11	GenOn	9/29/2011 Submittal 067 Additional submittal 10/11/2011 Submittal 069		Provided copies of correspondence regarding supply of city water.			Verified as accepted per Email notice from CEC MS. C Stora on 9/4/2012
CONS	Soil & Water-6d	If Primary Alternative water source is approved by CPM to be City of Antioch Fresh Water Supply. (1)Pay fee equal to no more than $1,000/ AF of City of Antioch Water consumed annually. (2) A payment of $15,000 shall be made to the city to offset water used during construction.	Provide evidence that brackish groundwater is environmentally undesirable or economical unsound. Provide proof that the initial water conservation fee of $15,000 was paid to the city of Antioch.	Prior to site operations	4/1/13	GenOn	9/29/2011 Submittal 067		Provided evidence of $15,000 payement to the city.	9/18/2012	Sent by Email to CEC PM C Strora 9/18	9/1912 Email confirmation to Dawn confirmation
OPS	Soil & Water-6e	If Primary Alternative water source (City of Antioch Water) is being used in operation, Pay an annual fee of $1,000/ AF of City of Antioch Water consumed annually	Calculate the annual use payment at the rate of $1,000/ AF of fresh water reported annual in in the ACR. Pay the amount confirmed by the CPM	No later than 60 days following the approval of the ACR	As required	NRG			Paid annually in May.			
CONS	STRUC-1a	Prior to the start of any increment of construction, submit to the CBO for design review and approval the proposed lateral force procedures for project structures and equipment identified in the CBO-approved master drawing and master specification list. Must include items within this condiditon	Construction of any structure or component shall not begin until the CBO has approved the lateral force procedures to be employed in designing that structure or component. Submit to the CBO the final design plans, specs and calcs with a copy of the transmittal letter to the CPM.	At least 60 days prior to start of any structure or component listed in Facility Design Table 2 of GEN-2	As required	KIEWIT						Verified as accepted per Email notice from CEC MS. C Stora on 9/4/2012
CONS	STRUC-1b	Submit to the CPM a copy of a statement from the CBO that the proposed structural plans, specifications, and calculations have been approved and comply with the requirements set forth in applicable engineering LORS.	Submit required info to the CPM.	Monthly	Include in MCR	KIEWIT					Monthly 10th Busness day of each month	Currently No noted issues with any Monthly report
CONS	STRUC-2	Submit to the CBO the required number of sets of the documents related to work that has undergone CBO design review and approval related to concrete cylinder strength test reports and pour sign-off sheets, bolt torque and field weld inspection reports, and other reports covering structural activities requiring special inspections in accordance with CBC.	If discrepancies are found, within 5 days the Project Owner shall prepare and submit an NCR to the CBO with a copy of the transmittal letter to the CPM. Within 5 days of resolution, the Project Owner shall submit a copy of the correction action to the CBO and CPM. The CBO's approval or disapproval shall be submitted to the CPM within 15 delays.	As required	As required	KIEWIT						Verified by CBO approvals and documented in Monthly reports section 2.26
CONS	STRUC-3	Submit to the CBO design changes to the final plans required by the CBC, including the revised drawings, specifications, calculations, and a complete description of, and supporting rationale for, the proposed changes, and shall give to the CBO prior notice of the intended filing.	Notify the CBO of the intended filing of design changes, and notify the CPM in the MCR of the CBO's approval of the revised plans.	Monthly	Include in MCR	KIEWIT			No inpending changes		Monthly 10th Busness day of each month	Currently No noted issues with any Monthly report

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CONS	STRUC-4	Tanks and vessels containing quantities of toxic or hazardous materials exceeding amounts specified in the 2007 CBC shall, at a minimum, be designed to comply with the requirements of that chapter.	Submit to the CBO for design review and approval the final plans, specs, and calcs, including a copy of the signed and stamped statement from the responsible engineer certifying compliance with LORS	At least 30 days prior to the start of installation of the tanks or vessels	As required	GenOn - Ammonia Tank KIEWIT - All Other						Verified by CBO approvals and documented in Monthly reports section 2.28
CONS	TLSN-1	Construct the proposed transmission line according to the requirements of California Public Utility Commission's GO-95, GO-52, GO-131-D, Title 8, and Group 2, High Voltage Electrical Safety Orders, Sections 2700 through 2974 of the California Code of Regulations, and Pacific Gas and Electric's EMF-reduction guidelines.	Submit to the CPM a letter signed by a CA registered EE affirming that the line will be constructed according to the requirements set forth in the Condition.	At least 30 days prior to starting construction of proposed new lines	4/1/12	KIEWIT	4/13/12 Submittal 097				4/13/2012	Verified as accepted per Email notice from CEC MS. C Stora on 9/4/2012
CONS	TLSN-2	Every reasonable effort will be made to identify and correct, on a case-specific basis, any complaints of interference with radio or TV signals from operation of the proposed line and associated switchyard.	Submit to the CPM a letter signed by a CA registered EE affirming the project owners intention to comply with this requirment.	At least 30 days before starting operation of either line option	8/22/12	KIEWIT	8/21/2012 Submittal 120				8/21/2012	Verified as accepted per Email notice from CEC MS. C Stora on 9/4/2012
CONS	TLSN-3	Use a qualified individual to measure the strengths of the electric and magnetic fields from the line at the points of maximum intensity along the proposed route. The measurements shall be made before and after energization according to ANSI/IEEE standard procedures. These measurements shall be completed not later than six months after the start of operations.	File copies of the pre-and post-energization measurements with the CPM.	Within 60 days after completion of measurements	11/12/12	KIEWIT	7/12/13 CEC Submittal 169					
CONS	TLSN-4	Ensure that the rights-of-way of the proposed transmission line are kept free of combustible material, as required under the provisions of Section 4292 of the Public Resources Code and Section 1250 of Title 14 of the California Code of Regulations.	Transmit to the CPM a letter affirming the intention to comply with this condition.	At least 30 days before the start of operations	8/24/2012 Submittal	GenOn	8/22/2012 Submittal 122				8/22/2012	Verified as accepted per Email notice from CEC MS. C Stora on 9/4/2012
CONS	TLSN-5	Ensure that all permanent metallic objects within the right-of-way of the project-related lines are grounded according to industry standards regardless of ownership.	Transmit to the CPM a letter confirming compliance with this condition.	At least 30 days before lines are energized	8/22/12	KIEWIT	8/20/2012 Submittal 119				8/21/2012	Verified as accepted per Email notice from CEC MS. C Stora on 9/4/2012
PC-1	TRANS-1	In coordination with Contra Costa County Public Works Department, develop and implement a construction traffic control plan to include the items specified within the condition	Provide CCCPW and the city of Antioch Engineering Department for review and comment the construction traffic control plan. Provide to the CPM the construction control plan and the CCPW and the City of Antioch Engineering Departments comments for review and approval.	At least 60 days prior to the start of site mobilization	12/17/10	KIEWIT	11/18/2010 Submittal 015 1/5/2011 Submittal 024 Submittal 031 Submittal 033 1/31/2011	2010-1685 2011-0219	Returned for addional Informatio 12/13/2010. Resubmitted 1/5/2011 Resubmitted additional information 1/31/2011 Resubmitted the plan in the CEC suggested format 2/1/2011	11/18/2010	11/18/2010	2/8/2011 Verified by Email from C Stora on 9/18/2012
PC-1	TRANS-2a	Prepare a mitigation plan for Wilbur Ave should it be damaged by project construction. Should ensure that if damage occurs it will be repaired to original condition. The plan include the condition specified items (Photographic/videotape evidence of pre construction condition is req)	Submit a mitigation plan focused on restoring the local identified roads to is pre-project condition to the City of Antioch for review and comment and to the CPM for Review and approval.	At least 90 days prior to the start of any site (or related facilities) mobilization	11/17/10	KIEWIT	11/18/2010 Submittal 015	2010-1686	Approved 2/4/2011 No Paperwork Given		11/18/2010	2/4/2011 Verified MCR No.6 3/14/2011
CONS	TRANS-2b	Restore any area of Wilbur Ave that were damaged during construction to their original condition.	Provide photo/ videotape documentation to the CCCPW and the City of Antioch Engineering Department and the CPM that any damaged areas have been restored.	Within 90 days following the completion of construction	3/28/12	KIEWIT	3/15/2013 Submittal 176					
CONS	TSE-1	Provide the CPM and CBO with a schedule of transmission facility design submittals, a master drawing list, a master specifications list, and a major equipment and structure list as indicated in the condition.	Provide info to CBO and CPM.	At least 60 days prior to start of transmission line construction.	3/2/12	KIEWIT	10/21/2011 Submittal 082					Submittal requirement only no approvals requested, updates for schedule are provided in Monthly reports

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PC-2	TSE-2	Assign an electrical engineer and at least one of each of the following: a civil engineer; geotechnical engineer or a civil engineer experienced and knowledgeable in the practice of soils engineering; a design engineer who is either a structural engineer or a civil engineer and fully competent and proficient in the design of power plant structures and equipment supports; or a mechanical engineer.	Prior to the start of rough grading, the project owner shall submit to theCBO for review and approval, the names, qualifications, and registration numbers of all the responsible engineers assigned to the project. The project owner shall notify theCPM of the CBO's approvals of the engineers within five days of the approval.If the designated responsible engineer is subsequently reassigned or replaced, the project owner has five days in which to submit the name, qualifications, and registration number of the newly assigned engineer to the CBO for review and approval. The project owner shall notify the CPM of the CBO's approval of the new engineer within five daysof the approval	Prior to start of rough grading	2/23/11	KIEWIT	To CBO 1-27-11 To CEC 2/16/2011 Submittal 036 8/15/2011 Submittal 057 9/29/2011 Submittal 066	Verballty approved (C.H.)	CBO Approved 2-16-11 CEC Approved 3/16/2011 Submitted Reid Strain for Design Engineer and Richard Jacober for Electrical Engineer 8/16/2011 9/29/2011 submitted Daren Phelps as EE. CEC Approved 10/5/11.	11/30/10	1/27/2011	3/16/11
CONS	TSE-3	If any discrepancy in design and/or construction is discovered in any engineering work that has undergone CBO design review and approval, the project owner shall document the discrepancy and recommend corrective action. The discrepancy documentation shall become a controlled document and shall be submitted to the CBO for review and approval and refer to this condition of certification.	Submit a copy of the CBO's approval or disapproval of any corrective action taken to resolve a discrepancy to the CPM.	Within 15 days of receipt	As required	KIEWIT	3/2/12 Submittal 093				3/2/2012	Verified as accepted per Email notice from CEC MS. C Stora on 9/4/2012
CONS	TSE-4	For the power plant switchyard, outlet line and termination, construction shall not begin until plans for that increment of construction have been approved by the CBO. These plans, together with design changes and design change notices, shall remain on the site for one year after completion of construction.	Submit to the CBO for review and approval the final design plans, specifications and calculations	Before the start of each increment of construction	As required	K&G	9/20/12 Submittal 127			9/20/2012	9/20/2002	Verified as accepted per Email notice from CEC MS. C Stora on 9/4/2012
CONS	TSE-5a	Design, construct, and operate the proposed transmission facilitiesin conformance with all applicable LORS, and the requirements listed in the condition.	Submit to the CBO: a) Design drawings, specifications, and calculations conforming with CPUC General Order 95 or National Electric Safety Code (NESC); Title 8 of the California Code and Regulations (Title 8); Articles 35, 36 and 37 of the *High Voltage Electric Safety Orders* , CA ISO standards, National Electric Code (NEC) and related industry standards, for the poles/towers, foundations, anchor bolts, conductors, grounding systems, and major switchyard equipment;	Prior to start to start of construction of the transmission facilities	5/1/12	KIEWIT	3/12/12				3/12/2012	Verified as accepted per Email notice from CEC MS. C Stora on 9/4/2012
CONS	TSE-5b	Provide electrical one-line diagrams signed and sealed by the registered professional electrical engineer in charge, a route map, and an engineering description of the equipment and configurations covered by requirements TSE-5 a) through j),	b) For each element of the transmission facilities identified above, the submittal package to the CBO shall contain the design criteria, a discussion of the calculation method(s), a sample calculation based on "worst case conditions"1 and a statement signed and sealed by the registered engineer in responsible charge, or other acceptable alternative verification, that the transmission element(s) will conform with CPUC General Order 95 or National Electric Safety Code (NESC); Title 8 of the California Code and Regulations (Title 8); Articles 35, 36 and 37 of the *High Voltage Electric Safety Orders* , California ISO standards, National Electric Code (NEC), and related industry standards;	Prior to start to start of construction of the transmission facilities	5/1/12	KIEWIT	9/20/12 Submittal 128			3/12/2012 9/20/2012	3/12/2012 9/20/2012	Verified as accepted per Email notice from CEC MS. C Stora on 9/4/2012
CONS	TSE-5c	Provide the final Detailed Facility Study (DFS) including a description of facility upgrades, operational mitigation measures, and/or special protection system sequencing and timing if applicable.	c) Electrical one-line diagrams signed and sealed by the registered professional electrical engineer in charge, a route map, and an engineering description of the equipment and configurations covered by requirements **TSE-5** a) through f);	Prior to start to start of construction of the transmission facilities	5/1/12	KIEWIT	3/12/12				3/12/2012	Verified By email from(CEC) C Stora on 9/4/12
CONS	TSE-5d	Provide the executed project owner and California ISO facility interconnection agreement.	d) The Special Protection System (SPS) sequencing and timing if applicable shall be provided concurrently to the CPM.	Prior to start to start of construction of the transmission facilities	5/1/12	GenOn	10/1/13		See email from CEC C Stora			
CONS	TSE-5e	Provide evidence showing coordination with the affected agencies and utilities including but not limited to Western Area Power Administration and Lodi Electric Utility.	e) A letter stating that the mitigation measures or projects selected by the transmission owners for each reliability criteria violation, for which the project is responsible, are acceptable.	Prior to start to start of construction of the transmission facilities	5/1/12	GenOn	10/1/13		See email from CEC C Stora			
CONS	TSE-5f	Inform the CPM and CBO of any impending changes which may not conform to the requirements of TSE-05 and request approval to implement such changes.	f) The final Phase II Interconnection Study, including a description of facility upgrades, operational mitigation measures, and/or special protection system sequencing and timing if applicable, and.	Prior to start to start of construction of the transmission facilities	5/1/12	GenOn	3/2/12			3/2/2012	3/2/2012	Verified as accepted per Email notice from CEC MS. C Stora on 9/4/2012

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CONS	TSE-5g	Provide a copy of the executed LGIA signed by the California ISO and the Project Owner.	g) A copy of the executed LGIA signed by the California ISO and the project owner. Prior to the start of construction of or modification of transmission facilities, the project owner shall inform the CBO and the CPM of any anticipated changes to the design that are different from the design previously submitted and approved and shall submit a detailed description of the proposed change and complete engineering, environmental, and economic rationale for the change to the CPM and CBO for review and approval.	Prior to start to start of construction of the transmission facilities	5/1/12	GenOn	3/2/12			3/2/2012	3/2/2012	Verified as accepted per Email notice from CEC MS. C Stora on 9/4/2012
CONS	TSE-5h	Inform the CPM and CBO of any impending changes which may not conform to the requirements of TSE-05 and request approval to implement such changes.	Inform the CBO and CPM of any impending changes.	Prior to start to start of construction of the transmission facilities	As required	KIEWIT			No inpending changes			
CONS	TSE-6	Provide notice to the Cal-ISO prior to synchronizing the facility with the California transmission system:	Provide notice to the Cal-ISO prior to synchronizing the facility with the California transmission system:	One week prior to initial synchronization w/ the grid	11/1/12	GenOn						
CONS	TSE-7	Inspect the transmission facilities during and after project construction, and for any subsequent CPM- and CBO-approved changes, to ensure conformance with CPUC General Order 95 or National Electric Safety Code (NESC); Title 8 of the California Code and Regulations (Title 8); Articles 35, 36 and 37 of the High Voltage Electric Safety Orders, California ISO standards, National Electric Code (NEC) and related industry standards.	Transmit to the CPM and CBO: "As built" engineering description(s) and one-line drawings of the electrical portion of the facilities signed and sealed by the registered electrical engineer in charge; a statement verifying conformity with the standards set forth in Condition; "as built" engineering description of the mechanical, structural, and civil portion of the transmission facilities signed and sealed by the registered engineer in charge or an acceptable alternative verification; and a summary of inspections of the completed transmission facilities, and identification of any nonconforming work and corrective actions taken, signed and sealed by the registered engineer in charge.	Within 60 days after first synchronization to the grid	1/20/13	KIEWIT			Submitted to Steve Erickson January 2013			
CONS	VIS-1a	Develop a treatment plan for the surfaces of all project structures and buildings visible to the public as specified in the condition.	Submit the proposed treatment plan to the CPM for review and approval and simultaneously to the CCC or responsible jurisdiction for review and comment. Any modifications must be sent to the CPM for approval	At least 90 days prior to specifying the vendor the colors and finishes of the first structures or building that are surface treated during manufacturing	12/1/10	K&M	5/19/2011 Submittal 049 6/6/2011 Submittal 050		Submitted plan per Condition on 5/19/2011 Submitted Hard Copies to Dawn Owens for submission to the City and County on 5/19/2011. Based on comments from the CEC resubmitted on 6/6/2011. Verbal approval received on Vis-1 approval around 6/15/2011.			
CONS	VIS-1b	Treat the surfaces of all project structures and buildings visible to the public as specified in the condition.	Notify the CPM that the surface treatment of all listed structures and buildings has been completed and is ready for inspection and submit electronic color photographs taken from the same KOPs.	Prior to start of commerical operation	12/23/11	KIEWIT	Email from Christine Stora of the CEC dated 3/15/13 conditionally accepting the surface treatments.					
OPS	VIS-1c	Ensure proper treatment maintenance for the life of the project.	Provide a status report regarding surface treatment maintenance in the ACR which specifies the items in the condition	Annually	Include in the ACR	NRG			Reports submitted annually.			
CONS	VIS-2a	Develop a landscaping plan which would Provide landscaping that reduces the visibility of the power plant structures and complies with local policies and ordinances	Submit landscaping plan to the CPM for review and approval and simultaneously to CCC for review and comment.	At least 90 days prior to installation	12/1/12	GenOn	2/25/13 Submittal 150					
CONS	VIS-2b	Provide landscaping that reduces the visibility of the power plant structures and complies with local policies and ordinances.	Simultaneously notify the CPM and CCC after the completion of the landscaping that the site is ready for inspection.	Within 7 days after completing landscaping	3/1/13	GenOn			3/12/2014: DJH contacting Zion to make repairs prior to scheduling an inspection.			

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OPS	VIS-2c	Maintain landscaping, including any needed irrigation and annual or semi annual debris removal for the life of the project	Report landscaping maintence activites, including replacement of dead or dying vegetation for the previous year of operation in the ACR	Annually	Include in the ACR	NRG			Reports submitted annually.			
CONS	VIS-3a	Design and install all permanent exterior lighting such that (a) lamps and reflectors are not visible from beyond the project site, including any off-site security buffer areas; (b) lighting does not cause excessive reflected glare; (c) direct lighting does not illuminate the nighttime sky; (d) illumination of the project and its immediate vicinity is minimized, and (e) the plan complies with local policies and ordinances.	Contact the CPM to discuss the documentation required in the lighting mitigation plan. The project owner shall not order any exterior lighting until receiving CPM approval of the lighting mitigation plan.	At least 90 days prior to ordering any permanent exterior lighting	2/1/13	KIEWIT	3/26/2012 Submittal 096		The following participated on the call on 3/7/12: Scott Kennedy, Tharu Nadarajah, Greg Zullig, Kelly Zullig (all PKS), David Frandsen (GenOn), David Flores and Chrstine Stora (CEC) Drawing documentation to follow.		3/7/2012	3/7/2012 Verified in MCR No. 21
CONS	VIS-3b	Prepare a lighting mitigation plan that includes the specific info set forth in the condition.	Submit to the CPM for review and approval and simultaneously to the Contra Costa County for review and comment a lighting mitigation plan.	At least 60 days prior to ordering any permanent exterior lighting	3/1/13	KIEWIT	3/26/2012 Submittal 096 4/16/12 Submittal 098				4/16/2012	5/3/2012 Verified in MCR No. 21
CONS	VIS-3c	Notify the CPM that the permanent exterior lighting has been completed and is ready for inspection.	Set up an inspection appointment.	Prior to start of commercial operation	12/29/11	KIEWIT	David Flores of the CEC performed the inspection with Raja on 4/2/13					
CONS	VIS-3d	Notify the CPM of any complaints re: lighting.	Submit a complaint resolution form to the CPM record each lighting complaint and document resolution of that complaint.	Within 48 hours after receiving a complaint	As required	KIEWIT- During Construction GenOn -			No Complaints			
PC-1	WASTE-1a	Comply with BAAQMD Regulation 11, rule 2 req for management and disposal of asbestos contain material removed during project demolition.	Provide to the CPM copies of the BAAQMD notification materials, acknowledgment letter and job number assigned by the BAAQMD for review and approval	No less than 10 day prior to commencement of project related demolition	1/7/11	K&G	1/24/2011 Submittal 028		Approved 1/31/2011 No Paperwork		1/24/2011	1/31/2011 Verified MCR No. 5 2/11/2011
CONS	WASTE-1b	Manage asbestos waste during demolition to comply with BAAQMD regulation 11, rule 2	Provide summary report(s) to the CPM on asbestos waste management via MCR to include items specified w/in the condition	Monthly	Include in MCR	K&G					Monthly 10th Busness day of each month	Currently No noted issues with any Monthly report
PC-1	WASTE-2	Complete a lead-based paint survey of all structures to be demolished and ensure that project related demolition debris contain lead based paint is properly managed and disposed of in accordance with all applicable LORS	Verification: At least 30 days prior to the start of project-related demolition, the project owner shall submit to the CPM for review and approval a copy of the lead-based paint survey conducted for the project site. The project manager shall also provide to the CPM a description of the procedures to be employed during demolition to ensure that lead-based paint debris and wastes are managed in accordance with all applicable LORS.	At least 30 days prior to the start of project-related demolition	1/16/11	GenOn	1/5/2011 Submittal 025	2011-0137	Approved 1/31/2011 No Paperwork		1/5/2011	1/31/2011 Verified in MCR No. 21
PC-1	WASTE-3	Provide the resume of a Registered PE or Geologist, who shall be available for consultation during site characterization (if needed), excavation and grading activities.	Submit resume to CPM for approval. Provide to the CPM a copy of the contract with the approved professional Engineer/Geologist prior to start of project related demolition	At least 30 days prior to site mobilization	1/16/11	KIEWIT	11/24/2010 Submittal 017	2010-1730	Approved 1/18/2011	12/1/2010	11/24/2010	1/18/2011 Verified in MCR No. 21

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CONS	WASTE-4	If potentially contaminated soil is identified during site characterization, excavation, or grading at either the proposed site or linear facilities, as evidenced by discoloration, odor, detection by handheld instruments, or other signs, the Professional Engineer or Professional Geologist shall inspect the site, determine the need for sampling to confirm the nature and extent of contamination, and provide a written report to the project owner, representatives of DTSC, and the CPM stating the recommended course of action.	Submit any final reports filed by the Professional Engineer or Professional Geologist to the CPM. Project owner must notify the CPM within 24 hours of any orders issued to halt construction.	Within 5 days of their receipt	As required	KIEWIT	4/15/2011 Submittal 046 4/26/2011 10/14/2011 11/23/2011 Submittal 078 12/14/2011 Submittal 081 4/27/12 Submittal 100 5/18/2012 Submittal 104 5/23/12 Submittal 106 5/25/12 Submittal 107 6/05/2012		Oily dirt - East side Oily dirt-Middle of Power Block, 11/23/2011 addnl oil on East Side. Dec. 14 DTSC correspondence	4/15/11, 4/26/11, 10/14/11, 11/23/11, 12/14/11, 5/1/12, 5/18/12, 6/5/2012	4/15/11, 4/26/11, 10/14/11, 11/23/11, 12/14/11, 5/1/12, 5/18/12, 6/5/2012	Verified as accepted per Email notice from CEC MS. C Stora on 9/4/2012
PC-1	WASTE-5a	Comply with all applicable provisions of the city of Antioch's Construction and Demolition Debris Recycling Ordinance No. 1018- C-S., including preparation of a Construction and Demolition Debris Recycling Ordinance Waste Management Plan for all wastes generated during project demolition and construction activities.	At least 45 days prior to the start of project-related demolition, the project owner shall submit to the city a draft Construction and Demolition Debris Recycling Ordinance Waste Management Plan for review and comment. Submit to the CPM for review and approval the draft Waste Management Plan and any comments on the plan provided by the city	Not less than 15 days prior to the start of project-related demolition	4/16/13	KIEWIT	12/02/2010 Submittal 013 to City 12/03/2010 to CEC Resubmit to CEC 12/21/2010 Submittal 19 Submittal 023	2010-1784 2010-1927	Approved 1/31/2011 No Paperwork	11/18/2010	12/2/2010	1/31/2011 Verified MCR No.5 2/11/2011
CONS	WASTE-5b	Require all project contractors and subcontractors to adhere to the city's waste diversion requirements and provide to the project owner adequate documentation of the types and volumes of wastes generated, how the wastes were managed, and volumes of wastes diverted	Submit documentation to the city of Antioch, with copies to the CPM, demonstrating compliance with th diversion program requirements. The required documentation shall include a final completed Waste Management Plan (as set forth by the city ordinance) and all necessary receipts or records of measurement from entities receiving project wastes.	Not later than 30 days after completion of project construction	1/28/12	KIEWIT	Loaded recycle receipts to the City of Antioch FTP site on 6/26/2013, and set an email to Julie Haas-Wajdowicz asking for confirmation.		Submittal # 171		8/21/2013	
CONS	WASTE-5c	Comply with all applicable provisions of the city of Antioch's Construction and Demolition Debris Recycling Ordinance No. 1018- C-S	Provide documentation to the CPM that the project has satisfactorily complied with the city of Antioch Ordinance No. 1018-C-S	Prior to start of project Operation	12/23/11	KIEWIT	Submittal 166 sent to CEC on 6/26/2013		Submittal # 171		8/21/2013	
PC-1	WASTE-6a	Obtain a hazardous waste generator identification number from the United States Environmental Protection Agency prior to generating any hazardous waste during construction.	Keep a copy of the identification number on file at the project site and provide the number to the CPM.	Prior to start of construction	5/1/13	K&M	11/16/2010 Submittal 013 Submittal 054	2010-1665	Approved 7/22/2011		11/16/2010	CEC Acceptance 11/18/2010by J Caswell Re-Verified By Email from C Stora on 9/18/12
CONS	WASTE-6b	Obtain a hazardous waste generator identification number from the United States Environmental Protection Agency prior to generating any hazardous waste during operations.	Keep a copy of the identification number on file at the project site and provide the number to the CPM.	At least 30 days prior to commercial operation.	1/22/12	NRG	11/16/10		Approved 7/22/2011			
COMM	WASTE-7a	Prepare an Operation Waste Management Plan for all wastes generated during operation of the facility	Submit the plan to the CPM for review and approval. The plan shall contain, at a minimum the items in the condition. submit any required revisions to the CPM within 20 days of notification from the CPM that revisions are necessary.	No less than 30 days prior to the start of project operation	11/23/11	GenOn	Submittal 152 sent to the CEC on 3/2/13				3/2/2013	
OPS	WASTE-7b	Update the Operation Waste Management Plan as necessary to address current waste generation and management practices.	Document in each ACR the actual volume of wastes generated and the waste management methods used during the year; provide a comparison of the actual waste generation and management methods used to those proposed in the original Operation Waste Management Plan	Annually	Include in the ACR	NRG			Reports submitted annually.			
OPS	WASTE-8	Ensure that all spills or releases of hazardous substances, hazardous materials, or hazardous waste are documented and cleaned up and that wastes generated from the release/spill are properly managed and disposed of, in accordance with all applicable federal, state, and local requirements.Document management of all unauthorized releases and spills of hazardous substances, hazardous materials, or hazardous wastes that occur on the project property or related linear facilities as specified in the condition	Provided to the CPM unauthorized release/spill documentation	Within 30 days of the date the release was discovered.	As required	NRG						
OPS	WASTE-9	Notify the CPM of any impending waste management-related enforcement action by any local, state, or federal authority taken or proposed to be taken against the project itself, or against any waste hauler or disposal facility or treatment operator with which the owner contracts that may be related to management of project wastes	Notify the CPM in writing and provide a description and timeline for steps to be taken to address the action.	Within 10 days of becoming aware of an impending enforcement action	As required	NRG						

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PC-1	WASTE-10	Ensure that the Marsh Landing Generating Station site is properly characterized so as to be able to identify hazardous wastes present at the project site. The project owner shall work closely with PG&E and Ensure that PG&E follows any and all directives issued by the California EPA Department of Toxic Substances Control (DTSC) to characterize, assess, and remediate the project site. No soil excavation or grading shall commence until the CPM gives approval	Provide the CPM for review and approval all project-related plans, results, and assessments provided by PG&E to DTSC and all obtainable project-related written correspondence between DTSC and PG&E	At least thirty (30) days prior to the start of any soil excavation or grading	2/23/11	GenOn	11/29/2010 Submittal 018 Submittal 024 Submittal 038 6/28/2011 Submittal 052 Submittal 053 Submittal 054	2010-1738 returned 12/3/2010 2011-0144	Pending DTSC approval of plan letter. Additional correspondence provided 1/5/2011 (Not plan letter.) Approved 2/7/2010 Addtnl sent 6/28/2011 Approved Corrective Measures Completion Report and Final Revision 7/27/2011		11/29/2010	2/7/2011 Verified MCR No.6 3/14/2011
PC-2	WORKER SAFETY-1	Submit a copy of the Project Construction Safety and Health Program containing the following construction plans: PPE, Exposure Monitoring, IIPP,EAP, and FPP. provide a copy of a letter to the CPM from the CCC Fire Protection District stating the fire department's comments on the Construction Fire Prevention Plan and Emergency Action Plan.	The Safety Program, PPE, IIPP, and Exposure Monitoring Program shall be submitted to the CEC CPM for review and approval; the EAP and FPP shall be submitted to the CCC Fire Protection District for review and comment prior to submittal to the CPM for approval.	At least 30 days prior to start of construction	4/1/13	KIEWIT	1/11/2011 Submittal 026	2011-0111	Approved (No Paperwork Given)	11/19/2010	1/11/2011	2/7/2011 Verified MCR No.6 3/14/2011
COMM	WORKER SAFETY-2	Prepare and submit an O&M Safety & Health Plan containing: an IIPP, EAP, HMMP, FPP, and PPE.	The Operations IIPP, EAP, PPE shall be submitted to the CEC CPM for review and comment; the EAP and FPP shall also be submitted to the CCC Fire Protection District for review and comment. Provide a copy of a letter to the CPM from the CCC Fire Protection District stating the fire department's comments on the Operations Fire Prevention Plan and Emergency Action Plan.	At least 30 days prior to first fire or commissioning	9/7/12	GenOn	10/9/12 Submittal 132 10/10/12 Submittal 133					
PC-1	WORKER SAFETY-3a	Provide a site Construction Safety Supervisor (CSS) who, by way of training and/or experience, is knowledgeable of power plant construction activities and relevant laws, ordinances, regulations, and standards; is capable of identifying workplace hazards relating to the construction activities; and has authority to take appropriate action to assure compliance and mitigate hazard	Submit to the CPM the name and contact information for the Construction Safety Supervisor (CSS). The contact information of any replacement CSS shall be submitted to the CPM within one business day.	At least 30 days prior to the start of construction	3/20/11	KIEWIT	11/18/2010 Submittal 13 Kiewit Submittal 015		CEC approval per email from J Caswell on 11/16/10		11/18/2010	2/4/2011 Verified MCR No.6 3/14/2011
CONS	WORKER SAFETY-3b	The CSS shall prepare and submit a monthly safety inspection that includes the info specified in the verification language of the condition.	Submit required info to the CPM.	Monthly	Include in MCR	KIEWIT			CEC approval per email from J Caswell on 11/16/10		Monthly 10th Busness day of each month	Currently No noted issues with any Monthly report
PC-2	WORKER SAFETY-4	Make payments to the CBO for the services of a Safety Monitor (in addition to the other services provided by the CBO). Safety monitor shall be responsible for verifying that the construction safety supervisor implements all required Cal/OSHA and CEC safety requirements.	Provide proof of agreement to fund the safety monitor services to the CPM for review and approval.	Prior to the start of construction	4/1/13	GenOn	1/31/2011 Submittal 031	2011-0220	Provided CBO letter confirming service were covered by GenOn 1/31/2011 Approved 4/2/2011	1/31/2011	1/21/2011	2/4/2011 Verified MCR No.6 3/14/2011
PC-1	WORKER SAFETY-5a	Ensure that a portable automatic external defibrillator (AED) is located on site during demolition & construction, and shall implement a program to ensure that workers are properly trained in its use and that the equipment is properly maintained and functioning at all times.	Submit to the CPM proof that a portable automatic external defibrillator (AED) exists on site and a copy of the training and maintenance program for review and approval.	At least 30 days prior to the start of construction	12/2/10	KIEWIT	11/24/2010 Submittal 013 and 017 Kiewit		CEC approval per email from J Caswell on 11/16/10	11/30/2010	11/24/2010	2/4/2011 Verified MCR No.6 3/14/2011

2.0 Project Operating Status Summary

MLGS began commercial operations May 1, 2013.

The Units ran throughout the year when called upon by CAISO/PG&E. There were no significant operating status changes to the facility during the year.

A one week Summer Readiness outage was performed on each unit during March. Preventative Maintenance tasks were also performed.

3.0 Documents Required by Specific Conditions

The following table lists the Conditions of Certification that require annual input.

Condition of Certification	Description	Items Included	Subsection
BIO-2	Designated Biologist Duties & WEAP Training.	YES	3.1
HAZ-1	List of hazardous materials contained at the facility.	YES	3.2
HAZ-8	Site specific security plan statements.	YES	3.3
SOIL & WATER-5	Waste water reporting to DDSD.	YES	3.4
SOIL & WATER-6	Potable water usage.	YES	3.5
VIS-1	Surface treatment of structures and buildings	YES	3.6
VIS-2	Landscaping activities	YES	3.7
WASTE-7	Waste management plan	YES	3.8
BIO-8 *	CWF Annual Report	YES	3.9

Note: * added subsection starting with the 2016 ACR.

3.1 BIO-2

There were required Biological Resources Monitoring Reports for 2020 related to the Black Start Battery Energy Storage System project, attached. WEAP Training attendance logs attached.

AECOM
300 Lakeside Drive, Suite 400
Oakland, CA 94612
USA
aecom.com

March 23, 2021

Mr. Daniel Leach
Marsh Landing LLC
3201-C Wilbur Avenue
Antioch, CA 94509

Subject: 2020 Biological Monitoring at Marsh Landing Generating Station (08-AFC-03C) in Contra Costa County, California

Dear Mr. Leach:

This letter report documents biological resources monitoring and compliance with the biological Conditions of Certification (COCs) for the Battery Energy Storage System (BESS) Black Start Project (Project) at Marsh Landing Generating Station (MLGS), which is the entirety of biological monitoring conducted by AECOM at MLGS in 2020.

Background

In 2010, the California Energy Commission (CEC) certified MLGS and the Bay Area Air Quality Management District issued the Authority to Construct for MLGS. MLGS began commercial operations in 2013 and the BESS Project was approved as a modification to MLGS by the CEC in March 2019 (TN227326). All construction and staging for the BESS Project will occur entirely within the developed limits of MLGS. The first phase of the Project includes installation of a concrete mat foundation between Unit 2 and Unit 3 and a mounting a cabinet with an electrical switch gear on the pad. The second phase of the project includes installing batteries to support Black Start operation in the event of a partial or system wide grid outage. Although AECOM's biological support services in 2020 were entirely related to the BESS Project, as described below, this work was not initiated in 2020 as originally planned.

AECOM is assisting Marsh Landing LLC with biological support and compliance with implementation of biological Conditions of Certification (COCs) for the BESS Project. Following initial biological survey activities, the project was delayed until 2021. AECOM continues to provide biological support for the Project in 2021, but that is not the focus of this letter. This letter describes AECOM's biological support conducted in 2020, for NRG to use in their annual compliance report to the CEC describing 2020 activities. Future reports will be prepared to document 2021 biological resources support.

Approved Designated Biologist and Biological Monitors

Biological surveys and monitoring at MLGS must be conducted by Biological Monitors approved by the CEC, and all biology work must be overseen by the approved Designated Biologist, consistent with the COCs for MLGS. I have been the Designated Biologist for MLGS since it was certified by the CEC and will continue to be the Designated Biologist for this Project. My lead Biological Monitor, Sam Abercrombie, and a second Biological Monitor, Sarah Flaherty, were approved by the CEC on February 17, 2020. I trained these newest two approved Biological Monitors on the MLGS Worker Environmental Awareness Program (WEAP) and Biological Resources Mitigation Implementation and Monitoring Plan (BRMIMP) on February 20, 2020. Derek Jansen, Joe Broberg, and Joe Bandel also were previously approved as Biological Monitors by the CEC, have worked on earlier phases at MLGS, and remain on staff and potentially available if needed.

AECOM

Preconstruction Biology and Nesting Bird Surveys

On February 17, 2020, Sam Abercrombie, Sarah Flaherty, and I conducted a biological reconnaissance survey of the entire Project area and vicinity. Figure 1 shows the approximate locations of work areas associated with the Project as understood and surveyed in 2020. We walked the Project footprint, laydown, parking, staging (Project area), and adjacent areas to identify any sensitive biological resources that may require avoidance or protection during construction. We confirmed that all disturbances associated with the first phase of work will occur in areas already paved or graveled and that there are no sensitive biological resources in the work areas (Figure 2, a and b).

Although construction was scheduled to begin prior to the bird nesting season (March 1-August 31, see BRMIMP Ch. 7), we opted for caution and conducted a nesting bird survey the morning of February 17th. We did not find any birds nesting within 150 feet of the Project area. The only nesting activity observed was a single Anna's hummingbird (*Calypte anna*) perched on a nest in an ornamental shrub adjacent to the MLGS administrative building, north of Unit 2, approximately 300 feet north of the Project area and separated by Unit 2 and other structures.

Construction was scheduled to begin on February 24, 2020. Biological Monitor Sam Abercrombie arrived early that morning, conducted a second bird survey, and cleared the phase one work area for construction. However, the construction crew never showed up and no construction activities were initiated. For reasons separate from biological resources, the Project was delayed until 2021. Therefore, there was no need for my team or I to conduct follow-up construction monitoring and we did not return to MLGS until 2021, when we resumed biological support for the BESS Project.

Biological Resources Coordination with the CEC

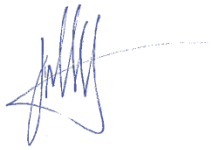
Following the initial preconstruction and nesting bird survey for the BESS Project conducted in 2020, on February 21, 2020, I prepared a letter describing a reduced biological monitoring approach for the first phase of the BESS Project. On March 5, 2020, the CEC approved the following approach for the first phase of the Project:

1. Biological monitoring during mobilization and during the first day of trenching.
2. Weekly inspections throughout the first phase of construction.
3. Monitoring inspection upon completion of the first phase of construction.

Mobilization for the first phase of the project began March 22, 2021 and my team is currently implementing this monitoring protocol. We also repeated preconstruction and nesting bird surveys prior to mobilization. I anticipate preparing a more detailed description of the 2021 biological support for the BESS Project in a subsequent letter with additional information regarding the second phase of the Project, the schedule for which is still being confirmed.

That concludes my report of AECOM's biological support at MLGS in 2020. Please contact Jonathan Stead at jon.stead@aecom.com or 510-874-3058 with any questions or comments.

Sincerely,



Jonathan Stead
MLGS Designated Biologist
Senior Project Ecologist
AECOM

Attachment – 2020 Biological Monitoring Logs

Figure 1. Approximate location of BESS Project work areas surveyed in 2020 (dark red boundaries).

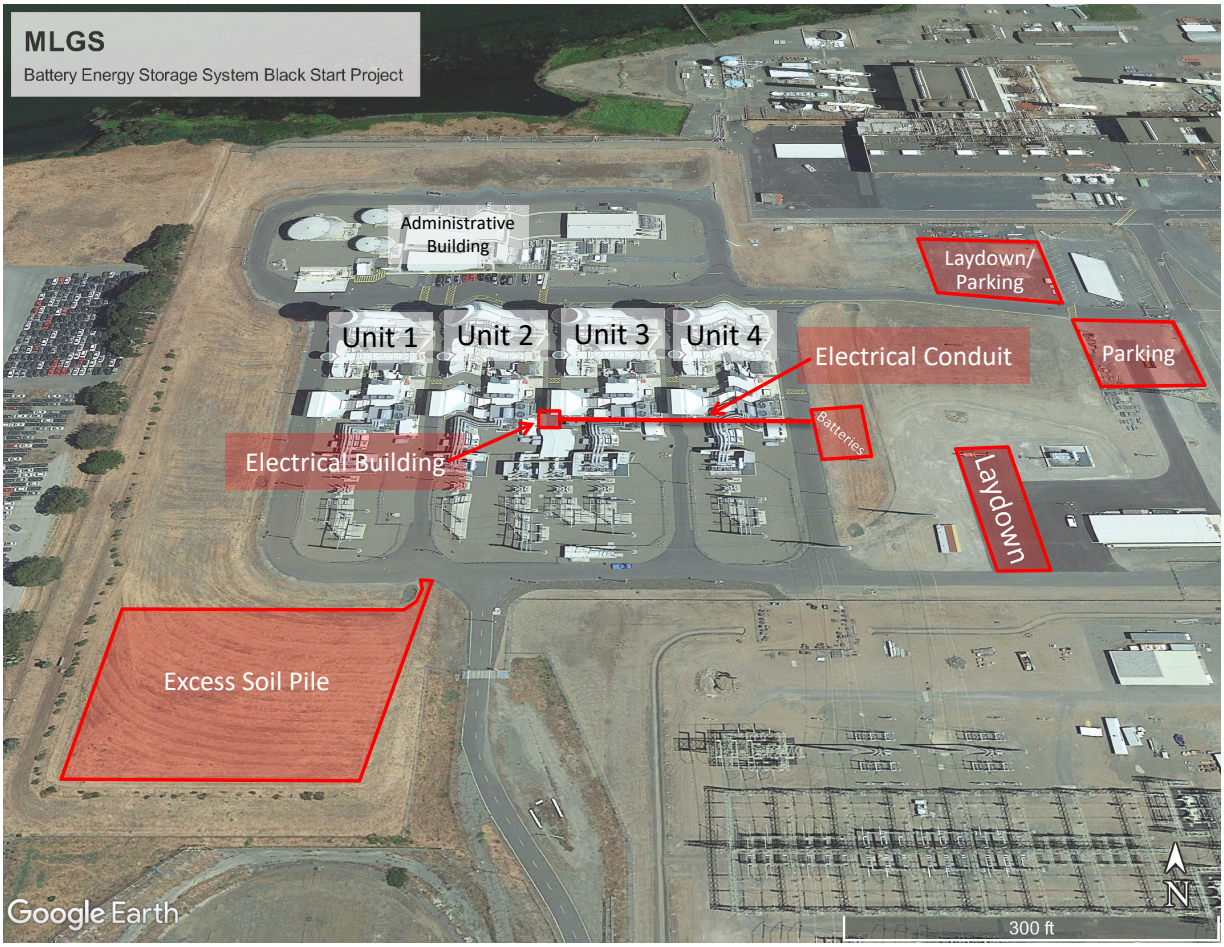
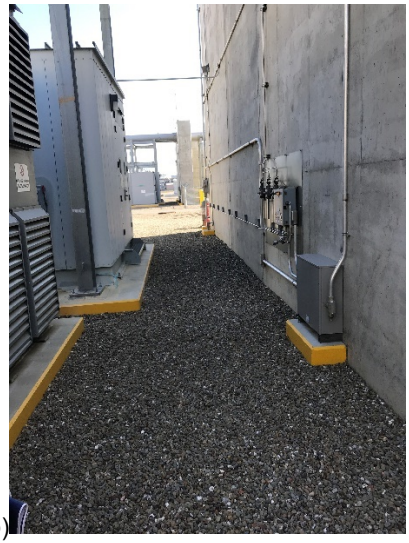


Figure 2. Photographs of (a) “Electrical Building,” (b) “Electrical Conduit,” (c) “Batteries,” and (d) “Excess Soil Pile” areas indicated in Figure 1.

(a)

(b)



(c)

(d)

Biological Monitoring Log

Marsh Landing Generating Station	Date: Feb 17 2020
Monitor: Sarah Flaherty, Sam Abercrombie, Jon Stead	Time: 0930-1130
Weather: Sunny 60's	

Photo Numbers:

Activity that requires monitor's presence:

N/A

Description of Construction Activities Observed:

Safety training + preconstruction survey only

Compliance Observations and Issues:

ESA Fencing: N/A

Wildlife Pitfalls/Traps/Pipes: N/A

Nesting Birds: ~~not observed~~ 1 anna's hummingbird nest observed in acacia at admin building outside of work area

Coordination with Construction Personnel: N/A

Other Compliance Issues: N/A

Wildlife Species List for Day:

Eurasian collared-dove
Turkey Vulture
Black Phoebe
Yellow-rumped Warbler
American Crow
merlin
mourning dove
California Scrub-jay
common Raven
Western Fence Lizard
Black-tailed Jackrabbit

URS
1333 Broadway, Suite 800
Oakland, CA 94612

Daily Monitoring Checklist Date Feb 17 2020
(Check if in compliance) — N/A - no construction

- ☑ N/A ESA fencing or a physical barrier is separating sensitive resources from active work areas and is in good condition.
- ☑ N/A All trenches left open overnight have an escape ramp or are completely covered
- ☑ No new bird nesting activity observed/known nests buffered appropriately
- ☑ N/A Straw wattles and/or silt fence are in place and in good condition
- ☑ Any areas of disturbed soil with slopes off the site are stabalized to reduce erosion potential during and after construction
- ☑ Speed limit signs and messages are in place and accurate
- ☑ Equipment storage and parking is limited to the project site and/or designated staging areas
- ☑ Deliberate feeding of wildlife is not occurring
- ☑ Food-related trash is being disposed of in closed containers and removed weekly
- ☑ No firearms are present on site (except security personnel)
- ☑ No pets are present on site

David Frandzen gave us a tour of site & upcoming work areas.
Biologists conducted preconstruction survey - visited 3 major workareas

① Gravel areas between units where trenching & tie-in will occcure
- Hardscaped, no constraints observed

② Grassy area between units + asphalt staging area - where battery pad will be constr.
- compacted earth + cover of ruderal grasses

③ Soil stockpile where excavation will occcur
- ruderal veg + ~~exotics~~ non-native grasses; limited gopher burrows where excavation unlikely to occcur

Notes: SAFETY TRAINING notes:
Joe Moura - POC
Emergency - call control room 925-779-6666
Check in w/ control room, sign-in @ front desk
Wraparound or side-shield on
Notify Control Room Operator & NRG POC at start + end of day

★ Also surveyed trees on SW perimeter for nests. none observed

URS
1333 Broadway, Suite 800
Oakland, CA 94612

Biological Monitoring Log

Marsh Landing Generating Station – BESS MOBILIZATION	Date: 2/24/20
Monitor: SAM ABERCROMBIE	Time: 0615 - 0930
Weather: CLEAR, BREEZY	

Photo Numbers: PRE-CON #1-3

Activity that requires monitor's presence: MOBILIZATION OF BESS PROJECT; BIRD SURVEYS + INITIAL MONITORING

Description of Construction Activities Observed:
MOBILIZATION WAS SCHEDULED TO BEGIN TODAY FOR THE B.E.S.S. PROJECT. I ARRIVED ON SITE TO COMPLETE PRE-CONSTRUCTION BIRD SURVEYS + PARTICIPATE IN TAILBOARD MTGS + PROJECT KICKOFF. I WAS INFORMED @ ~ 9:15 THAT THE CONSTRUCTION CREW WOULD NOT SHOW UP TODAY AND THE PROJECT START IS TBD. THE BIRD SURVEY IS VIABLE FOR 10 DAYS - 3/5/20

Compliance Observations and Issues:

ESA Fencing: N/A

Wildlife Pitfalls/Traps/Pipes: N/A

Nesting Birds: 2 ANHU NESTS IN ORNAMENTAL SHRUBS ADJACENT TO ADMIN BLD. S + W SIDE.

Coordination with Construction Personnel: N/A

Other Compliance Issues: N/A

Wildlife Species List for Day:
BIRD SURVEY 0630-0730: RED-TAILED HAWK, MOURNING DOVE, BLACK PHOEBE, GULL SP., WHITE-CROWNED SPARROW, YELLOW-RUMPED WARBLER, NORTHERN FLICKER, ANNA'S HUMMINGBIRD, CANADA GOOSE, CALIFORNIA SCRUB JAY, RUBY-CROWNED KINGLET, HOUSE FINCH, ROCK PIGEON, WHITE-TAILED KITE (OUTSIDE NTH FENCING)

- BLACK-TAILED JACKRABBIT

URS
1333 Broadway, Suite 800
Oakland, CA 94612

Daily Monitoring Checklist (Check if in compliance) N/A - CONSTRUCTION NOT YET UNDERWAY **Date** 2/24/20

- ☐ ESA fencing or a physical barrier is separating sensitive resources from active work areas and is in good condition.
- ☐ All trenches left open overnight have an escape ramp or are completely covered
- ☐ No new bird nesting activity observed/known nests buffered appropriately
- ☐ Straw wattles and/or silt fence are in place and in good condition
- ☐ Any areas of disturbed soil with slopes off the site are stabalized to reduce erosion potential during and after construction
- ☐ Speed limit signs and messages are in place and accurate
- ☐ Equipment storage and parking is limited to the project site and/or designated staging areas
- ☐ Deliberate feeding of wildlife is not occurring
- ☐ Food-related trash is being disposed of in closed containers and removed weekly
- ☐ No firearms are present on site (except security personnel)
- ☐ No pets are present on site

CONSTRUCTION START DELAYED

BIRD SURVEY VALID THROUGH 3/5/20

Notes: 2 ANHN NESTS IN ORNAMENTAL TREES ADJACENT TO THE ADMIN BUILDING S + W

URS
1333 Broadway, Suite 800
Oakland, CA 94612

Marsh Landing Generating Station

Trainer: MIKE ENGEL
Date: 2/25/2020
Training: WEAP
(for office use only)

WORKER ENVIRONMENTAL AWARENESS PROGRAM
WORKER TRAINING ATTENDANCE RECORD

I have attended the Marsh Landing Generating Station Project **Worker Environmental Awareness Program Worker Training** and understand and agree to comply with all environmental requirements presented. I understand that I am accountable for my actions and that failure to comply with the requirements may be grounds for immediate removal from the project and/or legal action.

	Signature	Print Name	Company	Date
1.	John P. Hancock	John P. Hancock	Gregg Drilling	2/25/2020
2.		WAYNE LISIEWSKI	Gregg Drilling	2-25-20
3.		Tuwayriab Ahmad	AECOM	2/25/20
4.				
5.				
6.				
7.				
8.				
9.				
10.				
11.				
12.				
13.				
14.				
15.				
16.				
17.				
18.				
19.				
20.				

Marsh Landing Generating Station

Trainer: MIKE ENGEL
Date: 2/27/20
Training: (WEAP)
(for office use only)

WORKER ENVIRONMENTAL AWARENESS PROGRAM
WORKER TRAINING ATTENDANCE RECORD

I have attended the Marsh Landing Generating Station Project **Worker Environmental Awareness Program Worker Training** and understand and agree to comply with all environmental requirements presented. I understand that I am accountable for my actions and that failure to comply with the requirements may be grounds for immediate removal from the project and/or legal action.

	Signature	Print Name	Company	Date
1.		Martin Lakin Jr	ALB	2/27/20
2.	Ramiro Duran	Ramiro Duran	ALB	2-27-2020
3.				2-27-20
4.	~~[illegible]~~			
5.		Mario Romani	ALB	2-27-20
6.		Curtis Riggins	ALB	2/27/20
7.		Matthew Duncan	ALB	2/27/20
8.		John Cichosz	ALB	2-27-20
9.		Kay Platt	ALB	2-27-20
10.	Bardomiano Mosana	Bardomiano Mosana	ALB	2-27-20
11.				
12.				
13.				
14.				
15.				
16.				
17.				
18.				
19.				
20.				

3.2 HAZ-1

See the latest attached copy of the list of Hazardous Materials contained at the facility.

Hazardous Materials And Wastes Inventory Matrix Report

CERS Business/Org. **Marsh Landing Generating Station**
Facility Name **Marsh Landing Generating Station**
3201C Wilbur Ave, Antioch 94509

Chemical Location **AMMONIA CONTAINMENT SLAB**

CERS ID **10480876**
Facility ID **07-000-774528**
Status **Submitted** on 2/15/2021 1:58 PM

DOT Code/Fire Haz. Class	Common Name	Unit	Quantities: Max. Daily	Quantities: Largest Cont.	Quantities: Avg. Daily	Annual Waste Amount	Federal Hazard Categories	Hazardous Components (For mixture only): Component Name	% Wt	EHS	CAS No.
Corrosive, Toxic	**AMMONIUM HYDROXIDE** CAS No 1336-21-6 Map: 2 Grid: D2	**Gallons** State Liquid Type Mixture	**21200** Storage Container Aboveground Tank Days on Site: 365	**21200**	12200 Pressue > Ambient Temperature Ambient	Waste Code	- Health Acute Toxicity - Health Skin Corrosion Irritation - Health Serious Eye Damage Eye Irritation - Health Specific Target Organ Toxicity	Anhydrous Ammonia Water	19 % 81 %		7664-41-7 7732-1-5

Hazardous Materials And Wastes Inventory Matrix Report

CERS Business/Org. **Marsh Landing Generating Station**
Facility Name **Marsh Landing Generating Station**
3201C Wilbur Ave, Antioch 94509

Chemical Location **BACK PULSE AIR FILTER COMPRESSORS**

CERS ID **10480876**
Facility ID **07-000-774528**
Status **Submitted** on 2/15/2021 1:58 PM

DOT Code/Fire Haz. Class	Common Name	Unit	Quantities: Max. Daily	Quantities: Largest Cont.	Quantities: Avg. Daily	Annual Waste Amount	Federal Hazard Categories	Hazardous Components (For mixture only): Component Name	% Wt	EHS	CAS No.
	COMPRESSOR OIL	**Gallons**	**8**	**3**	8		- Health Hazard	Base Oil	90 %		
	CAS No	State: Liquid	Storage Container: Other		Pressue: Ambient	Waste Code	Not Otherwise Classified	Dialkyl Thiophosphate Ester	1 %		268567-32-4
	Map: 2 Grid: G3-G8	Type: Mixture	Days on Site: 365		Temperature: Ambient			Alkaryl amine	2 %		68411-46-1

Hazardous Materials And Wastes Inventory Matrix Report

CERS Business/Org. **Marsh Landing Generating Station**
Facility Name **Marsh Landing Generating Station**
3201C Wilbur Ave, Antioch 94509

Chemical Location **BATTERIES THROUGHOUT SITE (5kV BLDG, SWITCHYARD, ELECTRICAL PACKAGES, ADMIN BLDG)**

CERS ID **10480876**
Facility ID **07-000-774528**
Status **Submitted** on 2/15/2021 1:58 PM

DOT Code/Fire Haz. Class	Common Name	Unit	Quantities Max. Daily	Largest Cont.	Avg. Daily	Annual Waste Amount	Federal Hazard Categories	Hazardous Components (For mixture only) Component Name	% Wt	EHS	CAS No.
DOT: 8 - Corrosives (Liquids and Solids) Corrosive, Water Reactive, Class 2, Toxic, Oxidizing, Class 1	**LEAD ACID BATTERIES** CAS No ✓EHS Map: 2 Grid: I6, G4-8, C4 State: Liquid Type: Mixture Storage Container: Other Days on Site: 365 Pressue: Ambient Temperature: Ambient	**Pounds**	**9617**	**58**	9617	Waste Code	- Physical Flammable - Physical Explosive - Physical Corrosive To Metal - Health Carcinogenicity - Health Acute Toxicity - Health Reproductive Toxicity - Health Skin Corrosion Irritation - Health Respiratory Skin Sensitization - Health Serious Eye Damage Eye Irritation - Health Specific Target Organ Toxicity	Sulfuric Acid	40 %	✓	7664-93-9

Hazardous Materials And Wastes Inventory Matrix Report

CERS Business/Org. **Marsh Landing Generating Station**
Facility Name **Marsh Landing Generating Station**
3201C Wilbur Ave, Antioch 94509

Chemical Location **CEMS SHELTERS UNITS 1-4**

CERS ID **10480876**
Facility ID **07-000-774528**
Status **Submitted** on 2/15/2021 1:58 PM

DOT Code/Fire Haz. Class	Common Name	Unit	Quantities: Max. Daily	Quantities: Largest Cont.	Quantities: Avg. Daily	Annual Waste Amount	Federal Hazard Categories	Hazardous Components (For mixture only): Component Name	% Wt	EHS	CAS No.
DOT: 2.2 - Nonflammable Gases	**NITROGEN** CAS No 7727-37-9 Map: 2 Grid: E3-E8	**Cu. Feet** State Gas Type Pure	**3600** Storage Container Cylinder Days on Site: 365	**300**	3000 Pressue > Ambient Temperature Ambient	Waste Code	- Physical Gas Under Pressure - Physical Explosive - Health Simple Asphyxiant				
	NITROGEN, NITRIC OXIDE CAS No Map: 2 Grid: E3-E8	**Cu. Feet** State Gas Type Mixture	**3000** Storage Container Cylinder Days on Site: 365	**150**	1800 Pressue > Ambient Temperature Ambient	Waste Code	- Physical Gas Under Pressure - Physical Explosive - Health Simple Asphyxiant	NITROGEN NITRIC OXIDE NITROGEN OXIDES	100 % 	 ✓ 	7727-37-9 10102-43-9 10102-44-0
	NITROGEN, NITRIC OXIDE, CARBON MONOXIDE CAS No Map: 2 Grid: E3-E8	**Cu. Feet** State Gas Type Mixture	**3000** Storage Container Cylinder Days on Site: 365	**150**	1800 Pressue > Ambient Temperature Ambient	Waste Code	- Physical Gas Under Pressure - Physical Explosive - Health Simple Asphyxiant	NITROGEN NITRIC OXIDE CARBON MONOXIDE NITROGEN OXIDES	100 % 	 ✓ 	7727-37-9 10102-43-9 630-08-0 10102-44-0
	NITROGEN, OXYGEN, CARBON MONOXIDE CAS No Map: 2 Grid: E3-8	**Cu. Feet** State Gas Type Mixture	**3750** Storage Container Cylinder Days on Site: 365	**150**	3150 Pressue > Ambient Temperature Ambient	Waste Code	- Physical Gas Under Pressure - Physical Explosive - Health Reproductive Toxicity - Health Simple Asphyxiant	NITROGEN OXYGEN CARBON MONOXIDE	89 % 10 % 0 %		7727-37-9 7782-44-7 630-08-0
	NITROGEN, CARBON MONOXIDE CAS No Map: 2 Grid: E3-8	**Cu. Feet** State Gas Type Mixture	**750** Storage Container Cylinder Days on Site: 365	**150**	600 Pressue > Ambient Temperature Ambient	Waste Code	- Physical Gas Under Pressure - Physical Explosive - Health Simple Asphyxiant	NITROGEN CARBON MONOXIDE	100 % 		7727-37-9 630-08-0

Hazardous Materials And Wastes Inventory Matrix Report

CERS Business/Org. **Marsh Landing Generating Station**
Facility Name **Marsh Landing Generating Station**
3201C Wilbur Ave, Antioch 94509

Chemical Location **COMPRESSOR BUILDING**

CERS ID **10480876**
Facility ID **07-000-774528**
Status **Submitted** on 2/15/2021 1:58 PM

DOT Code/Fire Haz. Class	Common Name	Unit	Quantities: Max. Daily	Quantities: Largest Cont.	Quantities: Avg. Daily	Annual Waste Amount	Federal Hazard Categories	Hazardous Components (For mixture only): Component Name	% Wt	EHS	CAS No.
DOT: 2.1 - Flammable Gases Unstable (Reactive), Class 2, Flammable Gas	**ACETYLENE** CAS No 74-86-2 Map: 2 Grid: C6	**Cu. Feet** State: Gas Type: Pure	**764** Storage Container: Cylinder Days on Site: 365	**382**	764 Pressue: > Ambient Temperature: Ambient	Waste Code	- Physical Flammable - Physical Gas Under Pressure - Physical Explosive - Health Simple Asphyxiant				
DOT: 2.2 - Nonflammable Gases Oxidizing, Class 2	**OXYGEN** CAS No 7782-44-7 Map: 2 Grid: C6	**Cu. Feet** State: Gas Type: Pure	**843** Storage Container: Cylinder Days on Site: 365	**281**	800 Pressue: > Ambient Temperature: Ambient	Waste Code	- Physical Gas Under Pressure - Physical Oxidizer				

Hazardous Materials And Wastes Inventory Matrix Report

CERS Business/Org. **Marsh Landing Generating Station**
Facility Name **Marsh Landing Generating Station**
3201C Wilbur Ave, Antioch 94509

Chemical Location **CONTROL OIL RESERVOIRS**

CERS ID **10480876**
Facility ID **07-000-774528**
Status **Submitted** on 2/15/2021 1:58 PM

DOT Code/Fire Haz. Class	Common Name	Unit	Quantities: Max. Daily	Largest Cont.	Avg. Daily	Annual Waste Amount	Federal Hazard Categories	Hazardous Components (For mixture only): Component Name	% Wt	EHS	CAS No.
	LUBE OIL	**Gallons**	**420**	**140**	420		- Health Hazard Not Otherwise Classified				
	CAS No	State: Liquid	Storage Container: Other		Pressue: Ambient	Waste Code					
	Map: 2 Grid: F3-F7	Type: Mixture	Days on Site: 365		Temperature: Ambient						

Hazardous Materials And Wastes Inventory Matrix Report

CERS Business/Org. **Marsh Landing Generating Station**
Facility Name **Marsh Landing Generating Station**
3201C Wilbur Ave, Antioch 94509

Chemical Location **DAIS UNIT AIR COMPRESSORS**

CERS ID **10480876**
Facility ID **07-000-774528**
Status **Submitted** on 2/15/2021 1:58 PM

DOT Code/Fire Haz. Class	Common Name	Unit	Quantities: Max. Daily	Quantities: Largest Cont.	Quantities: Avg. Daily	Annual Waste Amount	Federal Hazard Categories	Hazardous Components (For mixture only): Component Name	% Wt	EHS	CAS No.
	ULTRA COOLANT	**Gallons**	**60**	**15**	60		- Health Hazard	Polypropylene glycol	65 %		
	CAS No	State: Liquid	Storage Container: Other		Pressue: Ambient	Waste Code	Not Otherwise Classified	Pentaerythritol ester	27 %		
								Alkylated diphenylamine	5 %		68411-46-1
	Map: 2 Grid: F3-F8	Type: Mixture	Days on Site: 365		Temperature: > Ambient			Barium dinonyl-naphthalene sulfonate	0 %		25619-56-1
	COMPRESSOR OIL	**Gallons**	**100**	**30**	80		- Health Hazard	Base Oil	90 %		
	CAS No	State: Liquid	Storage Container: Other		Pressue: Ambient	Waste Code	Not Otherwise Classified	Dialkyl Thiophosphate Ester	1 %		268567-32-4
								Alkaryl amine	2 %		68411-46-1
	Map: 2 Grid: F3-F8	Type: Mixture	Days on Site: 365		Temperature: Ambient						

Hazardous Materials And Wastes Inventory Matrix Report

CERS Business/Org. **Marsh Landing Generating Station**
Facility Name **Marsh Landing Generating Station**
3201C Wilbur Ave, Antioch 94509

Chemical Location **EMERGENCY GENERATOR**

CERS ID **10480876**
Facility ID **07-000-774528**
Status **Submitted** on 2/15/2021 1:58 PM

DOT Code/Fire Haz. Class	Common Name	Unit	Quantities: Max. Daily	Quantities: Largest Cont.	Quantities: Avg. Daily	Annual Waste Amount	Federal Hazard Categories	Hazardous Components (For mixture only): Component Name	% Wt	EHS	CAS No.
DOT: 3 - Flammable and Combustible Liquids Combustible Liquid, Class II	**DIESEL FUEL NO. 2** CAS No 68476-34-6 Map: 2 Grid: G6	**Gallons** State Liquid Type Mixture	**1100** Storage Container Aboveground Tank Days on Site: 365	**1100**	800 Pressue Ambient Temperature Ambient	Waste Code	- Physical Flammable - Health Carcinogenicity - Health Acute Toxicity - Health Skin Corrosion Irritation - Health Respiratory Skin Sensitization - Health Specific Target Organ Toxicity - Health Aspiration Hazard	DIESEL FUEL NO. 2 RENEWABLE DIESEL FATTY ACID METHYL ESTERS NAPHTHALENE	98 % 10 % 3 % 0 %		68476-34-6 91-20-3

Hazardous Materials And Wastes Inventory Matrix Report

CERS Business/Org. **Marsh Landing Generating Station**
Facility Name **Marsh Landing Generating Station**
3201C Wilbur Ave, Antioch 94509

Chemical Location **FIRE PUMP BUILDING**

CERS ID **10480876**
Facility ID **07-000-774528**
Status **Submitted** on 2/15/2021 1:58 PM

DOT Code/Fire Haz. Class	Common Name	Unit	Quantities: Max. Daily	Quantities: Largest Cont.	Quantities: Avg. Daily	Annual Waste Amount	Federal Hazard Categories	Hazardous Components (For mixture only): Component Name	% Wt	EHS	CAS No.
DOT: 3 - Flammable and Combustible Liquids Combustible Liquid, Class II	**DIESEL FUEL NO. 2** CAS No 68476-34-6 Map: 2 Grid: C2	**Gallons** State Liquid Type Mixture	**359** Storage Container Tank Inside Building Days on Site: 365	**359**	280 Pressue Ambient Temperature Ambient	Waste Code	- Physical Flammable - Health Carcinogenicity - Health Acute Toxicity - Health Skin Corrosion Irritation - Health Respiratory Skin Sensitization - Health Specific Target Organ Toxicity - Health Aspiration Hazard	DIESEL FUEL NO. 2 RENEWABLE DIESEL FATTY ACID METHYL ESTERS NAPHTHALENE	98 % 10 % 3 % 0 %		68476-34-6 91-20-3
DOT: 8 - Corrosives (Liquids and Solids) Corrosive, Water Reactive, Class 2, Toxic, Oxidizing, Class 1	**LEAD ACID BATTERIES** CAS No ✔EHS Map: 2 Grid: C2	**Pounds** State Liquid Type Mixture	**100** Storage Container Other Days on Site: 365	**50**	100 Pressue Ambient Temperature Ambient	Waste Code	- Physical Flammable - Physical Explosive - Physical Corrosive To Metal - Health Carcinogenicity - Health Acute Toxicity - Health Reproductive Toxicity - Health Skin Corrosion Irritation - Health Respiratory Skin Sensitization - Health Serious Eye Damage Eye Irritation - Health Specific Target Organ Toxicity	Sulfuric Acid	40 %	✔	7664-93-9

Hazardous Materials And Wastes Inventory Matrix Report

CERS Business/Org. **Marsh Landing Generating Station**
Facility Name **Marsh Landing Generating Station**
3201C Wilbur Ave, Antioch 94509

Chemical Location **FUEL GAS CHROMATOGRAPH**

CERS ID **10480876**
Facility ID **07-000-774528**
Status **Submitted** on 2/15/2021 1:58 PM

DOT Code/Fire Haz. Class	Common Name	Unit	Quantities: Max. Daily	Quantities: Largest Cont.	Quantities: Avg. Daily	Annual Waste Amount	Federal Hazard Categories	Hazardous Components (For mixture only): Component Name	% Wt	EHS	CAS No.
DOT: 2.2 - Nonflammable Gases	**COMPRESSED AIR ZERO** CAS No Map: 2 Grid: C6	**Cu. Feet** State: Gas Type: Mixture	**600** Storage Container: Cylinder Days on Site: 365	**300**	300 Pressue: > Ambient Temperature: Ambient	Waste Code	- Physical Gas Under Pressure				
DOT: 2.2 - Nonflammable Gases	**HELIUM** CAS No 7440-59-7 Map: 2 Grid: C6	**Cu. Feet** State: Gas Type: Pure	**600** Storage Container: Cylinder Days on Site: 365	**300**	600 Pressue: > Ambient Temperature: Ambient	Waste Code	- Physical Gas Under Pressure - Physical Explosive - Health Simple Asphyxiant				
DOT: 2.1 - Flammable Gases Flammable Gas	**METHANE MIXTURE CHROMATOGRAPH CAL GAS** CAS No Map: 2 Grid: C6	**Cu. Feet** State: Gas Type: Mixture	**500** Storage Container: Cylinder Days on Site: 365	**250**	250 Pressue: > Ambient Temperature: Ambient	Waste Code	- Physical Flammable - Physical Gas Under Pressure - Physical Explosive - Health Simple Asphyxiant	ETHANE METHANE PROPANE NITROGEN	100 % 100 % 100 % 10 %		74-84-0 74-82-8 74-98-6 7727-37-9
DOT: 2.2 - Nonflammable Gases	**NITROGEN** CAS No 7727-37-9 Map: 2 Grid: C6	**Cu. Feet** State: Gas Type: Pure	**600** Storage Container: Cylinder Days on Site: 365	**300**	300 Pressue: > Ambient Temperature: Ambient	Waste Code	- Physical Gas Under Pressure - Physical Explosive - Health Simple Asphyxiant				
DOT: 2.1 - Flammable Gases Flammable Gas	**HYDROGEN** CAS No 1333-74-0 Map: 2 Grid: C6	**Cu. Feet** State: Gas Type: Pure	**600** Storage Container: Cylinder Days on Site: 365	**300**	300 Pressue: > Ambient Temperature: Ambient	Waste Code	- Physical Flammable - Physical Gas Under Pressure - Physical Explosive - Health Simple Asphyxiant				

Hazardous Materials And Wastes Inventory Matrix Report

CERS Business/Org. **Marsh Landing Generating Station**
Facility Name **Marsh Landing Generating Station**
3201C Wilbur Ave, Antioch 94509

Chemical Location **FUEL GAS COMPRESSORS**

CERS ID **10480876**
Facility ID **07-000-774528**
Status **Submitted** on 2/15/2021 1:58 PM

DOT Code/Fire Haz. Class	Common Name	Unit	Quantities: Max. Daily	Largest Cont.	Avg. Daily	Annual Waste Amount	Federal Hazard Categories	Hazardous Components (For mixture only): Component Name	% Wt	EHS	CAS No.
	LUBE OIL	**Gallons**	**315**	**105**	315		- Health Hazard Not Otherwise Classified				
	CAS No	State: Liquid	Storage Container: Aboveground Tank		Pressue: Ambient	Waste Code					
	Map: 2 Grid: C6	Type: Mixture	Days on Site: 365		Temperature: Ambient						

Hazardous Materials And Wastes Inventory Matrix Report

CERS Business/Org. **Marsh Landing Generating Station**
Facility Name **Marsh Landing Generating Station**
3201C Wilbur Ave, Antioch 94509

Chemical Location **FUEL GAS CONDITIONING SKID AND FILTER/SEPARATOR**

CERS ID **10480876**
Facility ID **07-000-774528**
Status **Submitted** on 2/15/2021 1:58 PM

DOT Code/Fire Haz. Class	Common Name	Unit	Quantities: Max. Daily	Quantities: Largest Cont.	Quantities: Avg. Daily	Annual Waste Amount	Federal Hazard Categories	Hazardous Components (For mixture only): Component Name	% Wt	EHS	CAS No.
	NATURAL GAS CONDENSATE	**Gallons**	**561**	**211**	5		- Physical Flammable	Propane	50 %		74-98-6
	CAS No	State: Liquid	Storage Container: Aboveground Tank		Pressue: Ambient	Waste Code	- Health Carcinogenicity	Ethane	30 %		74-84-0
	Map: 2 Grid: C6	Type: Mixture	Days on Site: 365		Temperature: Ambient		- Health Acute Toxicity	n-Pentane	15 %		109-66-0
							- Health Specific Target Organ Toxicity	n-Hexane	8 %		110-54-3
							- Health Aspiration Hazard	Heptane	6 %		142-82-5
							- Health Germ Cell Mutagenicity				

Hazardous Materials And Wastes Inventory Matrix Report

CERS Business/Org. **Marsh Landing Generating Station**
Facility Name **Marsh Landing Generating Station**
3201C Wilbur Ave, Antioch 94509

Chemical Location **FUEL GAS DEW POINT HEATERS**

CERS ID **10480876**
Facility ID **07-000-774528**
Status **Submitted** on 2/15/2021 1:58 PM

DOT Code/Fire Haz. Class	Common Name	Unit	Quantities: Max. Daily	Quantities: Largest Cont.	Quantities: Avg. Daily	Annual Waste Amount	Federal Hazard Categories	Hazardous Components (For mixture only): Component Name	% Wt	EHS	CAS No.
	PROPYLENE GLYCOL 30%	**Gallons**	**18932**	**9466**	18932		- Health Hazard	PROPYLENE GLYCOL	96 %		57-55-6
	CAS No 57-55-6	State Liquid	Storage Container Aboveground Tank		Pressue Ambient	Waste Code	Not Otherwise Classified	WATER	4 %		7732-18-5
	Map: 2 Grid: D6	Type Mixture	Days on Site: 365		Temperature > Ambient						

Hazardous Materials And Wastes Inventory Matrix Report

CERS Business/Org. **Marsh Landing Generating Station**
Facility Name **Marsh Landing Generating Station**
3201C Wilbur Ave, Antioch 94509

Chemical Location **GENERATOR AIR COMPRESSOR, SHOP COMPRESSOR**

CERS ID **10480876**
Facility ID **07-000-774528**
Status **Submitted** on 2/15/2021 1:58 PM

DOT Code/Fire Haz. Class	Common Name	Unit	Quantities: Max. Daily	Largest Cont.	Avg. Daily	Annual Waste Amount	Federal Hazard Categories	Hazardous Components (For mixture only): Component Name	% Wt	EHS	CAS No.
	COMPRESSOR OIL	**Gallons**	**5**	**2**	5		- Health Hazard	Base Oil	90 %		
	CAS No	State: Liquid	Storage Container: Other		Pressue: Ambient	Waste Code	Not Otherwise Classified	Dialkyl Thiophosphate Ester	1 %		268567-32-4
	Map: 2 Grid: G3-G8, C3	Type: Mixture	Days on Site: 365		Temperature: Ambient			Alkaryl amine	2 %		68411-46-1

Hazardous Materials And Wastes Inventory Matrix Report

CERS Business/Org. **Marsh Landing Generating Station**
Facility Name **Marsh Landing Generating Station**
3201C Wilbur Ave, Antioch 94509

Chemical Location **HAZARDOUS MATERIALS STORAGE**

CERS ID **10480876**
Facility ID **07-000-774528**
Status **Submitted** on 2/15/2021 1:58 PM

DOT Code/Fire Haz. Class	Common Name	Unit	Quantities: Max. Daily	Largest Cont.	Avg. Daily	Annual Waste Amount	Federal Hazard Categories	Hazardous Components (For mixture only): Component Name	% Wt	EHS	CAS No.
	LUBRICATING AND HYDRAULIC OILS CAS No Map: 2 Grid: H12	**Gallons** State: Liquid Type: Mixture	**275** Storage Container: Steel Drum, Plastic/Non-metalic Drum Days on Site: 365	**55**	275 Pressue: Ambient Temperature: Ambient	Waste Code	- Health Hazard Not Otherwise Classified				
DOT: 3 - Flammable and Combustible Liquids Combustible Liquid, Class II	**PAINT** CAS No 8052-41-3 Map: 2 Grid: H12	**Gallons** State: Liquid Type: Mixture	**15** Storage Container: Other Days on Site: 365	**5**	12 Pressue: Ambient Temperature: Ambient	Waste Code	- Health Carcinogenicity - Health Skin Corrosion Irritation - Health Respiratory Skin Sensitization - Health Serious Eye Damage Eye Irritation - Health Specific Target Organ Toxicity				
	COMPRESSOR OIL CAS No Map: 2 Grid: H12	**Gallons** State: Liquid Type: Mixture	**15** Storage Container: Plastic Bottle or Jug Days on Site: 365	**5**	7 Pressue: Ambient Temperature: Ambient	Waste Code	- Health Hazard Not Otherwise Classified	Base Oil Alkaryl amine Dialkyl Thiophosphate Ester	90 % 2 % 1 %		 68411-46-1 268567-32-4

Hazardous Materials And Wastes Inventory Matrix Report

CERS Business/Org. **Marsh Landing Generating Station**
Facility Name **Marsh Landing Generating Station**
3201C Wilbur Ave, Antioch 94509

Chemical Location **HAZARDOUS WASTE STORAGE**

CERS ID **10480876**
Facility ID **07-000-774528**
Status **Submitted** on 2/15/2021 1:58 PM

DOT Code/Fire Haz. Class	Common Name	Unit	Quantities: Max. Daily	Quantities: Largest Cont.	Quantities: Avg. Daily	Annual Waste Amount	Federal Hazard Categories	Hazardous Components (For mixture only): Component Name	% Wt	EHS	CAS No.
	USED OIL CAS No Map: 2 Grid: C4	**Gallons** State: Liquid Type: Waste	**110** Storage Container: Steel Drum Days on Site: 365	**55**	30 Pressue: Ambient Temperature: Ambient	1000 Waste Code: 221	- Health Carcinogenicity - Health Reproductive Toxicity - Health Skin Corrosion Irritation - Health Respiratory Skin Sensitization - Health Serious Eye Damage Eye Irritation - Health Specific Target Organ Toxicity - Health Aspiration Hazard - Health Germ Cell Mutagenicity	Lubricating Oils, used Water/Solids	90 % 10 %		70514-12-4 7732-18-5
	OILY RAGS AND SPILL DEBRIS CAS No Map: 2 Grid: C4	**Pounds** State: Solid Type: Waste	**1000** Storage Container: Steel Drum, Box Days on Site: 365	**500**	250 Pressue: Ambient Temperature: Ambient	1900 Waste Code: 352	- Physical Flammable - Physical SelfHeating - Health Carcinogenicity - Health Reproductive Toxicity - Health Skin Corrosion Irritation - Health Respiratory Skin Sensitization - Health Serious Eye Damage Eye Irritation - Health Specific Target Organ Toxicity - Health Germ Cell Mutagenicity				

Hazardous Materials And Wastes Inventory Matrix Report

CERS Business/Org. **Marsh Landing Generating Station**
Facility Name **Marsh Landing Generating Station**
3201C Wilbur Ave, Antioch 94509

Chemical Location **LAYDOWN YARD**

CERS ID **10480876**
Facility ID **07-000-774528**
Status **Submitted** on 2/15/2021 1:58 PM

DOT Code/Fire Haz. Class	Common Name	Unit	Quantities: Max. Daily	Quantities: Largest Cont.	Quantities: Avg. Daily	Annual Waste Amount	Federal Hazard Categories	Hazardous Components (For mixture only): Component Name	% Wt	EHS	CAS No.
DOT: 2.2 - Nonflammable Gases	**NITROGEN** CAS No 7727-37-9 Map: 2 Grid: C11	**Cu. Feet** State Gas Type Pure	**3000** Storage Container Cylinder Days on Site: 365	**500**	2000 Pressue > Ambient Temperature Ambient	Waste Code	- Physical Gas Under Pressure - Physical Explosive - Health Simple Asphyxiant				

Hazardous Materials And Wastes Inventory Matrix Report

CERS Business/Org. **Marsh Landing Generating Station**
Facility Name **Marsh Landing Generating Station**
3201C Wilbur Ave, Antioch 94509

Chemical Location **MACHINE SHOP**

CERS ID **10480876**
Facility ID **07-000-774528**
Status **Submitted** on 2/15/2021 1:58 PM

DOT Code/Fire Haz. Class	Common Name	Unit	Quantities: Max. Daily	Largest Cont.	Avg. Daily	Annual Waste Amount	Federal Hazard Categories	Hazardous Components (For mixture only): Component Name	% Wt	EHS	CAS No.
	LUBRICATING AND HYDRAULIC OILS CAS No Map: 2 Grid: C4	**Gallons** State: Liquid Type: Mixture	**40** Storage Container: Plastic Bottle or Jug Days on Site: 365	**5**	35 Pressue: Ambient Temperature: Ambient	Waste Code	- Health Hazard Not Otherwise Classified				
DOT: 3 - Flammable and Combustible Liquids Combustible Liquid, Class II	**DIESEL FUEL NO. 2** CAS No 68476-34-6 Map: 2 Grid: C4	**Gallons** State: Liquid Type: Mixture	**10** Storage Container: Other Days on Site: 365	**5**	10 Pressue: Ambient Temperature: Ambient	Waste Code	- Physical Flammable - Health Carcinogenicity - Health Acute Toxicity - Health Skin Corrosion Irritation - Health Respiratory Skin Sensitization - Health Specific Target Organ Toxicity - Health Aspiration Hazard	DIESEL FUEL NO. 2 RENEWABLE DIESEL FATTY ACID METHYL ESTERS NAPHTHALENE	98 % 10 % 3 % 0 %		68476-34-6 91-20-3

Hazardous Materials And Wastes Inventory Matrix Report

CERS Business/Org. **Marsh Landing Generating Station**
Facility Name **Marsh Landing Generating Station**
3201C Wilbur Ave, Antioch 94509

Chemical Location **MAIN AIR COMPRESSORS**

CERS ID **10480876**
Facility ID **07-000-774528**
Status **Submitted** on 2/15/2021 1:58 PM

DOT Code/Fire Haz. Class	Common Name	Unit	Quantities: Max. Daily	Quantities: Largest Cont.	Quantities: Avg. Daily	Annual Waste Amount	Federal Hazard Categories	Hazardous Components (For mixture only): Component Name	% Wt	EHS	CAS No.
	COMPRESSOR OIL	**Gallons**	**14**	**5**	12		- Health Hazard	Base Oil	90 %		
	CAS No	State: Liquid	Storage Container: Other		Pressue: Ambient	Waste Code	Not Otherwise Classified	Dialkyl Thiophosphate Ester	1 %		268567-32-4
								Alkaryl amine	2 %		68411-46-1
	Map: 2 Grid: D6	Type: Mixture	Days on Site: 365		Temperature: Ambient						

Hazardous Materials And Wastes Inventory Matrix Report

CERS Business/Org. **Marsh Landing Generating Station**
Facility Name **Marsh Landing Generating Station**
3201C Wilbur Ave, Antioch 94509

Chemical Location **OIL WATER SEPARATORS NEAR U1 SWITCHYARD & NORTH OF UNITS 2&3**

CERS ID **10480876**
Facility ID **07-000-774528**
Status **Submitted** on 2/15/2021 1:58 PM

DOT Code/Fire Haz. Class	Common Name	Unit	Quantities Max. Daily	Largest Cont.	Avg. Daily	Annual Waste Amount	Federal Hazard Categories	Hazardous Components (For mixture only) Component Name	% Wt	EHS	CAS No.
	OILY WATER	**Gallons**	**3000**	**2000**	3000		- Health Carcinogenicity - Health Reproductive Toxicity - Health Skin Corrosion Irritation - Health Respiratory Skin Sensitization - Health Serious Eye Damage Eye Irritation - Health Specific Target Organ Toxicity - Health Aspiration Hazard - Health Germ Cell Mutagenicity				
	CAS No	State: Liquid	Storage Container: Other		Pressue: Ambient	Waste Code					
	Map: 2 Grid: D6, H4	Type: Mixture	Days on Site: 365		Temperature: Ambient						

Hazardous Materials And Wastes Inventory Matrix Report

CERS Business/Org. **Marsh Landing Generating Station**
Facility Name **Marsh Landing Generating Station**
3201C Wilbur Ave, Antioch 94509

Chemical Location
PORTABLE TANKS AT COVERED PARKING LOT AND TURBINES (as needed)

CERS ID **10480876**
Facility ID **07-000-774528**
Status **Submitted** on 2/15/2021 1:58 PM

DOT Code/Fire Haz. Class	Common Name	Unit	Quantities Max. Daily	Largest Cont.	Avg. Daily	Annual Waste Amount	Federal Hazard Categories	Hazardous Components (For mixture only) Component Name	% Wt	EHS	CAS No.
	CLEANBLADE GTC 1000	**Gallons**	**575**	**400**	50		- Health Carcinogenicity	FATTY ALCOLHOL ALKOXYLATE	15 %		69227-21-0
	CAS No	State	Storage Container		Pressue	Waste Code	- Health Reproductive Toxicity	PROPYLENE GLYCOL N-BUTYL ETHER	5 %		5131-66-8
	Map: 2 Grid: D12, F3-F8	Liquid	Tank Wagon		Ambient		- Health Skin Corrosion Irritation	SEBACIC ACID	2 %		70103-35-4
		Type			Temperature		- Health Respiratory Skin Sensitization	DIETHANOLAMINE	1 %		111-42-2
		Mixture	Days on Site: 365		Ambient		- Health Serious Eye Damage Eye Irritation				
							- Health Specific Target Organ Toxicity				

Hazardous Materials And Wastes Inventory Matrix Report

CERS Business/Org. **Marsh Landing Generating Station**
Facility Name **Marsh Landing Generating Station**
3201C Wilbur Ave, Antioch 94509

Chemical Location **REFUELING TRUCK**

CERS ID **10480876**
Facility ID **07-000-774528**
Status **Submitted** on 2/15/2021 1:58 PM

DOT Code/Fire Haz. Class	Common Name	Unit	Quantities: Max. Daily	Largest Cont.	Avg. Daily	Annual Waste Amount	Federal Hazard Categories	Hazardous Components (For mixture only): Component Name	% Wt	EHS	CAS No.
DOT: 3 - Flammable and Combustible Liquids Combustible Liquid, Class II	**DIESEL FUEL NO. 2** CAS No 68476-34-6 Map: 2 Grid: D12	**Gallons** State Liquid Type Mixture	**50** Storage Container Other Days on Site: 365	**50**	25 Pressue Ambient Temperature Ambient	Waste Code	- Physical Flammable - Health Carcinogenicity - Health Acute Toxicity - Health Skin Corrosion Irritation - Health Respiratory Skin Sensitization - Health Specific Target Organ Toxicity - Health Aspiration Hazard	DIESEL FUEL NO. 2 RENEWABLE DIESEL FATTY ACID METHYL ESTERS NAPHTHALENE	98 % 10 % 3 % 0 %		68476-34-6 91-20-3
DOT: 3 - Flammable and Combustible Liquids Flammable Liquid, Class I-B	**GASOLINE (Unleaded)** CAS No Map: 2 Grid: D12	**Gallons** State Liquid Type Mixture	**50** Storage Container Other Days on Site: 365	**50**	25 Pressue Ambient Temperature Ambient	Waste Code	- Physical Flammable - Health Carcinogenicity - Health Reproductive Toxicity - Health Skin Corrosion Irritation - Health Serious Eye Damage Eye Irritation - Health Specific Target Organ Toxicity - Health Aspiration Hazard - Health Germ Cell Mutagenicity	GASOLINE TOLUENE XYLENE PENTANE BUTANE	100 % 20 % 8 % 7 % 6 %		86290-81-5 108-88-3 1330-20-7 540-84-1 106-97-8

Hazardous Materials And Wastes Inventory Matrix Report

CERS Business/Org. **Marsh Landing Generating Station**
Facility Name **Marsh Landing Generating Station**
3201C Wilbur Ave, Antioch 94509

Chemical Location **SPARE TRANSFORMER NORTH OF WAREHOUSE**

CERS ID **10480876**
Facility ID **07-000-774528**
Status **Submitted** on 2/15/2021 1:58 PM

DOT Code/Fire Haz. Class	Common Name	Unit	Quantities: Max. Daily	Quantities: Largest Cont.	Quantities: Avg. Daily	Annual Waste Amount	Federal Hazard Categories	Hazardous Components (For mixture only): Component Name	% Wt	EHS	CAS No.
DOT: 2.2 - Nonflammable Gases	**NITROGEN** CAS No 7727-37-9 Map: 2 Grid: G11	**Cu. Feet** State Gas Type Pure	**300** Storage Container Cylinder Days on Site: 365	**150**	150 Pressue > Ambient Temperature Ambient	Waste Code	- Physical Gas Under Pressure - Physical Explosive - Health Simple Asphyxiant				

Hazardous Materials And Wastes Inventory Matrix Report

CERS Business/Org. **Marsh Landing Generating Station**
Facility Name **Marsh Landing Generating Station**
3201C Wilbur Ave, Antioch 94509

Chemical Location **SWITCHYARD**

CERS ID **10480876**
Facility ID **07-000-774528**
Status **Submitted** on 2/15/2021 1:58 PM

DOT Code/Fire Haz. Class	Common Name	Unit	Quantities: Max. Daily	Quantities: Largest Cont.	Quantities: Avg. Daily	Annual Waste Amount	Federal Hazard Categories	Hazardous Components (For mixture only): Component Name	% Wt	EHS	CAS No.
	HYDRAULIC OIL CAS No Map: 2 Grid: H3-H7	**Gallons** State: Liquid Type: Mixture	**90** Storage Container: Aboveground Tank Days on Site: 365	**15**	90 Pressue: Ambient Temperature: Ambient	Waste Code	- Health Acute Toxicity - Health Skin Corrosion Irritation - Health Aspiration Hazard	Gas Oils Butylated hydroxytoluene	85 % 0 %		64742-79-6 128-37-0
DOT: 2.2 - Nonflammable Gases	**SULFUR HEXAFLUORIDE** CAS No 2551-62-4 Map: 2 Grid: H3-H7	**Cu. Feet** State: Gas Type: Pure	**3015** Storage Container: Other Days on Site: 365	**503**	3015 Pressue: > Ambient Temperature: Ambient	Waste Code	- Physical Gas Under Pressure - Physical Explosive - Health Simple Asphyxiant				

Hazardous Materials And Wastes Inventory Matrix Report

CERS Business/Org. **Marsh Landing Generating Station**
Facility Name **Marsh Landing Generating Station**
3201C Wilbur Ave, Antioch 94509

Chemical Location **TA FANS**

CERS ID **10480876**
Facility ID **07-000-774528**
Status **Submitted** on 2/15/2021 1:58 PM

DOT Code/Fire Haz. Class	Common Name	Unit	Quantities: Max. Daily	Quantities: Largest Cont.	Quantities: Avg. Daily	Annual Waste Amount	Federal Hazard Categories	Hazardous Components (For mixture only): Component Name	% Wt	EHS	CAS No.
	LUBE OIL	**Gallons**	**864**	**108**	680		- Health Hazard Not Otherwise Classified				
	CAS No	State: Liquid	Storage Container: Other		Pressue: Ambient	Waste Code					
	Map: 2 Grid: E3-E7	Type: Mixture	Days on Site: 365		Temperature: Ambient						

Hazardous Materials And Wastes Inventory Matrix Report

CERS Business/Org. **Marsh Landing Generating Station**
Facility Name **Marsh Landing Generating Station**
3201C Wilbur Ave, Antioch 94509

Chemical Location **Transformers Throughout (GSU, AUX, and SPARE)**

CERS ID **10480876**
Facility ID **07-000-774528**
Status **Submitted** on 2/15/2021 1:58 PM

DOT Code/Fire Haz. Class	Common Name	Unit	Quantities: Max. Daily	Quantities: Largest Cont.	Quantities: Avg. Daily	Annual Waste Amount	Federal Hazard Categories	Hazardous Components (For mixture only): Component Name	% Wt	EHS	CAS No.
	MINERAL OIL, HYTRANS 61	**Gallons**	**87893**	**15224**	87893		- Health	DISTILLATES, PETROLEUM	99 %		64742-53-6
	CAS No	State: Liquid; Storage Container: Other			Pressue: Ambient	Waste Code	Respiratory Skin Sensitization - Health Serious Eye Damage Eye Irritation - Health Aspiration Hazard	2, 6-DI-BUTYL-P-CRESOL (BHT)	1 %		128-37-0
	Map: 2 Grid: G3-G7, G11	Type: Mixture; Days on Site: 365			Temperature: Ambient						

Hazardous Materials And Wastes Inventory Matrix Report

CERS Business/Org. **Marsh Landing Generating Station**
Facility Name **Marsh Landing Generating Station**
3201C Wilbur Ave, Antioch 94509

Chemical Location **TURBINES**

CERS ID **10480876**
Facility ID **07-000-774528**
Status **Submitted** on 2/15/2021 1:58 PM

DOT Code/Fire Haz. Class	Common Name	Unit	Quantities Max. Daily	Largest Cont.	Avg. Daily	Annual Waste Amount	Federal Hazard Categories	Hazardous Components (For mixture only) Component Name	% Wt	EHS	CAS No.
	LUBE OIL	**Gallons**	**26000**	**7244**	22000		- Health Hazard Not Otherwise Classified				
	CAS No 64742-54-7 Map: 2 Grid: F4-F8	State Liquid	Storage Container Other		Pressue Ambient	Waste Code					
		Type Mixture	Days on Site: 365		Temperature Ambient						

Hazardous Materials And Wastes Inventory Matrix Report

CERS Business/Org. **Marsh Landing Generating Station**
Facility Name **Marsh Landing Generating Station**
3201C Wilbur Ave, Antioch 94509

Chemical Location **TURBINES AND ELECTRICAL PACKAGES**

CERS ID **10480876**
Facility ID **07-000-774528**
Status **Submitted** on 2/15/2021 1:58 PM

DOT Code/Fire Haz. Class	Common Name	Unit	Quantities: Max. Daily	Quantities: Largest Cont.	Quantities: Avg. Daily	Annual Waste Amount	Federal Hazard Categories	Hazardous Components (For mixture only): Component Name	% Wt	EHS	CAS No.
	FM 200 FIRE SUPPRESSION CAS No 431-89-0 Map: 2 Grid: G3-G8	**Pounds** State Gas Type Pure	**5376** Storage Container Cylinder Days on Site: 365	**562**	5376 Pressue > Ambient Temperature Ambient	Waste Code	- Physical Gas Under Pressure - Physical Explosive - Health Simple Asphyxiant	1,1,1,2,3,3,3-HEPTAFLUROPROPANE NITROGEN	100 %		431-89-0 7727-37-9

Hazardous Materials And Wastes Inventory Matrix Report

CERS Business/Org. **Marsh Landing Generating Station**
Facility Name **Marsh Landing Generating Station**
3201C Wilbur Ave, Antioch 94509

Chemical Location **TURNING GEAR LUBE OIL**

CERS ID **10480876**
Facility ID **07-000-774528**
Status **Submitted** on 2/15/2021 1:58 PM

DOT Code/Fire Haz. Class	Common Name	Unit	Quantities: Max. Daily	Quantities: Largest Cont.	Quantities: Avg. Daily	Annual Waste Amount	Federal Hazard Categories	Hazardous Components (For mixture only): Component Name	% Wt	EHS	CAS No.
	LUBE OIL	**Gallons**	**76**	**19**	76		- Health Hazard Not Otherwise Classified				
	CAS No	State: Liquid	Storage Container: Other		Pressue: Ambient	Waste Code					
	Map: 2 Grid: G3-G8	Type: Mixture	Days on Site: 365		Temperature: Ambient						

Hazardous Materials And Wastes Inventory Matrix Report

CERS Business/Org. **Marsh Landing Generating Station**
Facility Name **Marsh Landing Generating Station**
3201C Wilbur Ave, Antioch 94509

Chemical Location **Various Air Receivers**

CERS ID **10480876**
Facility ID **07-000-774528**
Status **Submitted** on 2/15/2021 1:58 PM

DOT Code/Fire Haz. Class	Common Name	Unit	Quantities: Max. Daily	Quantities: Largest Cont.	Quantities: Avg. Daily	Annual Waste Amount	Federal Hazard Categories	Hazardous Components (For mixture only): Component Name	% Wt	EHS	CAS No.
DOT: 2.2 - Nonflammable Gases	**AIR**	**Cu. Feet**	**3753**	**2115**	2369		- Physical Gas Under Pressure				
	CAS No 132259-10-0	State Gas	Storage Container Aboveground Tank		Pressue > Ambient	Waste Code					
	Map: 2 Grid: C3-G8	Type Pure	Days on Site: 365		Temperature Ambient						

Hazardous Materials And Wastes Inventory Matrix Report

CERS Business/Org. **Marsh Landing Generating Station**
Facility Name **Marsh Landing Generating Station**
3201C Wilbur Ave, Antioch 94509

Chemical Location **WAREHOUSE**

CERS ID **10480876**
Facility ID **07-000-774528**
Status **Submitted** on 2/15/2021 1:58 PM

DOT Code/Fire Haz. Class	Common Name	Unit	Quantities: Max. Daily	Quantities: Largest Cont.	Quantities: Avg. Daily	Annual Waste Amount	Federal Hazard Categories	Hazardous Components (For mixture only): Component Name	% Wt	EHS	CAS No.
	NITROGEN, NITRIC OXIDE, CARBON MONOXIDE CAS No Map: 2 Grid: H12	**Cu. Feet** State: Gas Type: Mixture	**3000** Storage Container: Cylinder Days on Site: 365	**150**	1500 Pressue: > Ambient Temperature: Ambient	Waste Code	- Physical Gas Under Pressure - Physical Explosive - Health Simple Asphyxiant	NITROGEN NITRIC OXIDE CARBON MONOXIDE NITROGEN OXIDES	100 % 	 ✓ 	7727-37-9 10102-43-9 630-08-0 10102-44-0
	NITROGEN, NITRIC OXIDE CAS No Map: 2 Grid: H12	**Cu. Feet** State: Gas Type: Mixture	**3750** Storage Container: Cylinder Days on Site: 365	**150**	2700 Pressue: > Ambient Temperature: Ambient	Waste Code	- Physical Gas Under Pressure - Physical Explosive - Health Simple Asphyxiant	NITROGEN NITRIC OXIDE NITROGEN OXIDES	100 % 	 ✓ 	7727-37-9 10102-43-9 10102-44-7
	NITROGEN, OXYGEN, CARBON MONOXIDE CAS No Map: 2 Grid: H12	**Cu. Feet** State: Gas Type: Mixture	**3300** Storage Container: Cylinder Days on Site: 365	**150**	2250 Pressue: > Ambient Temperature: Ambient	Waste Code	- Physical Gas Under Pressure - Physical Explosive - Health Reproductive Toxicity - Health Simple Asphyxiant	NITROGEN OXYGEN CARBON MONOXIDE	89 % 10 % 0 %		7727-37-9 7782-44-7 630-08-0
DOT: 2.2 - Nonflammable Gases	**ULTRA ZERO COMPRESSED AIR** CAS No Map: 2 Grid: H12	**Cu. Feet** State: Gas Type: Mixture	**1200** Storage Container: Cylinder Days on Site: 365	**300**	900 Pressue: > Ambient Temperature: Ambient	Waste Code	- Physical Gas Under Pressure - Physical Explosive				
DOT: 2.1 - Flammable Gases Flammable Gas	**METHANE MIXTURE CHROMATOGRAPH CAL GAS** CAS No Map: 2 Grid: H12	**Cu. Feet** State: Gas Type: Mixture	**500** Storage Container: Cylinder Days on Site: 365	**150**	250 Pressue: > Ambient Temperature: Ambient	Waste Code	- Physical Flammable - Physical Gas Under Pressure - Physical Explosive - Health Simple Asphyxiant	ETHANE METHANE PROPANE NITROGEN	100 % 100 % 100 % 10 %		74-84-0 74-82-8 74-98-6 7727-37-9
DOT: 2.2 - Nonflammable Gases	**NITROGEN** CAS No 7727-37-9 Map: 2 Grid: H12	**Cu. Feet** State: Gas Type: Pure	**12000** Storage Container: Cylinder Days on Site: 365	**500**	5500 Pressue: > Ambient Temperature: Ambient	Waste Code	- Physical Gas Under Pressure - Physical Explosive - Health Simple Asphyxiant				

Hazardous Materials And Wastes Inventory Matrix Report

CERS Business/Org. **Marsh Landing Generating Station**
Facility Name **Marsh Landing Generating Station**
3201C Wilbur Ave, Antioch 94509

Chemical Location **WAREHOUSE**

CERS ID **10480876**
Facility ID **07-000-774528**
Status **Submitted** on 2/15/2021 1:58 PM

DOT Code/Fire Haz. Class	Common Name	Unit	Quantities: Max. Daily	Largest Cont.	Avg. Daily	Annual Waste Amount	Federal Hazard Categories	Hazardous Components (For mixture only): Component Name	% Wt	EHS	CAS No.
DOT: 8 - Corrosives (Liquids and Solids) Corrosive, Water Reactive, Class 2, Toxic, Oxidizing, Class 1	**LEAD ACID BATTERIES** CAS No ✓EHS Map: 2 Grid: H12	**Pounds** State: Liquid Type: Mixture	**300** Storage Container: Other Days on Site: 365	**300**	300 Pressure: Ambient Temperature: Ambient	Waste Code	- Physical Flammable - Physical Explosive - Physical Corrosive To Metal - Health Carcinogenicity - Health Acute Toxicity - Health Reproductive Toxicity - Health Skin Corrosion Irritation - Health Respiratory Skin Sensitization - Health Serious Eye Damage Eye Irritation - Health Specific Target Organ Toxicity	Sulfuric Acid	40 %	✓	7664-93-9
	NITROGEN, CARBON MONOXIDE CAS No Map: 2 Grid: H12	**Cu. Feet** State: Gas Type: Mixture	**750** Storage Container: Cylinder Days on Site: 365	**150**	450 Pressure: > Ambient Temperature: Ambient	Waste Code	- Physical Gas Under Pressure - Physical Explosive - Health Simple Asphyxiant	NITROGEN CARBON MONOXIDE	100 %		7727-37-9 630-08-0
DOT: 2.2 - Nonflammable Gases	**HELIUM** CAS No 7440-59-7 Map: 2 Grid: H12	**Cu. Feet** State: Gas Type: Pure	**1200** Storage Container: Cylinder Days on Site: 365	**300**	600 Pressure: > Ambient Temperature: Ambient	Waste Code	- Physical Gas Under Pressure - Physical Explosive - Health Simple Asphyxiant				
DOT: 2.1 - Flammable Gases Flammable Gas	**HYDROGEN** CAS No 1333-74-0 Map: 2 Grid: H12	**Cu. Feet** State: Gas Type: Pure	**900** Storage Container: Cylinder Days on Site: 365	**300**	600 Pressure: > Ambient Temperature: Ambient	Waste Code	- Physical Flammable - Physical Gas Under Pressure - Physical Explosive - Health Simple Asphyxiant				

Hazardous Materials And Wastes Inventory Matrix Report

CERS Business/Org. **Marsh Landing Generating Station**
Facility Name **Marsh Landing Generating Station**
3201C Wilbur Ave, Antioch 94509

Chemical Location **WAREHOUSE FLAMMABLE CABINET**

CERS ID **10480876**
Facility ID **07-000-774528**
Status **Submitted** on 2/15/2021 1:58 PM

DOT Code/Fire Haz. Class	Common Name	Unit	Quantities: Max. Daily	Quantities: Largest Cont.	Quantities: Avg. Daily	Annual Waste Amount	Federal Hazard Categories	Hazardous Components (For mixture only): Component Name	% Wt	EHS	CAS No.
DOT: 3 - Flammable and Combustible Liquids Combustible Liquid, Class II	**DIESEL FUEL NO. 2** CAS No 68476-34-6 Map: 2 Grid: H12	**Gallons** State Liquid Type Mixture	**10** Storage Container Other Days on Site: 365	**5**	10 Pressue Ambient Temperature Ambient	Waste Code	- Physical Flammable - Health Carcinogenicity - Health Acute Toxicity - Health Skin Corrosion Irritation - Health Respiratory Skin Sensitization - Health Specific Target Organ Toxicity - Health Aspiration Hazard	DIESEL FUEL NO. 2 RENEWABLE DIESEL FATTY ACID METHYL ESTERS NAPTHALENE	100 % 10 % 3 % 0 %		68476-34-6 91-20-3
DOT: 3 - Flammable and Combustible Liquids Flammable Liquid, Class I-B	**GASOLINE (Unleaded)** CAS No Map: 2 Grid: H12	**Gallons** State Liquid Type Mixture	**20** Storage Container Can Days on Site: 365	**5**	20 Pressue Ambient Temperature Ambient	Waste Code	- Physical Flammable - Health Carcinogenicity - Health Reproductive Toxicity - Health Skin Corrosion Irritation - Health Serious Eye Damage Eye Irritation - Health Specific Target Organ Toxicity - Health Aspiration Hazard - Health Germ Cell Mutagenicity	GASOLINE TOLUENE XYLENE PENTANE BUTANE	100 % 20 % 8 % 7 % 6 %		86290-81-5 108-88-3 1330-20-7 540-84-1 106-97-8
	ULTRA COOLANT CAS No Map: 2 Grid: H12	**Gallons** State Liquid Type Mixture	**16** Storage Container Plastic Bottle or Jug Days on Site: 365	**5.3**	11 Pressue Ambient Temperature Ambient	Waste Code	- Health Hazard Not Otherwise Classified	Polypropylene glycol Pentaerythritol ester Alkylated diphenylamine Barium dinonyl-naphthalene sulfonate	65 % 27 % 5 % 0 %		 68411-46-1 25619-56-1

Hazardous Materials And Wastes Inventory Matrix Report

CERS Business/Org. **Marsh Landing Generating Station**
Facility Name **Marsh Landing Generating Station**
3201C Wilbur Ave, Antioch 94509

Chemical Location **WATER TREATMENT BUILDING**

CERS ID **10480876**
Facility ID **07-000-774528**
Status **Submitted** on 2/15/2021 1:58 PM

DOT Code/Fire Haz. Class	Common Name	Unit	Quantities: Max. Daily	Quantities: Largest Cont.	Quantities: Avg. Daily	Annual Waste Amount	Federal Hazard Categories	Hazardous Components (For mixture only): Component Name	% Wt	EHS	CAS No.
DOT: 8 - Corrosives (Liquids and Solids) Corrosive, Highly Toxic	**SODIUM BISULFITE 35% - 40%, BWT-104** CAS No 7631-90-5 Map: 2 Grid: C4	**Gallons** State Liquid Type Mixture	**350** Storage Container Tote Bin Days on Site: 365	**350**	200 Pressue Ambient Temperature Ambient	Waste Code	- Health Acute Toxicity - Health Skin Corrosion Irritation - Health Serious Eye Damage Eye Irritation	SODIUM BISULFITE			7631-90-5
	RO-505 CAS No Map: 2 Grid: C4	**Gallons** State Liquid Type Mixture	**350** Storage Container Tote Bin Days on Site: 365	**350**	190 Pressue Ambient Temperature Ambient	Waste Code	- Health Acute Toxicity - Health Skin Corrosion Irritation - Health Serious Eye Damage Eye Irritation - Health Aspiration Hazard	2-Propenoic acid, homopolymer Polyoxalkylenes, C4-6, propoxylated 2 Propenoic acid, telomer	14 % 20 % 8 %		9003-01-4 68918-96-7 97953-25-8
	SODIUM HYPOCHLORITE 12.5% CAS No Map: 2 Grid: C4	**Gallons** State Liquid Type Mixture	**325** Storage Container Tote Bin Days on Site: 365	**325**	100 Pressue Ambient Temperature Ambient	Waste Code	- Health Skin Corrosion Irritation - Health Serious Eye Damage Eye Irritation	SODIUM HYPOCHLORITE SODIUM HYDROXIDE	13 % 1 %		7681-52-9 1310-73-2

3.3 HAZ-8

The site specific security plan has been reviewed and updated and is available on site for viewing.

- All current project employees and appropriate contractor background investigations have been performed and a certification statement has been appended to the operations security plan.
- The operation security plan includes all current hazardous material transport vendor certifications for security plans and employee background investigations.

3.4 SOIL & WATER-5

- See attached Quarterly Industrial User Compliance Reports to DDSD.

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.

Delta Diablo

Industrial User Report Checklist And Certification Statement Form

Certification Statement

Industrial User Facility Name	**Marsh Landing LLC**
Industrial User Facility Address	**3201-C Wilbur Avenue, Antioch, CA 94509**
Duly Authorized Representative Phone	**925-779-6685**
Indicate Period Covered by This Report	**January 1-March 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	
Duly Authorized Representative Print	**Joe Moura**
Date	4/3/2020

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

April 3, 2020

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

Subject: **2020 First Quarterly (January 1-March 31) Self-Monitoring Report**
Marsh Landing LLC, Marsh Landing Generating Station,
Industrial Wastewater Discharge Permit 0311963-S

This letter documents the transmittal of the 2020 First 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 January 1 through March 31, 2020. This report includes monthly flow data and quarterly, semiannual, and annual analytical data required to be collected in 2020. Data are summarized in the attached tables.

Additionally, enclosed is documentation of the flow meter calibrations performed in January 2020 for compliance with the Annual Flow Measurement Device Calibration requirement in the Industrial Wastewater Discharge Permit.

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
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:	Annual Results for Combined Wastewater (FAC Combined)
Table 4:	January 2020 Monthly Flow Data
Table 5:	February 2020 Monthly Flow Data
Table 6:	March 2020 Monthly Flow Data

Attachment 1:	pH COC
Attachment 2:	Analytical Reports
Attachment 3:	Annual Flow Measurement Device Calibration Record

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	January - March 2020
Report Type	Quarterly

Constituent	Sample Date	Permit Limit	Result	Units
Field pH	2/2/2020	6-10	7.7	S.U.
BOD	1/30/2020	-	12	mg/L
COD	1/30/2020	-	22	mg/L
Arsenic	1/30/2020	0.15	0.00043 J	mg/L
Cadmium	1/30/2020	0.1	ND	mg/L
Chromium	1/30/2020	0.5	ND	mg/L
Copper	1/30/2020	0.5	0.0074	mg/L
Iron	1/30/2020	-	0.093	mg/L
Lead	1/30/2020	0.5	ND	mg/L
Mercury	1/30/2020	0.003	ND	mg/L
Molybdenum	1/30/2020	-	0.00084	mg/L
Nickel	1/30/2020	0.5	0.002	mg/L
Selenium	1/30/2020	0.25	ND	mg/L
Silver	1/30/2020	0.2	ND	mg/L
Zinc	1/30/2020	1.0	0.040	mg/L
TDS	1/30/2020	-	154	mg/L
TSS	1/30/2020	-	2.70	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
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	January - July 2020
Report Type	Semiannual

Constituent	Sample Date	Permit Limit	Result	Units
Cyanide	1/30/2019	0.20	0.0012	mg/L
Total Phenolics (EPA 420.4)	1/30/2019	1.0	0.014	mg/L
Ammonia as N	1/30/2019	200	6.7	mg/L
Oil and Grease Animal/Vegetable (HEM)	1/30/2019	300	2.3 J	mg/L
Oil and Grease Petroleum/Mineral (SGT-HEM)	1/30/2019	100	1.0 J	mg/L
Bromodichloromethane	1/30/2019	-	*0.0017*	mg/L
Bromoform	1/30/2019	-	*0.00021 J*	mg/L
Chloroform	1/30/2019	-	*0.0012*	mg/L
Dibromochloromethane	1/30/2019	-	*0.0014*	mg/L
Bis (2-Ethylhexyl) phthalate	1/30/2019	-	*0.00021 J*	mg/L
Di-n-butyl Phthalate	1/30/2019	-	*0.000069*	mg/L
Diethyl Phthalate	1/30/2019	-	*0.00011*	mg/L
Phenol	1/30/2019	-	*0.0034*	mg/L
TOTAL TOXIC ORGANICS	1/30/2019	2.0	**0.0079**	mg/L

J = The reported concentration is an estimated value and is not included in Total Toxic Organic totals.
mg/L = Milligrams per Liter

Table 3

Annual 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	January - December 2020
Report Type	Annual

Constituent	Sample Date	Permit Limit	Result	Units
Sulfide	1/30/2020	-	0.047 J	mg/L
Sulfate	1/30/2020	-	35	mg/L

J = The reported concentration is an estimated value.

mg/L = Milligrams per Liter

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	January, 2020
Report Type	Quarterly
Constituent	Flow
Sample Type	Continuous, measured by flow meter
Sample Date	1/1/2020 - 1/31/2020
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	4,822	20.23	
2	4,764	20.10	
3	0	0.00	
4	0	0.00	
5	4,386	20.25	
6	985	20.10	
7	0	0.00	
8	3,581	20.48	
9	0	0.00	
10	5,828	21.31	
11	321	20.07	
12	0	0.00	
13	6,724	20.27	
14	9,142	20.10	
15	3,509	20.13	
16	9,608	20.18	
17	5,844	20.16	
18	7,607	20.07	
19	0	0.00	
20	5,045	20.25	
21	15,360	20.10	
22	6,792	20.35	
23	1,500	20.07	
24	0	0.00	
25	0	0.00	
26	0	0.00	
27	0	0.00	
28	0	0.00	
29	18,023	20.84	
30	15,099	20.10	
31	4,127	20.19	

Total Monthly Flow (gal)	133,065	Did flow exceed limits?	NO
Daily Max Flow (gpd)	18,023	Flow above daily max (30,240 gpd)?	NO
Average Monthly Flow (gpd)	4,292		

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	February, 2020
Report Type	Quarterly
Constituent	Flow
Sample Type	Continuous, measured by flow meter
Sample Date	2/1/2020 - 2/29/2020
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	1,927	20.31	
2	0	0.00	
3	0	0.00	
4	0	0.00	
5	4,970	20.37	
6	6,197	20.09	
7	6,201	20.17	
8	4,571	20.09	
9	23,231	20.20	
10	5,073	20.09	
11	2,774	20.09	
12	3,114	20.14	
13	8,788	20.28	
14	3,682	20.11	
15	6,483	20.25	
16	0	0.00	
17	456	16.91	
18	0	0.00	
19	9,797	21.45	
20	1,371	19.17	
21*	3,158	19.11	
22*	6,824	19.10	
23	0	0.00	
24	4,638	19.14	
25	12,580	19.18	
26	4,893	19.24	
27	10,989	19.82	
28	0	0.00	
29	0	0.00	

Total Monthly Flow (gal)	131,718	Did flow exceed limits?	NO
Daily Max Flow (gpd)	23,231	Flow above daily max (30,240 gpd)?	NO
Average Monthly Flow (gpd)	4,542		

Table 6
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	March, 2020
Report Type	Quarterly
Constituent	Flow
Sample Type	Continuous, measured by flow meter
Sample Date	3/1/2020 - 3/31/2020
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	0	0.00	
2	2,921	19.22	
3	8,440	19.11	
4	0	0.00	
5	455	17.17	
6	0	0.00	
7	450	15.48	
8	0	0.00	
9	3,101	20.45	
10	1,298	20.33	
11	3,468	19.72	
12	6,575	19.10	
13	5,331	21.01	
14	0	0.00	
15	485	17.40	
16	6,817	19.35	
17	22,203	19.14	
18	414	16.82	
19	6,413	19.52	
20	6,457	19.12	
21	14,970	19.22	
22	17,405	19.09	
23	4,789	20.43	
24	1,143	19.09	
25	3,657	19.13	
26	7,075	19.09	
27	426	15.90	
28	10,257	20.45	
29	0	0.00	
30	3,286	19.08	
31	8,418	19.08	

Total Monthly Flow (gal)	146,249	Did flow exceed limits?	NO
Daily Max Flow (gpd)	22,203	Flow above daily max (30,240 gpd)?	NO
Average Monthly Flow (gpd)	4,718		

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-20-036	2/5/20	1330	2/5/20	0955	Wastewater	Grab	7.7

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

Environmental Engineer David Franden

Signature: David Franden

Date: Feb 5, 2020

Sampling Technologist: James E Robinson

Signature: James E. Robinson

Date: 5-Feb-20

McCampbell Analytical, Inc.

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Analytical Report

WorkOrder: 2001C56

Report Created for: NRG Energy, LLC

3201 Wilbur Avenue
Antioch, CA 94509

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

Project Received: 01/30/2020

Analytical Report reviewed & approved for release on 02/05/2020 by:

Jennifer Lagerbom
Project Manager

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Glossary of Terms & Qualifier Definitions

Client: NRG Energy, LLC
Project: DDSD: Quarterly: Marsh Landing
WorkOrder: 2001C56

Glossary Abbreviation

%D	Serial Dilution Percent Difference
95% Interval	95% Confident Interval
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: DDSD: Quarterly: Marsh Landing
WorkOrder: 2001C56

Analytical Qualifiers

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

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Case Narrative

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

Work Order: 2001C56
February 05, 2020

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:**	2001C56
Date Received:	01/30/2020 14:45	**Extraction Method:**	SM5210B
Date Prepared:	01/30/2020	**Analytical Method:**	SM5210 B-2001
Project:	DDSD: Quarterly: Marsh Landing	**Unit:**	mg/L

Biochemical Oxygen Demand (BOD)

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
FAC Combines Wastewater	**2001C56-001B**	**Water**	**01/30/2020 13:30**	**WetChem**	**193221**

Analytes	Result	MDL	RL	DF	Date Analyzed
BOD	**12**	4.0	4.0	1	02/04/2020 11:09

Analyst(s): AL

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Analytical Report

Client:	NRG Energy, LLC	**WorkOrder:**	2001C56
Date Received:	01/30/2020 14:45	**Extraction Method:**	SM5220 D-1997
Date Prepared:	02/03/2020	**Analytical Method:**	SM5220 D-1997
Project:	DDSD: Quarterly: Marsh Landing	**Unit:**	mg/L

Chemical Oxygen Demand (COD) as mg O2 /L

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
FAC Combines Wastewater	**2001C56-001A**	**Water**	**01/30/2020 13:30**	**SPECTROPHOTOMETER**	**193313**

Analytes	Result	MDL	RL	DF	Date Analyzed
COD	**22**	7.2	10	1	02/03/2020 12:09

Analyst(s): RB

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Analytical Report

Client:	NRG Energy, LLC	**WorkOrder:**	2001C56
Date Received:	01/30/2020 14:45	**Extraction Method:**	E200.8
Date Prepared:	01/30/2020	**Analytical Method:**	E200.8
Project:	DDSD: Quarterly: Marsh Landing	**Unit:**	µg/L

Metals

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
FAC Combines Wastewater	**2001C56-001E**	**Water**	**01/30/2020 13:30**	**ICP-MS4 120SMPL.d**	**193217**

Analytes	Result	Qualifiers	MDL	RL	DF	Date Analyzed
Arsenic	**0.43**	J	0.12	0.50	1	01/31/2020 13:47
Cadmium	ND		0.060	0.50	1	01/31/2020 13:47
Chromium	ND		0.36	0.50	1	01/31/2020 13:47
Copper	**7.4**		0.43	0.50	1	01/31/2020 13:47
Iron	**93**	J	58	100	1	01/31/2020 13:47
Lead	ND		0.32	0.50	1	01/31/2020 13:47
Mercury	ND		0.033	0.050	1	01/31/2020 13:47
Molybdenum	**0.84**		0.21	0.50	1	01/31/2020 13:47
Nickel	**2.0**		0.58	1.0	1	01/31/2020 13:47
Selenium	ND		0.18	0.50	1	01/31/2020 13:47
Silver	ND		0.042	0.50	1	01/31/2020 13:47
Zinc	**40**		11	20	1	01/31/2020 13:47

Surrogates	REC (%)	Limits	
Terbium	109	70-130	01/31/2020 13:47

Analyst(s): MIG

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Analytical Report

Client:	NRG Energy, LLC	**WorkOrder:**	2001C56
Date Received:	01/30/2020 14:45	**Extraction Method:**	SM2540 C-1997
Date Prepared:	02/03/2020	**Analytical Method:**	SM2540 C-1997
Project:	DDSD: Quarterly: Marsh Landing	**Unit:**	mg/L

Total Dissolved Solids

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
FAC Combines Wastewater	**2001C56-001C**	**Water**	**01/30/2020 13:30**	**WetChem**	**193327**

Analytes	Result	MDL	RL	DF	Date Analyzed
Total Dissolved Solids	**154**	10.0	10.0	1	02/04/2020 08:40

Analyst(s): AL

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Analytical Report

Client:	NRG Energy, LLC	**WorkOrder:**	2001C56
Date Received:	01/30/2020 14:45	**Extraction Method:**	SM2540 D-1997
Date Prepared:	01/30/2020	**Analytical Method:**	SM2540 D-1997
Project:	DDSD: Quarterly: Marsh Landing	**Unit:**	mg/L

Total Suspended Solids

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
FAC Combines Wastewater	**2001C56-001D**	**Water**	**01/30/2020 15:00**	**WetChem**	**193201**

Analytes	Result	MDL	RL	DF	Date Analyzed
Total Suspended Solids	**2.70**	1.00	1.00	1	01/30/2020 21:47

Analyst(s): HAD

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Quality Control Report

Client:	NRG Energy, LLC	**WorkOrder:**	2001C56
Date Prepared:	01/30/2020	**BatchID:**	193221
Date Analyzed:	02/04/2020	**Extraction Method:**	SM5210B
Instrument:	WetChem	**Analytical Method:**	SM5210 B-2001
Matrix:	Water	**Unit:**	mg/L
Project:	DDSD: Quarterly: Marsh Landing	**Sample ID:**	MB/LCS/LCSD-193221 2001C56-001B

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	172	170	198	87	86	80-120	0.585	16

Analyte	SAMP Result	DUP Result	RPD	RPD Limit
BOD	12.0	11.9	1.00	10

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Quality Control Report

Client:	NRG Energy, LLC	**WorkOrder:**	2001C56
Date Prepared:	02/03/2020	**BatchID:**	193313
Date Analyzed:	02/03/2020	**Extraction Method:**	SM5220 D-1997
Instrument:	SPECTROPHOTOMETER	**Analytical Method:**	SM5220 D-1997
Matrix:	Water	**Unit:**	mg/L
Project:	DDSD: Quarterly: Marsh Landing	**Sample ID:**	MB/LCS/LCSD-193313

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	98.0	107	100	98	107	90-110	8.78	20

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Quality Control Report

Client:	NRG Energy, LLC	**WorkOrder:**	2001C56
Date Prepared:	01/30/2020	**BatchID:**	193217
Date Analyzed:	01/31/2020	**Extraction Method:**	E200.8
Instrument:	ICP-MS4	**Analytical Method:**	E200.8
Matrix:	Water	**Unit:**	µg/L
Project:	DDSD: Quarterly: Marsh Landing	**Sample ID:**	MB/LCS/LCSD-193217 2001C56-001EMS/MSD

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	536			500	107	70-130

(Cont.)

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Quality Control Report

Client:	NRG Energy, LLC	**WorkOrder:**	2001C56
Date Prepared:	01/30/2020	**BatchID:**	193217
Date Analyzed:	01/31/2020	**Extraction Method:**	E200.8
Instrument:	ICP-MS4	**Analytical Method:**	E200.8
Matrix:	Water	**Unit:**	µg/L
Project:	DDSD: Quarterly: Marsh Landing	**Sample ID:**	MB/LCS/LCSD-193217 2001C56-001EMS/MSD

QC Summary Report for Metals

Analyte	LCS Result	LCSD Result	SPK Val	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Limit
Arsenic	54.3	53.1	50	109	106	85-115	2.28	20
Cadmium	53.9	52.6	50	108	105	85-115	2.42	20
Chromium	52.5	51.7	50	105	103	85-115	1.48	20
Copper	54.3	53.1	50	109	106	85-115	2.25	20
Iron	5180	5140	5000	104	103	85-115	0.785	20
Lead	50.1	50.2	50	100	100	85-115	0.345	20
Mercury	1.24	1.24	1.25	99	99	85-115	0.161	20
Molybdenum	51.4	50.5	50	103	101	85-115	1.77	20
Nickel	53.4	52.7	50	107	105	85-115	1.38	20
Selenium	54.4	52.8	50	109	106	85-115	2.99	20
Silver	50.7	49.6	50	101	99	85-115	2.09	20
Zinc	545	528	500	109	106	85-115	3.22	20
Surrogate Recovery								
Terbium	526	536	500	105	107	70-130	1.80	20

Analyte	MS DF	MS Result	MSD Result	SPK Val	SPKRef Val	MS %REC	MSD %REC	MS/MSD Limits	RPD	RPD Limit
Arsenic	1	54.8	53.9	50	ND	109	107	85-115	1.59	20
Cadmium	1	52.8	51.9	50	ND	106	104	85-115	1.83	20
Chromium	1	52.3	51.3	50	ND	105	103	85-115	2.04	20
Copper	1	59.7	58.3	50	7.413	105	102	85-115	2.35	20
Iron	1	5270	5200	5000	ND	104	102	85-115	1.38	20
Lead	1	50.9	50.4	50	ND	102	101	85-115	1.12	20
Mercury	1	1.26	1.27	1.25	ND	101	102	85-115	0.788	20
Molybdenum	1	53.2	52.6	50	0.8350	105	104	85-115	1.06	20
Nickel	1	53.4	52.8	50	1.979	103	102	85-115	1.33	20
Selenium	1	52.6	52.0	50	ND	105	104	85-115	1.18	20
Silver	1	49.4	49.4	50	ND	99	99	85-115	0.0850	20
Zinc	1	558	537	500	40.22	104	99	85-115	3.84	20
Surrogate Recovery										
Terbium	1	546	528	500		109	106	70-130	3.43	20

Analyte	DLT Result	DLTRef Val	%D	%D Limit

(Cont.)

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Quality Control Report

Client:	NRG Energy, LLC	**WorkOrder:**	2001C56
Date Prepared:	01/30/2020	**BatchID:**	193217
Date Analyzed:	01/31/2020	**Extraction Method:**	E200.8
Instrument:	ICP-MS4	**Analytical Method:**	E200.8
Matrix:	Water	**Unit:**	µg/L
Project:	DDSD: Quarterly: Marsh Landing	**Sample ID:**	MB/LCS/LCSD-193217 2001C56-001EMS/MSD

QC Summary Report for Metals

Analyte	DLT Result	DLTRef Val	%D	%D Limit
Arsenic	ND	ND	-	-
Cadmium	ND	ND	-	-
Chromium	ND	ND	-	-
Copper	7.07	7.413	4.63	-
Iron	ND	ND	-	-
Lead	ND	ND	-	-
Mercury	ND	ND	-	-
Molybdenum	ND	0.8350	-	-
Nickel	ND	1.979	-	-
Selenium	ND	ND	-	-
Silver	ND	ND	-	-
Zinc	ND	40.22	-	-

%D Control Limit applied to analytes with concentrations greater than 25 times the reporting limits.

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Quality Control Report

Client:	NRG Energy, LLC	**WorkOrder:**	2001C56
Date Prepared:	02/03/2020	**BatchID:**	193327
Date Analyzed:	02/04/2020	**Extraction Method:**	SM2540 C-1997
Instrument:	WetChem	**Analytical Method:**	SM2540 C-1997
Matrix:	Water	**Unit:**	mg/L
Project:	DDSD: Quarterly: Marsh Landing	**Sample ID:**	MB/LCS/LCSD-193327

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	1030	1010	1000	103	101	80-120	2.06	10

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Quality Control Report

Client:	NRG Energy, LLC	**WorkOrder:**	2001C56
Date Prepared:	01/30/2020	**BatchID:**	193201
Date Analyzed:	01/30/2020	**Extraction Method:**	SM2540 D-1997
Instrument:	WetChem	**Analytical Method:**	SM2540 D-1997
Matrix:	Water	**Unit:**	mg/L
Project:	DDSD: Quarterly: Marsh Landing	**Sample ID:**	MB/LCS/LCSD-193201

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	94.0	100	101	94	80-120	7.67	10

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CHAIN-OF-CUSTODY RECORD

WorkOrder: 2001C56 **ClientCode: GOA**

☐ 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: DDSD: Quarterly: 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: **01/30/2020**
Date Logged: **01/30/2020**

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
2001C56-001	FAC Combines Wastewater	Water	1/30/2020 13:30	☐	B	A	E	A	C							
2001C56-001	FAC Combines Wastewater	Water	1/30/2020 15:00	☐						D						

Test Legend:

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

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

Comments: Use QUOTE 192976 for any Marsh Landing projects to get correct analyte list.

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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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: DDSD: Quarterly: Marsh Landing
Comments: Use QUOTE 192976 for any Marsh Landing projects to get correct analyte list.

Work Order: 2001C56
QC Level: LEVEL 2
Date Logged: 1/30/2020

☐ 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
2001C56-001A	FAC Combines Wastewater	Water	SM5220D (COD)	2	aVOA w/ H2SO4	☐	1/30/2020 13:30	5 days	None	☐	
2001C56-001B	FAC Combines Wastewater	Water	SM5210B (BOD)	1	500mL HDPE, unprsv.	☐	1/30/2020 13:30	7 days	None	☐	
2001C56-001C	FAC Combines Wastewater	Water	SM2540C (TDS)	1	500mL HDPE, unprsv.	☐	1/30/2020 13:30	5 days	None	☐	
2001C56-001D	FAC Combines Wastewater	Water	SM2540D (TSS)	1	1L HDPE, unprsv.	☐	1/30/2020 15:00	5 days	None	☐	
2001C56-001E	FAC Combines Wastewater	Water	E200.8 (Metals) <Arsenic, Cadmium, Chromium, Copper, Iron, Lead, Mercury, Molybdenum, Nickel, Selenium, Silver, Zinc>	1	250mL HDPE w/ HNO3	☐	1/30/2020 13:30	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-Quaterly

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

200/C576

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-20-018	30-Jan-20	1330	DDSD	Quarterly	Wastewater	C-24	FAC Combined Wastewater	2	Amber VOAs	43	H_2SO_4 (pH<2, 4°C)	X			
ML-20-019	30-Jan-20	1330	DDSD	Quarterly	Wastewater	C-24	FAC Combined Wastewater	1	HDPE Bottle	1,000	None (ZHS, 4°C)		X		
ML-20-020	30-Jan-20	1330	DDSD	Quarterly	Wastewater	C-24	FAC Combined Wastewater	1	HDPE Bottle	500	None (4°C)			X	
ML-20-021	30-Jan-20	1500	DDSD	Quarterly	Wastewater	C-24	FAC Combined Wastewater	1	Poly	1,000	None				X
											HOLDING TIME:	28 days	48 hours	7 days	7 days

REPORTING		LABORATORY NOTES RE: SAMPLE RECEIPT/CONDITION	DIRECTIONS FOR LABORATORY
Original to:	David Frandsen		**STANDARDTAT (5-day).** Establish calibration standards so Minimum Level (ML) value is the lowest calibration standard, the lowest quantifiable concentration or Reporting Limit (RL). Report "Detected, but Not Quantified" (DNQ) with estimated J-flagged concentrations below the RL and include method detection limits (MDLs) in report.
Title:	Environmental Specialist/Engineer		
Address:	P.O. Box 1687 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		

	PRINTED NAME	SIGNATURE	COMPANY	DATE	TIME
Sampled by:	James E. Robinson	James E. Robinson	NRG	30-Jan-20	1330
Relinquished by:	James E. Robinson	James E. Robinson	NRG	30-Jan-20	1445
Received by:	Lilly Ortiz	Lilly Ortiz	MVA	30-Jan-20	1445
Relinquished by:					0.8 wet
Received by:					
Relinquished by:					
Received by:					

0.9C

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	
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-20-022	30-Jan-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		**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		

	PRINTED NAME	SIGNATURE	COMPANY	DATE	TIME
Sampled by:	James E. Robinson	James E. Robinson	NRG	30-Jan-20	1330
Relinquished by:	James E. Robinson	James E. Robinson	NRG	30-Jan-20	1445
Received by:	Lilly Ortiz	Lilly Ortiz	MMM	30-Jan-20	1445
Relinquished by:					
Received by:					
Relinquished by:					
Received by:					

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Sample Receipt Checklist

Client Name:	**NRG Energy, LLC**	Date and Time Received:	**1/30/2020 14:45**
Project:	**DDSD: Quarterly: Marsh Landing**	Date Logged:	**1/30/2020**
		Received by:	Lilly Ortiz
WorkOrder №:	**2001C56** 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: 0.8°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:	2001C57	**Amended:**	02/10/2020
		Revision:	1
Report Created for:	NRG Energy, LLC		
	3201 Wilbur Avenue Antioch, CA 94509		
Project Contact:	David Frandsen		
Project P.O.:	4501896168		
Project:	DDSD: Semi-Annual: Marsh Landing		
Project Received:	01/30/2020		

Analytical Report reviewed & approved for release on 02/07/2020 by:

Christine Askari
Project Manager

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Glossary of Terms & Qualifier Definitions

Client: NRG Energy, LLC
Project: DDSD: Semi-Annual: Marsh Landing
WorkOrder: 2001C57

Glossary Abbreviation

%D	Serial Dilution Percent Difference
95% Interval	95% Confident Interval
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: DDSD: Semi-Annual: Marsh Landing
WorkOrder: 2001C57

Analytical Qualifiers

J	Result is less than the RL/ML but greater than the MDL. The reported concentration is an estimated value.
a3	Sample diluted due to high organic content.
a19	Reporting limit near, but not identical to our standard reporting limit due to variable sample volume

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:**	2001C57
Date Received:	01/30/2020 14:45	**Extraction Method:**	E1664A_SG
Date Prepared:	02/03/2020	**Analytical Method:**	E1664A
Project:	DDSD: Semi-Annual: Marsh Landing	**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 Wastwater	**2001C57-001B**	**Water**	**01/30/2020 13:30**	**O&G**	**193467**

Analytes	Result	Qualifiers	MDL	RL	DF	Date Analyzed
SGT-HEM	**1.0**	J	0.72	5.0	1	02/04/2020 13:25

Analyst(s): HN

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Analytical Report

Client:	NRG Energy, LLC	**WorkOrder:**	2001C57
Date Received:	01/30/2020 14:45	**Extraction Method:**	E1664A
Date Prepared:	02/04/2020	**Analytical Method:**	E1664A
Project:	DDSD: Semi-Annual: Marsh Landing	**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 Wastwater	**2001C57-001A**	**Water**	**01/30/2020 13:30**	**O&G**	**193466**

Analytes	Result	Qualifiers	MDL	RL	DF	Date Analyzed
HEM	**2.3**	J	1.4	5.7	1	02/05/2020 12:05

Analyst(s): HN

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Analytical Report

Client:	NRG Energy, LLC	**WorkOrder:**	2001C57
Date Received:	01/30/2020 14:45	**Extraction Method:**	E608/SW3620B
Date Prepared:	02/03/2020	**Analytical Method:**	E608
Project:	DDSD: Semi-Annual: Marsh Landing	**Unit:**	mg/L

Organochlorine Pesticides &/or PCBs (Low-Level) w/ Florisil Clean-up

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
FAC Combined Wastewater	2001C57-001E	Water	01/30/2020 13:30	GC20 02072010.D	193319

Analytes	Result	MDL	RL	DF	Date Analyzed
Aldrin	ND	0.000005	0.000020	20	02/07/2020 13:33
a-BHC	ND	0.000006	0.000020	20	02/07/2020 13:33
b-BHC	ND	0.000014	0.000020	20	02/07/2020 13:33
d-BHC	ND	0.000002	0.000020	20	02/07/2020 13:33
g-BHC	ND	0.000009	0.000020	20	02/07/2020 13:33
Chlordane (Technical)	ND	0.000046	0.00040	20	02/07/2020 13:33
p,p-DDD	ND	0.000002	0.000020	20	02/07/2020 13:33
p,p-DDE	ND	0.000003	0.000020	20	02/07/2020 13:33
p,p-DDT	ND	0.000003	0.000020	20	02/07/2020 13:33
Dieldrin	ND	0.000002	0.000020	20	02/07/2020 13:33
Endosulfan I	ND	0.000002	0.000020	20	02/07/2020 13:33
Endosulfan II	ND	0.000009	0.000020	20	02/07/2020 13:33
Endosulfan sulfate	ND	0.000006	0.000040	20	02/07/2020 13:33
Endrin	ND	0.000003	0.000020	20	02/07/2020 13:33
Endrin aldehyde	ND	0.000011	0.000020	20	02/07/2020 13:33
Heptachlor	ND	0.000008	0.000020	20	02/07/2020 13:33
Heptachlor epoxide	ND	0.000005	0.000020	20	02/07/2020 13:33
Toxaphene	ND	0.000040	0.00040	20	02/07/2020 13:33
Aroclor1016	ND	0.000038	0.00040	20	02/07/2020 13:33
Aroclor1221	ND	0.000048	0.00040	20	02/07/2020 13:33
Aroclor1232	ND	0.000076	0.00040	20	02/07/2020 13:33
Aroclor1242	ND	0.000056	0.00040	20	02/07/2020 13:33
Aroclor1248	ND	0.000036	0.00040	20	02/07/2020 13:33
Aroclor1254	ND	0.000030	0.00040	20	02/07/2020 13:33
Aroclor1260	ND	0.000056	0.00040	20	02/07/2020 13:33

Surrogates	REC (%)	Limits	
Decachlorobiphenyl	109	14-168	02/07/2020 13:33

Analyst(s): CK Analytical Comments: a3

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Analytical Report

Client:	NRG Energy, LLC	**WorkOrder:**	2001C57
Date Received:	01/30/2020 14:45	**Extraction Method:**	E624
Date Prepared:	02/01/2020	**Analytical Method:**	E624
Project:	DDSD: Semi-Annual: Marsh Landing	**Unit:**	mg/L

Acrolein, Acrylonitrile, & 2-Chloroethyl Vinyl Ether

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
FAC Combined Wastwater	**2001C57-001G**	**Water**	**01/30/2020 13:30**	**GC18 01312061.D**	**193309**

Analytes	Result	MDL	RL	DF	Date Analyzed
Acrolein (Propenal)	ND	0.0025	0.0050	1	02/01/2020 23:21
Acrylonitrile	ND	0.0010	0.0020	1	02/01/2020 23:21
2-Chloroethyl Vinyl Ether	ND	0.00050	0.0010	1	02/01/2020 23:21

Surrogates	REC (%)	Limits	
Dibromofluoromethane	85	65-165	02/01/2020 23:21

Analyst(s): HK

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Analytical Report

Client:	NRG Energy, LLC	**WorkOrder:**	2001C57
Date Received:	01/30/2020 14:45	**Extraction Method:**	E624
Date Prepared:	02/04/2020	**Analytical Method:**	E624
Project:	DDSD: Semi-Annual: Marsh Landing	**Unit:**	mg/L

Volatile Organics

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
FAC Combined Wastwater	**2001C57-001F**	**Water**	**01/30/2020 13:30**	**GC16 02042026.D**	**193345**

Analytes	Result	Qualifiers	MDL	RL	DF	Date Analyzed
Benzene	ND		0.000051	0.00050	1	02/04/2020 23:43
Bromodichloromethane	**0.0017**		0.00020	0.00050	1	02/04/2020 23:43
Bromoform	**0.00021**	J	0.000066	0.00050	1	02/04/2020 23:43
Bromomethane	ND		0.00016	0.00050	1	02/04/2020 23:43
Carbon tetrachloride	ND		0.000069	0.00050	1	02/04/2020 23:43
Chlorobenzene	ND		0.000050	0.00050	1	02/04/2020 23:43
Chloroethane	ND		0.00031	0.00050	1	02/04/2020 23:43
Chloroform	**0.0012**		0.000064	0.00050	1	02/04/2020 23:43
Chloromethane	ND		0.00013	0.00050	1	02/04/2020 23:43
Dibromochloromethane	**0.0014**		0.000080	0.00050	1	02/04/2020 23:43
1,2-Dichlorobenzene	ND		0.000080	0.00050	1	02/04/2020 23:43
1,3-Dichlorobenzene	ND		0.000071	0.00050	1	02/04/2020 23:43
1,4-Dichlorobenzene	ND		0.000072	0.00050	1	02/04/2020 23:43
1,1-Dichloroethane	ND		0.000060	0.00050	1	02/04/2020 23:43
1,2-Dichloroethane (1,2-DCA)	ND		0.000090	0.00050	1	02/04/2020 23:43
1,1-Dichloroethene	ND		0.000086	0.00050	1	02/04/2020 23:43
trans-1,2-Dichloroethene	ND		0.000060	0.00050	1	02/04/2020 23:43
1,2-Dichloropropane	ND		0.000055	0.00050	1	02/04/2020 23:43
cis-1,3-Dichloropropene	ND		0.000090	0.00050	1	02/04/2020 23:43
trans-1,3-Dichloropropene	ND		0.000070	0.00050	1	02/04/2020 23:43
Ethylbenzene	ND		0.000050	0.00050	1	02/04/2020 23:43
Methylene chloride	ND		0.0012	0.0020	1	02/04/2020 23:43
1,1,2,2-Tetrachloroethane	ND		0.00011	0.00050	1	02/04/2020 23:43
Tetrachloroethene	ND		0.000082	0.00050	1	02/04/2020 23:43
Toluene	ND		0.00025	0.00050	1	02/04/2020 23:43
1,1,1-Trichloroethane	ND		0.000050	0.00050	1	02/04/2020 23:43
1,1,2-Trichloroethane	ND		0.00018	0.00050	1	02/04/2020 23:43
Trichloroethene	ND		0.000060	0.00050	1	02/04/2020 23:43
Trichlorofluoromethane	ND		0.000047	0.00050	1	02/04/2020 23:43
Vinyl chloride	ND		0.000070	0.00050	1	02/04/2020 23:43

Surrogates	REC (%)	Limits	
Dibromofluoromethane	94	78-112	02/04/2020 23:43
Toluene-d8	99	82-109	02/04/2020 23:43
4-BFB	78	63-121	02/04/2020 23:43

Analyst(s): KF

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Analytical Report

Client:	NRG Energy, LLC	**WorkOrder:**	2001C57
Date Received:	01/30/2020 14:45	**Extraction Method:**	E625
Date Prepared:	02/03/2020	**Analytical Method:**	E625
Project:	DDSD: Semi-Annual: Marsh Landing	**Unit:**	mg/L

Semi-Volatile Organics

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
FAC Combined Wastwater	**2001C57-001H**	**Water**	**01/30/2020 13:30**	**GC17 02032038.D**	**193328**

Analytes	Result	Qualifiers	MDL	RL	DF	Date Analyzed
Acenaphthene	ND		0.000011	0.000021	2	02/04/2020 02:20
Acenaphthylene	ND		0.000011	0.000021	2	02/04/2020 02:20
Anthracene	ND		0.000009	0.000021	2	02/04/2020 02:20
Benzidine	ND		0.0012	0.011	2	02/04/2020 02:20
Benzo (a) anthracene	ND		0.000040	0.000042	2	02/04/2020 02:20
Benzo (a) pyrene	ND		0.000014	0.000021	2	02/04/2020 02:20
Benzo (b) fluoranthene	ND		0.000011	0.000053	2	02/04/2020 02:20
Benzo (g,h,i) perylene	ND		0.000015	0.000042	2	02/04/2020 02:20
Benzo (k) fluoranthene	ND		0.000013	0.000021	2	02/04/2020 02:20
Bis (2-chloroethoxy) Methane	ND		0.0018	0.0021	2	02/04/2020 02:20
Bis (2-chloroethyl) Ether	ND		0.000004	0.000011	2	02/04/2020 02:20
Bis (2-chloroisopropyl) Ether	ND		0.000019	0.000021	2	02/04/2020 02:20
Bis (2-ethylhexyl) Phthalate	**0.00021**	J	0.00011	0.00021	2	02/04/2020 02:20
4-Bromophenyl Phenyl Ether	ND		0.00096	0.0021	2	02/04/2020 02:20
Butylbenzyl Phthalate	ND		0.000059	0.00011	2	02/04/2020 02:20
4-Chloro-3-methylphenol	ND		0.0012	0.0021	2	02/04/2020 02:20
2-Chloronaphthalene	ND		0.0012	0.0021	2	02/04/2020 02:20
2-Chlorophenol	ND		0.000018	0.000042	2	02/04/2020 02:20
4-Chlorophenyl Phenyl Ether	ND		0.0010	0.0021	2	02/04/2020 02:20
Chrysene	ND		0.000020	0.000021	2	02/04/2020 02:20
Dibenzo (a,h) anthracene	ND		0.000020	0.000021	2	02/04/2020 02:20
Di-n-butyl Phthalate	**0.000069**		0.000025	0.000042	2	02/04/2020 02:20
1,2-Dichlorobenzene	ND		0.0023	0.0042	2	02/04/2020 02:20
1,3-Dichlorobenzene	ND		0.0025	0.0042	2	02/04/2020 02:20
1,4-Dichlorobenzene	ND		0.0021	0.0042	2	02/04/2020 02:20
3,3-Dichlorobenzidine	ND		0.000017	0.000042	2	02/04/2020 02:20
2,4-Dichlorophenol	ND		0.000013	0.000021	2	02/04/2020 02:20
Diethyl Phthalate	**0.00011**		0.000032	0.000042	2	02/04/2020 02:20
2,4-Dimethylphenol	ND		0.0017	0.0021	2	02/04/2020 02:20
Dimethyl Phthalate	ND		0.000023	0.000042	2	02/04/2020 02:20
4,6-Dinitro-2-methylphenol	ND		0.0038	0.011	2	02/04/2020 02:20
2,4-Dinitrophenol	ND		0.00032	0.0011	2	02/04/2020 02:20
2,4-Dinitrotoluene	ND		0.000014	0.000053	2	02/04/2020 02:20
2,6-Dinitrotoluene	ND		0.000011	0.000021	2	02/04/2020 02:20
Di-n-octyl Phthalate	ND		0.000042	0.00027	2	02/04/2020 02:20
1,2-Diphenylhydrazine	ND		0.00085	0.0021	2	02/04/2020 02:20
Fluoranthene	ND		0.000014	0.000021	2	02/04/2020 02:20

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Analytical Report

Client:	NRG Energy, LLC	**WorkOrder:**	2001C57
Date Received:	01/30/2020 14:45	**Extraction Method:**	E625
Date Prepared:	02/03/2020	**Analytical Method:**	E625
Project:	DDSD: Semi-Annual: Marsh Landing	**Unit:**	mg/L

Semi-Volatile Organics

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
FAC Combined Wastwater	**2001C57-001H**	**Water**	**01/30/2020 13:30**	**GC17 02032038.D**	**193328**

Analytes	Result	Qualifiers	MDL	RL	DF	Date Analyzed
Fluorene	ND		0.000014	0.000021	2	02/04/2020 02:20
Hexachlorobenzene	ND		0.000009	0.000011	2	02/04/2020 02:20
Hexachlorobutadiene	ND		0.000007	0.000021	2	02/04/2020 02:20
Hexachlorocyclopentadiene	ND		0.0010	0.011	2	02/04/2020 02:20
Hexachloroethane	ND		0.000014	0.000021	2	02/04/2020 02:20
Indeno (1,2,3-cd) pyrene	ND		0.000014	0.000042	2	02/04/2020 02:20
Isophorone	ND		0.0014	0.0021	2	02/04/2020 02:20
Naphthalene	ND		0.000010	0.000021	2	02/04/2020 02:20
Nitrobenzene	ND		0.0020	0.0021	2	02/04/2020 02:20
2-Nitrophenol	ND		0.0051	0.011	2	02/04/2020 02:20
4-Nitrophenol	ND		0.0023	0.011	2	02/04/2020 02:20
N-Nitrosodiphenylamine	ND		0.00087	0.0021	2	02/04/2020 02:20
N-Nitrosodi-n-propylamine	ND		0.0014	0.0021	2	02/04/2020 02:20
Pentachlorophenol	ND		0.00012	0.00053	2	02/04/2020 02:20
Phenanthrene	ND		0.000012	0.000042	2	02/04/2020 02:20
Phenol	**0.0034**		0.000019	0.000042	2	02/04/2020 02:20
Pyrene	ND		0.000012	0.000042	2	02/04/2020 02:20
1,2,4-Trichlorobenzene	ND		0.00019	0.0021	2	02/04/2020 02:20
2,4,6-Trichlorophenol	ND		0.000010	0.00011	2	02/04/2020 02:20
N-Nitrosodimethylamine	ND		0.0059	0.011	2	02/04/2020 02:20

Surrogates	REC (%)	Limits	
2-Fluorophenol	42	1-92	02/04/2020 02:20
Phenol-d5	28	5-104	02/04/2020 02:20
Nitrobenzene-d5	63	4-143	02/04/2020 02:20
2-Fluorobiphenyl	73	9-134	02/04/2020 02:20
2,4,6-Tribromophenol	83	1-159	02/04/2020 02:20
Terphenyl-d14	46	5-150	02/04/2020 02:20

Analyst(s): REB Analytical Comments: a19

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Analytical Report

Client:	NRG Energy, LLC	**WorkOrder:**	2001C57
Date Received:	01/30/2020 14:45	**Extraction Method:**	E350.1
Date Prepared:	01/31/2020	**Analytical Method:**	E350.1
Project:	DDSD: Semi-Annual: Marsh Landing	**Unit:**	mg/L

Ammonia As Nitrogen

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
FAC Combined Wastwater	**2001C57-002A**	**Water**	**01/30/2020 13:30**	**WC_SKALAR 013120A1_75**	**193239**

Analytes	Result	MDL	RL	DF	Date Analyzed
Ammonia, total as N	**6.7**	0.092	0.10	1	01/31/2020 10:42

Analyst(s): RB

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Analytical Report

Client:	NRG Energy, LLC	**WorkOrder:**	2001C57
Date Received:	01/30/2020 14:45	**Extraction Method:**	Kelada-01
Date Prepared:	02/06/2020	**Analytical Method:**	Kelada-01
Project:	DDSD: Semi-Annual: Marsh Landing	**Unit:**	mg/L

Cyanide, Total

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
FAC Combined Wastwater	**2001C57-001C**	**Water**	**01/30/2020 13:30**	**WC_SKALAR 020620A1_36**	**193548**

Analytes	Result	MDL	RL	DF	Date Analyzed
Total Cyanide	**0.0012**	0.00077	0.0010	1	02/06/2020 10:40

Analyst(s): NM

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Analytical Report

Client:	NRG Energy, LLC	**WorkOrder:**	2001C57
Date Received:	01/30/2020 14:45	**Extraction Method:**	E420.4
Date Prepared:	02/05/2020	**Analytical Method:**	E420.4
Project:	DDSD: Semi-Annual: Marsh Landing	**Unit:**	mg/L

Phenolics

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
FAC Combined Wastwater	**2001C57-001D**	**Water**	**01/30/2020 13:30**	**WC_SKALAR 020520A1_25**	**193463**

Analytes	Result	MDL	RL	DF	Date Analyzed
Phenolics	**0.014**	0.0016	0.0020	1	02/05/2020 08:58

Analyst(s): RB

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Quality Control Report

Client:	NRG Energy, LLC	**WorkOrder:**	2001C57
Date Prepared:	02/05/2020	**BatchID:**	193467
Date Analyzed:	02/04/2020	**Extraction Method:**	E1664A_SG
Instrument:	O&G	**Analytical Method:**	E1664A
Matrix:	Water	**Unit:**	mg/L
Project:	DDSD: Semi-Annual: Marsh Landing	**Sample ID:**	MB/LCS/LCSD-193467

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	8.66	9.24	10.42	83	89	64-132	6.41	30

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Quality Control Report

Client:	NRG Energy, LLC	**WorkOrder:**	2001C57
Date Prepared:	02/05/2020	**BatchID:**	193466
Date Analyzed:	02/05/2020	**Extraction Method:**	E1664A
Instrument:	O&G	**Analytical Method:**	E1664A
Matrix:	Water	**Unit:**	mg/L
Project:	DDSD: Semi-Annual: Marsh Landing	**Sample ID:**	MB/LCS/LCSD-193466

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	18.0	17.8	20.83	86	86	78-114	0.931	30

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Quality Control Report

Client:	NRG Energy, LLC	**WorkOrder:**	2001C57
Date Prepared:	02/03/2020	**BatchID:**	193319
Date Analyzed:	02/06/2020	**Extraction Method:**	E608/SW3620B
Instrument:	GC20	**Analytical Method:**	E608
Matrix:	Water	**Unit:**	µg/L
Project:	DDSD: Semi-Annual: Marsh Landing	**Sample ID:**	MB/LCS/LCSD-193319

QC Summary Report for E608

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	0.0456			0.05	91	35-113

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Quality Control Report

Client:	NRG Energy, LLC	**WorkOrder:**	2001C57
Date Prepared:	02/03/2020	**BatchID:**	193319
Date Analyzed:	02/06/2020	**Extraction Method:**	E608/SW3620B
Instrument:	GC20	**Analytical Method:**	E608
Matrix:	Water	**Unit:**	µg/L
Project:	DDSD: Semi-Annual: Marsh Landing	**Sample ID:**	MB/LCS/LCSD-193319

QC Summary Report for E608

Analyte	LCS Result	LCSD Result	SPK Val	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Limit
Aldrin	0.0494	0.0498	0.050	99	100	50-103	0.846	20
a-BHC	0.0528	0.0530	0.050	106	106	63-131	0.326	20
b-BHC	0.0471	0.0473	0.050	94	95	56-112	0.523	20
d-BHC	0.0561	0.0558	0.050	112	112	63-132	0.425	20
g-BHC	0.0533	0.0538	0.050	107	108	61-135	0.791	20
a-Chlordane	0.0476	0.0479	0.050	95	96	54-113	0.679	20
g-Chlordane	0.0538	0.0540	0.050	108	108	55-117	0.402	20
p,p-DDD	0.0499	0.0505	0.050	100	101	56-135	1.30	20
p,p-DDE	0.0513	0.0527	0.050	103	105	56-131	2.65	20
p,p-DDT	0.0537	0.0538	0.050	107	108	47-153	0.0932	20
Dieldrin	0.0528	0.0532	0.050	106	106	67-152	0.614	20
Endosulfan I	0.0510	0.0513	0.050	102	103	56-137	0.562	20
Endosulfan II	0.0496	0.0503	0.050	99	101	50-113	1.41	20
Endosulfan sulfate	0.0480	0.0485	0.050	96	97	57-121	1.22	20
Endrin	0.0493	0.0496	0.050	99	99	60-150	0.519	20
Endrin aldehyde	0.0510	0.0515	0.050	102	103	47-121	1.05	20
Endrin ketone	0.0468	0.0481	0.050	94	96	48-130	2.64	20
Heptachlor	0.0496	0.0498	0.050	99	100	46-133	0.403	20
Heptachlor epoxide	0.0465	0.0464	0.050	93	93	54-105	0.291	20
Methoxychlor	0.0441	0.0447	0.050	88	89	54-135	1.36	20
Aroclor1016	0.155	0.156	0.15	103	104	50-114	0.984	20
Aroclor1260	0.149	0.150	0.15	99	100	42-121	0.873	20
Surrogate Recovery								
Decachlorobiphenyl	0.0460	0.0480	0.050	92	96	35-113	4.42	20

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Quality Control Report

Client:	NRG Energy, LLC	**WorkOrder:**	2001C57
Date Prepared:	02/01/2020 - 02/02/2020	**BatchID:**	193309
Date Analyzed:	02/01/2020 - 02/02/2020	**Extraction Method:**	E624
Instrument:	GC18	**Analytical Method:**	E624
Matrix:	Water	**Unit:**	µg/L
Project:	DDSD: Semi-Annual: Marsh Landing	**Sample ID:**	MB/LCS/LCSD-193309

QC Summary Report for E624

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	21.8			25	87	76-110

Analyte	LCS Result	LCSD Result	SPK Val	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Limit
Acrolein (Propenal)	15.4	14.6	20	77	73	71-140	5.56	20
Acrylonitrile	18.1	17.6	20	91	88	67-145	3.15	20
2-Chloroethyl Vinyl Ether	18.3	17.2	20	91	86	70-124	6.38	20
Surrogate Recovery								
Dibromofluoromethane	21.1	21.1	25	84	84	76-110	0.188	20

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Quality Control Report

Client:	NRG Energy, LLC	**WorkOrder:**	2001C57
Date Prepared:	02/03/2020	**BatchID:**	193345
Date Analyzed:	02/03/2020	**Extraction Method:**	E624
Instrument:	GC16	**Analytical Method:**	E624
Matrix:	Water	**Unit:**	µg/L
Project:	DDSD: Semi-Annual: Marsh Landing	**Sample ID:**	MB/LCS/LCSD-193345

QC Summary Report for E624

Analyte	MB Result	MDL	RL	SPK Val	MB SS %REC	MB SS Limits
Benzene	ND	0.0510	0.200	-	-	-
Bromodichloromethane	ND	0.200	0.500	-	-	-
Bromoform	ND	0.0660	0.500	-	-	-
Bromomethane	ND	0.160	0.500	-	-	-
Carbon tetrachloride	ND	0.0690	0.500	-	-	-
Chlorobenzene	ND	0.0500	0.500	-	-	-
Chloroethane	ND	0.310	0.500	-	-	-
Chloroform	ND	0.0640	0.500	-	-	-
Chloromethane	ND	0.130	0.500	-	-	-
Dibromochloromethane	ND	0.0800	0.500	-	-	-
1,2-Dibromoethane (EDB)	ND	0.120	0.500	-	-	-
1,2-Dichlorobenzene	ND	0.0800	0.500	-	-	-
1,3-Dichlorobenzene	ND	0.0710	0.500	-	-	-
1,4-Dichlorobenzene	ND	0.0720	0.500	-	-	-
1,1-Dichloroethane	ND	0.0600	0.500	-	-	-
1,2-Dichloroethane (1,2-DCA)	ND	0.0900	0.500	-	-	-
1,1-Dichloroethene	ND	0.0860	0.500	-	-	-
trans-1,2-Dichloroethene	ND	0.0600	0.500	-	-	-
1,2-Dichloropropane	ND	0.0550	0.500	-	-	-
cis-1,3-Dichloropropene	ND	0.0900	0.500	-	-	-
trans-1,3-Dichloropropene	ND	0.0700	0.500	-	-	-
Ethylbenzene	ND	0.0500	0.500	-	-	-
Methyl-t-butyl ether (MTBE)	ND	0.100	0.500	-	-	-
Methylene chloride	ND	1.20	2.00	-	-	-
Styrene	ND	0.590	2.00	-	-	-
1,1,2,2-Tetrachloroethane	ND	0.110	0.500	-	-	-
Tetrachloroethene	ND	0.0820	0.500	-	-	-
Toluene	ND	0.250	0.500	-	-	-
1,2,4-Trichlorobenzene	ND	0.0860	0.500	-	-	-
1,1,1-Trichloroethane	ND	0.0500	0.500	-	-	-
1,1,2-Trichloroethane	ND	0.180	0.500	-	-	-
Trichloroethene	ND	0.0600	0.500	-	-	-
Trichlorofluoromethane	ND	0.0470	0.500	-	-	-
Vinyl chloride	ND	0.0700	0.500	-	-	-
m,p-Xylene	ND	0.110	0.500	-	-	-
o-Xylene	ND	0.0600	0.500	-	-	-

(Cont.)

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Quality Control Report

Client:	NRG Energy, LLC	**WorkOrder:**	2001C57
Date Prepared:	02/03/2020	**BatchID:**	193345
Date Analyzed:	02/03/2020	**Extraction Method:**	E624
Instrument:	GC16	**Analytical Method:**	E624
Matrix:	Water	**Unit:**	µg/L
Project:	DDSD: Semi-Annual: Marsh Landing	**Sample ID:**	MB/LCS/LCSD-193345

QC Summary Report for E624

Analyte	MB Result	MDL	RL	SPK Val	MB SS %REC	MB SS Limits
Surrogate Recovery						
Dibromofluoromethane	23.6			25	94	76-110
Toluene-d8	24.6			25	98	84-111
4-BFB	1.97			2.5	79	64-121

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Quality Control Report

Client:	NRG Energy, LLC	**WorkOrder:**	2001C57
Date Prepared:	02/03/2020	**BatchID:**	193345
Date Analyzed:	02/03/2020	**Extraction Method:**	E624
Instrument:	GC16	**Analytical Method:**	E624
Matrix:	Water	**Unit:**	µg/L
Project:	DDSD: Semi-Annual: Marsh Landing	**Sample ID:**	MB/LCS/LCSD-193345

QC Summary Report for E624

Analyte	LCS Result	LCSD Result	SPK Val	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Limit
tert-Amyl methyl ether (TAME)	3.91	3.98	4	98	100	62-119	1.75	20
Benzene	4.25	3.93	4	106	98	71-126	7.63	20
Bromodichloromethane	4.03	3.78	4	101	94	63-119	6.47	20
Bromoform	3.96	3.70	4	99	92	46-117	6.71	20
Bromomethane	3.78	3.62	4	95	91	32-171	4.22	20
t-Butyl alcohol (TBA)	18.9	15.8	16	118	99	40-131	17.6	20
Carbon tetrachloride	3.99	3.57	4	100	89	67-122	11.0	20
Chlorobenzene	4.40	4.07	4	110	102	71-117	7.86	20
Chloroethane	3.66	3.55	4	91	89	53-136	3.15	20
Chloroform	4.13	3.83	4	103	96	67-126	7.50	20
Chloromethane	3.56	3.34	4	89	84	42-148	6.13	20
Dibromochloromethane	4.12	3.84	4	103	96	52-120	7.06	20
1,2-Dibromoethane (EDB)	2.34	2.18	2	117	109	58-117	7.11	20
1,2-Dichlorobenzene	4.92	4.38	4	123,F2	109	71-117	11.8	20
1,3-Dichlorobenzene	4.51	4.05	4	113	101	74-116	10.9	20
1,4-Dichlorobenzene	4.57	4.09	4	114	102	71-115	11.0	20
1,1-Dichloroethane	4.18	3.85	4	105	96	68-128	8.37	20
1,2-Dichloroethane (1,2-DCA)	4.20	3.95	4	105	99	61-123	5.96	20
1,1-Dichloroethene	4.15	3.78	4	104	95	65-126	9.34	20
trans-1,2-Dichloroethene	4.12	3.76	4	103	94	70-126	9.14	20
1,2-Dichloropropane	4.05	3.81	4	101	95	67-124	6.10	20
cis-1,3-Dichloropropene	4.27	3.88	4	107	97	63-119	9.58	20
trans-1,3-Dichloropropene	4.14	3.80	4	104	95	63-116	8.59	20
Diisopropyl ether (DIPE)	4.05	3.85	4	101	96	64-128	4.91	20
Ethylbenzene	4.16	3.98	4	104	99	69-120	4.48	20
Ethyl tert-butyl ether (ETBE)	3.90	3.90	4	98	98	63-120	0.0689	20
Methyl-t-butyl ether (MTBE)	3.69	3.96	4	92	99	60-121	7.22	20
Methylene chloride	3.35	3.21	4	84	80	40-148	4.09	20
Styrene	4.15	4.12	4	104	103	57-118	0.823	20
1,1,2,2-Tetrachloroethane	4.01	3.81	4	100	95	60-116	5.22	20
Tetrachloroethene	4.34	3.81	4	109	95	60-131	13.1	20
Toluene	4.12	3.74	4	103	94	67-115	9.70	20
1,2,4-Trichlorobenzene	5.12	4.31	4	128	108	61-133	17.1	20
1,1,1-Trichloroethane	4.05	3.67	4	101	92	67-124	9.63	20
1,1,2-Trichloroethane	4.44	4.22	4	111	106	62-117	4.98	20
Trichloroethene	4.23	3.90	4	106	97	69-120	8.25	20
Trichlorofluoromethane	4.20	3.82	4	105	95	60-134	9.58	20
Vinyl chloride	1.84	1.76	2	92	88	52-145	4.06	20

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Quality Control Report

Client:	NRG Energy, LLC	**WorkOrder:**	2001C57
Date Prepared:	02/03/2020	**BatchID:**	193345
Date Analyzed:	02/03/2020	**Extraction Method:**	E624
Instrument:	GC16	**Analytical Method:**	E624
Matrix:	Water	**Unit:**	µg/L
Project:	DDSD: Semi-Annual: Marsh Landing	**Sample ID:**	MB/LCS/LCSD-193345

QC Summary Report for E624

Analyte	LCS Result	LCSD Result	SPK Val	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Limit
m,p-Xylene	8.18	7.80	8	102	98	67-119	4.76	20
o-Xylene	4.04	3.82	4	101	95	68-120	5.74	20
Surrogate Recovery								
Dibromofluoromethane	23.4	23.2	25	94	93	76-110	0.833	20
Toluene-d8	24.6	24.1	25	99	96	84-111	2.35	20
4-BFB	2.04	2.00	2.5	82	80	64-121	1.93	20

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Quality Control Report

Client:	NRG Energy, LLC	**WorkOrder:**	2001C57
Date Prepared:	02/03/2020	**BatchID:**	193328
Date Analyzed:	02/03/2020	**Extraction Method:**	E625
Instrument:	GC17	**Analytical Method:**	E625
Matrix:	Water	**Unit:**	µg/L
Project:	DDSD: Semi-Annual: Marsh Landing	**Sample ID:**	MB/LCS/LCSD-193328

QC Summary Report for E625

Analyte	MB Result	MDL	RL	SPK Val	MB SS %REC	MB SS Limits
Acenaphthene	ND	0.00510	0.0100	-	-	-
Acenaphthylene	ND	0.00500	0.0100	-	-	-
Anthracene	ND	0.00430	0.0100	-	-	-
Benzidine	ND	0.550	5.00	-	-	-
Benzo (a) anthracene	ND	0.0190	0.0200	-	-	-
Benzo (a) pyrene	ND	0.00640	0.0100	-	-	-
Benzo (b) fluoranthene	ND	0.00500	0.0250	-	-	-
Benzo (g,h,i) perylene	ND	0.00710	0.0200	-	-	-
Benzo (k) fluoranthene	ND	0.00630	0.0100	-	-	-
Benzyl Alcohol	ND	2.90	5.00	-	-	-
Bis (2-chloroethoxy) Methane	ND	0.840	1.00	-	-	-
Bis (2-chloroethyl) Ether	ND	0.00210	0.00500	-	-	-
Bis (2-chloroisopropyl) Ether	ND	0.00890	0.0100	-	-	-
Bis (2-ethylhexyl) Adipate	ND	0.390	3.00	-	-	-
Bis (2-ethylhexyl) Phthalate	ND	0.0520	0.100	-	-	-
4-Bromophenyl Phenyl Ether	ND	0.450	1.00	-	-	-
Butylbenzyl Phthalate	ND	0.0280	0.0500	-	-	-
4-Chloroaniline	ND	0.00510	0.0200	-	-	-
4-Chloro-3-methylphenol	ND	0.550	1.00	-	-	-
2-Chloronaphthalene	ND	0.570	1.00	-	-	-
2-Chlorophenol	ND	0.00860	0.0200	-	-	-
4-Chlorophenyl Phenyl Ether	ND	0.480	1.00	-	-	-
Chrysene	ND	0.00930	0.0100	-	-	-
Dibenzo (a,h) anthracene	ND	0.00940	0.0100	-	-	-
Dibenzofuran	ND	0.370	1.00	-	-	-
Di-n-butyl Phthalate	ND	0.0120	0.0200	-	-	-
1,2-Dichlorobenzene	ND	1.10	2.00	-	-	-
1,3-Dichlorobenzene	ND	1.20	2.00	-	-	-
1,4-Dichlorobenzene	ND	1.00	2.00	-	-	-
3,3-Dichlorobenzidine	ND	0.00810	0.0200	-	-	-
2,4-Dichlorophenol	ND	0.00610	0.0100	-	-	-
Diethyl Phthalate	ND	0.0150	0.0200	-	-	-
2,4-Dimethylphenol	ND	0.810	1.00	-	-	-
Dimethyl Phthalate	ND	0.0110	0.0200	-	-	-
4,6-Dinitro-2-methylphenol	ND	1.80	5.00	-	-	-
2,4-Dinitrophenol	ND	0.150	0.500	-	-	-
2,4-Dinitrotoluene	ND	0.00660	0.0250	-	-	-
2,6-Dinitrotoluene	ND	0.00530	0.0100	-	-	-

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Quality Control Report

Client:	NRG Energy, LLC	**WorkOrder:**	2001C57
Date Prepared:	02/03/2020	**BatchID:**	193328
Date Analyzed:	02/03/2020	**Extraction Method:**	E625
Instrument:	GC17	**Analytical Method:**	E625
Matrix:	Water	**Unit:**	µg/L
Project:	DDSD: Semi-Annual: Marsh Landing	**Sample ID:**	MB/LCS/LCSD-193328

QC Summary Report for E625

Analyte	MB Result	MDL	RL	SPK Val	MB SS %REC	MB SS Limits
Di-n-octyl Phthalate	ND	0.0200	0.120	-	-	-
1,2-Diphenylhydrazine	ND	0.400	1.00	-	-	-
Fluoranthene	ND	0.00680	0.0100	-	-	-
Fluorene	ND	0.00640	0.0100	-	-	-
Hexachlorobenzene	ND	0.00430	0.00500	-	-	-
Hexachlorobutadiene	ND	0.00350	0.0100	-	-	-
Hexachlorocyclopentadiene	ND	0.480	5.00	-	-	-
Hexachloroethane	ND	0.00680	0.0100	-	-	-
Indeno (1,2,3-cd) pyrene	ND	0.00650	0.0200	-	-	-
Isophorone	ND	0.660	1.00	-	-	-
2-Methylnaphthalene	ND	0.00530	0.0100	-	-	-
2-Methylphenol (o-Cresol)	ND	0.530	1.00	-	-	-
3 & 4-Methylphenol (m,p-Cresol)	ND	0.410	1.00	-	-	-
Naphthalene	ND	0.00480	0.0100	-	-	-
2-Nitroaniline	ND	1.80	5.00	-	-	-
3-Nitroaniline	ND	3.10	5.00	-	-	-
4-Nitroaniline	ND	2.70	5.00	-	-	-
Nitrobenzene	ND	0.950	1.00	-	-	-
2-Nitrophenol	ND	2.40	5.00	-	-	-
4-Nitrophenol	ND	1.10	5.00	-	-	-
N-Nitrosodiphenylamine	ND	0.410	1.00	-	-	-
N-Nitrosodi-n-propylamine	ND	0.650	1.00	-	-	-
Pentachlorophenol	ND	0.0550	0.250	-	-	-
Phenanthrene	ND	0.00550	0.0200	-	-	-
Phenol	ND	0.00880	0.0200	-	-	-
Pyrene	ND	0.00570	0.0200	-	-	-
Pyridine	ND	0.490	1.00	-	-	-
1,2,4-Trichlorobenzene	ND	0.0890	1.00	-	-	-
2,4,5-Trichlorophenol	ND	0.00610	0.0500	-	-	-
2,4,6-Trichlorophenol	ND	0.00490	0.0500	-	-	-
N-Nitrosodimethylamine	ND	2.80	5.00	-	-	-

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Quality Control Report

Client:	NRG Energy, LLC	**WorkOrder:**	2001C57
Date Prepared:	02/03/2020	**BatchID:**	193328
Date Analyzed:	02/03/2020	**Extraction Method:**	E625
Instrument:	GC17	**Analytical Method:**	E625
Matrix:	Water	**Unit:**	µg/L
Project:	DDSD: Semi-Annual: Marsh Landing	**Sample ID:**	MB/LCS/LCSD-193328

QC Summary Report for E625

Analyte	MB Result	MDL	RL	SPK Val	MB SS %REC	MB SS Limits
Surrogate Recovery						
2-Fluorophenol	4.46			5	89	36-131
Phenol-d5	4.52			5	90	43-149
Nitrobenzene-d5	4.33			5	87	39-150
2-Fluorobiphenyl	4.26			5	85	43-133
2,4,6-Tribromophenol	4.76			5	95	42-147
Terphenyl-d14	2.98			5	60	44-124

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Quality Control Report

Client:	NRG Energy, LLC	**WorkOrder:**	2001C57
Date Prepared:	02/03/2020	**BatchID:**	193328
Date Analyzed:	02/03/2020	**Extraction Method:**	E625
Instrument:	GC17	**Analytical Method:**	E625
Matrix:	Water	**Unit:**	µg/L
Project:	DDSD: Semi-Annual: Marsh Landing	**Sample ID:**	MB/LCS/LCSD-193328

QC Summary Report for E625

Analyte	LCS Result	LCSD Result	SPK Val	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Limit
Acenaphthene	0.457	0.438	0.50	91	88	47-145	4.17	25
Acenaphthylene	0.327	0.318	0.50	65	64	33-145	2.74	25
Anthracene	0.516	0.488	0.50	103	98	27-133	5.46	25
Benzidine	40.2	37.9	50	80	76	33-87	5.78	25
Benzo (a) anthracene	0.387	0.370	0.50	77	74	33-143	4.40	25
Benzo (a) pyrene	0.434	0.410	0.50	87	82	17-163	5.81	25
Benzo (b) fluoranthene	0.364	0.345	0.50	73	69	24-159	5.45	25
Benzo (g,h,i) perylene	0.465	0.452	0.50	93	90	1-219	2.89	25
Benzo (k) fluoranthene	0.434	0.408	0.50	87	82	11-162	6.11	25
Benzyl Alcohol	44.6	40.5	50	89	81	38-130	9.54	25
Bis (2-chloroethoxy) Methane	8.23	7.90	10	82	79	33-184	3.99	25
Bis (2-chloroethyl) Ether	0.332	0.319	0.50	66	64	12-158	3.95	25
Bis (2-chloroisopropyl) Ether	0.392	0.372	0.50	78	74	36-166	5.36	25
Bis (2-ethylhexyl) Adipate	8.37	7.96	10	84	80	49-109	4.98	25
Bis (2-ethylhexyl) Phthalate	0.425	0.400	0.50	85	80	8-158	6.00	25
4-Bromophenyl Phenyl Ether	8.24	7.86	10	82	79	53-127	4.64	25
Butylbenzyl Phthalate	0.415	0.389	0.50	83	78	1-152	6.47	25
4-Chloroaniline	0.461	0.436	0.50	92	87	57-121	5.65	25
4-Chloro-3-methylphenol	9.26	8.49	10	93	85	22-147	8.61	25
2-Chloronaphthalene	7.99	8.19	10	80	82	60-118	2.55	25
2-Chlorophenol	0.376	0.374	0.50	75	75	23-134	0.384	25
4-Chlorophenyl Phenyl Ether	8.27	8.04	10	83	80	25-158	2.89	25
Chrysene	0.409	0.390	0.50	82	78	17-168	4.85	25
Dibenzo (a,h) anthracene	0.418	0.401	0.50	84	80	1-227	4.30	25
Dibenzofuran	7.94	7.50	10	79	75	57-108	5.60	25
Di-n-butyl Phthalate	0.460	0.422	0.50	92	84	1-118	8.41	25
1,2-Dichlorobenzene	6.99	6.78	10	70	68	32-129	3.04	25
1,3-Dichlorobenzene	6.89	6.92	10	69	69	1-172	0.489	25
1,4-Dichlorobenzene	7.33	7.37	10	73	74	20-124	0.578	25
3,3-Dichlorobenzidine	0.483	0.462	0.50	97	92	1-262	4.47	25
2,4-Dichlorophenol	0.465	0.457	0.50	93	91	39-135	1.83	25
Diethyl Phthalate	0.481	0.435	0.50	96	87	1-114	10.1	25
2,4-Dimethylphenol	8.54	8.11	10	85	81	32-119	5.11	25
Dimethyl Phthalate	0.432	0.399	0.50	86	80	1-112	7.87	25
4,6-Dinitro-2-methylphenol	44.9	42.3	50	90	85	33-117	5.95	25
2,4-Dinitrophenol	9.73	9.09	10	97	91	1-191	6.80	25
2,4-Dinitrotoluene	0.585	0.546	0.50	117	109	39-139	6.95	25
2,6-Dinitrotoluene	0.453	0.447	0.50	91	89	50-158	1.40	25

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Quality Control Report

Client:	NRG Energy, LLC	**WorkOrder:**	2001C57
Date Prepared:	02/03/2020	**BatchID:**	193328
Date Analyzed:	02/03/2020	**Extraction Method:**	E625
Instrument:	GC17	**Analytical Method:**	E625
Matrix:	Water	**Unit:**	µg/L
Project:	DDSD: Semi-Annual: Marsh Landing	**Sample ID:**	MB/LCS/LCSD-193328

QC Summary Report for E625

Analyte	LCS Result	LCSD Result	SPK Val	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Limit
Di-n-octyl Phthalate	0.435	0.411	0.50	87	82	4-146	5.70	25
1,2-Diphenylhydrazine	8.34	8.05	10	83	81	53-110	3.51	25
Fluoranthene	0.436	0.401	0.50	87	80	26-137	8.34	25
Fluorene	0.455	0.434	0.50	91	87	59-121	4.80	25
Hexachlorobenzene	0.377	0.368	0.50	75	74	1-152	2.24	25
Hexachlorobutadiene	0.350	0.365	0.50	70	73	24-116	4.14	25
Hexachlorocyclopentadiene	36.0	38.2	50	72	77	26-107	5.94	25
Hexachloroethane	0.344	0.350	0.50	69	70	40-113	1.68	25
Indeno (1,2,3-cd) pyrene	0.447	0.429	0.50	89	86	1-171	4.08	25
Isophorone	9.26	8.63	10	93	86	21-196	7.06	25
2-Methylnaphthalene	0.390	0.390	0.50	78	78	51-132	0.0790	25
2-Methylphenol (o-Cresol)	9.40	9.01	10	94	90	47-127	4.22	25
3 & 4-Methylphenol (m,p-Cresol)	8.74	7.66	10	87	77	51-126	13.1	25
Naphthalene	0.366	0.361	0.50	73	72	21-133	1.41	25
2-Nitroaniline	46.7	44.0	50	93	88	56-126	6.07	25
3-Nitroaniline	46.1	42.4	50	92	85	57-124	8.42	25
4-Nitroaniline	48.2	43.4	50	96	87	58-130	10.6	25
Nitrobenzene	8.04	8.06	10	80	81	35-180	0.163	25
2-Nitrophenol	41.6	41.4	50	83	83	29-182	0.607	25
4-Nitrophenol	47.8	43.8	50	96	88	1-132	8.71	25
N-Nitrosodiphenylamine	8.04	7.75	10	80	78	56-106	3.68	25
N-Nitrosodi-n-propylamine	8.06	7.00	10	81	70	1-230	14.0	25
Pentachlorophenol	2.11	1.98	2.5	84	79	14-176	6.62	25
Phenanthrene	0.422	0.401	0.50	84	80	54-120	5.11	25
Phenol	1.68	1.58	2	84	79	5-112	6.25	25
Pyrene	0.404	0.392	0.50	81	78	52-115	2.99	25
Pyridine	7.16	6.86	10	72	69	36-96	4.28	25
1,2,4-Trichlorobenzene	8.48	8.76	10	85	88	44-142	3.24	25
2,4,5-Trichlorophenol	0.433	0.426	0.50	87	85	52-119	1.68	25
2,4,6-Trichlorophenol	0.448	0.440	0.50	90	88	37-144	1.81	25
N-Nitrosodimethylamine	39.6	38.8	50	79	78	42-121	1.89	25

(Cont.)

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Quality Control Report

Client:	NRG Energy, LLC	**WorkOrder:**	2001C57
Date Prepared:	02/03/2020	**BatchID:**	193328
Date Analyzed:	02/03/2020	**Extraction Method:**	E625
Instrument:	GC17	**Analytical Method:**	E625
Matrix:	Water	**Unit:**	µg/L
Project:	DDSD: Semi-Annual: Marsh Landing	**Sample ID:**	MB/LCS/LCSD-193328

QC Summary Report for E625

Analyte	LCS Result	LCSD Result	SPK Val	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Limit
Surrogate Recovery								
2-Fluorophenol	3.66	3.95	5	73	79	36-131	7.54	25
Phenol-d5	4.18	4.36	5	83	87	43-149	4.30	25
Nitrobenzene-d5	4.02	4.36	5	80	87	39-150	8.14	25
2-Fluorobiphenyl	3.86	4.23	5	77	85	43-133	8.90	25
2,4,6-Tribromophenol	4.69	4.99	5	94	100	42-147	6.16	25
Terphenyl-d14	2.96	3.06	5	59	61	44-124	3.60	25

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Quality Control Report

Client:	NRG Energy, LLC	**WorkOrder:**	2001C57
Date Prepared:	01/31/2020	**BatchID:**	193239
Date Analyzed:	01/31/2020	**Extraction Method:**	E350.1
Instrument:	WC_SKALAR	**Analytical Method:**	E350.1
Matrix:	Water	**Unit:**	mg/L
Project:	DDSD: Semi-Annual: Marsh Landing	**Sample ID:**	MB/LCS/LCSD-193239

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	3.90	3.96	4	98	99	88-113	1.53	20

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Quality Control Report

Client:	NRG Energy, LLC	**WorkOrder:**	2001C57
Date Prepared:	02/06/2020	**BatchID:**	193548
Date Analyzed:	02/06/2020	**Extraction Method:**	Kelada-01
Instrument:	WC_SKALAR	**Analytical Method:**	Kelada-01
Matrix:	Water	**Unit:**	µg/L
Project:	DDSD: Semi-Annual: Marsh Landing	**Sample ID:**	MB/LCS/LCSD-193548

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	39.4	40.3	40	98	101	80-120	2.24	20

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Quality Control Report

Client:	NRG Energy, LLC	**WorkOrder:**	2001C57
Date Prepared:	02/05/2020	**BatchID:**	193463
Date Analyzed:	02/05/2020	**Extraction Method:**	E420.4
Instrument:	WC_SKALAR	**Analytical Method:**	E420.4
Matrix:	Water	**Unit:**	µg/L
Project:	DDSD: Semi-Annual: Marsh Landing	**Sample ID:**	MB/LCS/LCSD-193463 2001C57-001DMS/MSD

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	42.9	42.9	40	107	107	80-120	0.137	20

Analyte	MS DF	MS Result	MSD Result	SPK Val	SPKRef Val	MS %REC	MSD %REC	MS/MSD Limits	RPD	RPD Limit
Phenolics	1	56.1	58.2	40	14.2	105	110	70-130	3.59	30

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

CHAIN-OF-CUSTODY RECORD

WorkOrder: 2001C57 **ClientCode: GOA**

☐ 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: DDSD: Semi-Annual: Marsh Landing

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

Requested TAT: **5 days;**

Date Received: **01/30/2020**
Date Logged: **01/30/2020**

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
2001C57-001	FAC Combined Wastewater	Water	1/30/2020 13:30	☐	B	A	E	F	G	H		C	D	A		
2001C57-002	FAC Combined Wastewater	Water	1/30/2020 13:30	☐							A			A		

Test Legend:

1	1664A_SG_W	2	1664A_W	3	608_LL_W [J]	4	624_W
5	624ACR+2CEVE_W	6	625_SCSM_W	7	AMMONIA_W	8	CN_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.

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: DDSD: Semi-Annual: Marsh Landing
Comments: Use QUOTE 192976 for any Marsh Landing projects to get correct analyte list.

Work Order: 2001C57
QC Level: LEVEL 2
Date Logged: 1/30/2020

☐ 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
2001C57-001A	FAC Combined Wastwater	Water	E1664A (HEM; Oil & Grease w/o S.G. Clean-Up)	1	1LA w/ HCl	☐	1/30/2020 13:30	5 days	None	☐	
2001C57-001B	FAC Combined Wastwater	Water	E1664A (SGT- HEM; Non-polar Material)	1	1LA w/ HCl	☐	1/30/2020 13:30	5 days	None	☐	
2001C57-001C	FAC Combined Wastwater	Water	Kelada-01 (Cyanide, Total)	1	250mL aHDPE w/ NaOH	☐	1/30/2020 13:30	5 days	None	☐	
2001C57-001D	FAC Combined Wastwater	Water	E420.4 (Phenolics)	1	250mL aG w/ H2SO4	☐	1/30/2020 13:30	5 days	None	☐	
2001C57-001E	FAC Combined Wastwater	Water	E608 (OC Pesticides+PCBs, Low-Level) w/ Florisil	1	1LA, Unpres	☐	1/30/2020 13:30	5 days	None	☐	
2001C57-001F	FAC Combined Wastwater	Water	E624 (VOCs)	2	VOA w/ HCl	☐	1/30/2020 13:30	5 days	None	☐	
2001C57-001G	FAC Combined Wastwater	Water	E624 (ACRO, ACRY, & 2-CEVE)	2	VOA, Unpres	☐	1/30/2020 13:30	5 days	None	☐	
2001C57-001H	FAC Combined Wastwater	Water	E625 (SVOCs)	1	1LA, Unpres	☐	1/30/2020 13:30	5 days	None	☐	
2001C57-002A	FAC Combined Wastwater	Water	E350.1 (Ammonia)	1	250mL aG w/ H2SO4	☐	1/30/2020 13:30	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 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

200 1C57

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, L)	Preserv.	Oil and Grease (animal/vegetable)[1] (EPA Method 1664A)	Oil and Grease (Petroleum/Mineral)[2] (EPA Method 1664A)		
ML-20-023	30-Jan-20	1330	DDSD	Semi-Annual	Wastewater	Grab	FAC Combined Wastewater	1	Amber Glass Jar	1	Hydrochloric Acid (pH<2, 4°C)	X			
ML-20-024	30-Jan-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		

	PRINTED NAME	SIGNATURE	COMPANY	DATE	TIME
Sampled by:	James E. Robinson	James E. Robinson	NRG	30-Jan-20	1330
Relinquished by:	James E. Robinson	James E. Robinson	NRG	30-Jan-20	1445
Received by:	Lilly Ortiz	Lilly Ortiz	MAI	30-Jan-20	1445
Relinquished by:					
Received by:					
Relinquished by:					
Received by:					

0.8C

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-20-025	30-Jan-20	1330	DDSD	Semi-Annual	Wastewater	Grab	FAC Combined Wastewater	1	HDPE Bottle	250	HNO3 (pH<2)	X			
ML-20-026	30-Jan-20	1330	DDSD	Semi-Annual	Wastewater	Grab	FAC Combined Wastewater	1	Amber Glass Jar	250	H_2SO_4 (pH<2, 4°C)		X		
ML-20-027	30-Jan-20	1330	DDSD	Semi-Annual	Wastewater	C-24	FAC Combined Wastewater	1	Amber Glass Jar	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		

	PRINTED NAME	SIGNATURE	COMPANY	DATE	TIME
Sampled by:	James E. Robinson	James E. Robinson	NRG	30-Jan-20	1330
Relinquished by:	James E. Robinson	James E. Robinson	NRG	30-Jan-20	1445
Received by:	Lilly Ortiz	Lilly Ortiz	MAI	30-Jan-20	1445
Relinquished by:					
Received by:					
Relinquished by:					
Received by:					

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* (EPA Method 624)	Semi-Volatile Organics (EPA Method 625)
ML-20-028	30-Jan-20	1330	DDSD	Semi-Annual	Water	Grab	FAC Combined Wastewater	1	Amber Glass	1,000	None (4°C)	X			
ML-20-029	30-Jan-20	1330	DDSD	Semi-Annual	Water	Grab	FAC Combined Wastewater	2	Clear VOA	43	HCL (ZHS, pH<2, 4°C)		X		
ML-20-030	30-Jan-20	1330	DDSD	Semi-Annual	Water	Grab	FAC Combined Wastewater	2	Clear VOA	43	None (4°C)			X	
ML-20-031	30-Jan-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. 1. VOCs- Acrolein, acrylonitrile, and 2cleave **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		

	PRINTED NAME	SIGNATURE	COMPANY	DATE	TIME
Sampled by:	James E. Robinson	James E. Robinson	NRG	30-Jan-20	1330
Relinquished by:	James E. Robinson	James E. Robinson	NRG	30-Jan-20	1445
Received by:	Libby Ortiz	Libby Ortiz	NRG	30-Jan-20	1445
Relinquished by:					
Received by:					
Relinquished by:					
Received by:					

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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:	**1/30/2020 14:45**
Project:	**DDSD: Semi-Annual: Marsh Landing**	Date Logged:	**1/30/2020**
		Received by:	Lilly Ortiz
WorkOrder №:	**2001C57** 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: 0.8°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.

"When Quality Counts"

Analytical Report

WorkOrder: 2001C55

Report Created for: NRG Energy, LLC

3201 Wilbur Avenue
Antioch, CA 94509

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

Project Received: 01/30/2020

Analytical Report reviewed & approved for release on 02/05/2020 by:

Yen Cao
Project Manager

McCampbell Analytical, Inc.
"When Quality Counts"

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

Glossary of Terms & Qualifier Definitions

Client: NRG Energy, LLC
Project: DDSD: Annual: Marsh Landing
WorkOrder: 2001C55

Glossary Abbreviation

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

McCampbell Analytical, Inc.
"When Quality Counts"

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Toll Free Telephone: (877) 252-9262 / Fax: (925) 252-9269
http://www.mccampbell.com / E-mail: main@mccampbell.com

Glossary of Terms & Qualifier Definitions

Client: NRG Energy, LLC
Project: DDSD: Annual: Marsh Landing
WorkOrder: 2001C55

Analytical Qualifiers

J	Result is less than the RL/ML but greater than the MDL. The reported concentration is an estimated value.
S	Spike recovery outside accepted recovery limits.
c1	Surrogate recovery outside of the control limits due to the dilution of the sample.

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Toll Free Telephone: (877) 252-9262 / Fax: (925) 252-9269
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Analytical Report

Client:	NRG Energy, LLC	**WorkOrder:**	2001C55
Date Received:	01/30/2020 14:45	**Extraction Method:**	E300.1
Date Prepared:	01/30/2020	**Analytical Method:**	E300.1
Project:	DDSD: Annual: Marsh Landing	**Unit:**	mg/L

Inorganic Anions by IC

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
FAC Combined Wastewater	**2001C55-001B**	**Water**	**01/30/2020 13:30**	**IC4 013020215.D**	**193222**

Analytes	Result	MDL	RL	DF	Date Analyzed
Sulfate	**35**	2.2	2.5	25	01/30/2020 18:01

Surrogates	REC (%)	Qualifiers	Limits	
Formate	0	S	90-115	01/30/2020 18:01

Analyst(s): AO Analytical Comments: c1

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Toll Free Telephone: (877) 252-9262 / Fax: (925) 252-9269
http://www.mccampbell.com / E-mail: main@mccampbell.com

Analytical Report

Client:	NRG Energy, LLC	**WorkOrder:**	2001C55
Date Received:	01/30/2020 14:45	**Extraction Method:**	SM4500-S^{-2} D-2000
Date Prepared:	01/31/2020	**Analytical Method:**	SM4500 S^{-2} D
Project:	DDSD: Annual: Marsh Landing	**Unit:**	mg/L

Total Sulfide - S

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
FAC Combined Wastewater	**2001C55-001A**	**Water**	**01/30/2020 13:30**	**SPECTROPHOTOMETER**	**193253**

Analytes	Result	Qualifiers	MDL	RL	DF	Date Analyzed
Total Sulfide	**0.047**	J	0.0073	0.050	1	01/31/2020 12:08

Analyst(s): RB

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Quality Control Report

Client:	NRG Energy, LLC	**WorkOrder:**	2001C55
Date Prepared:	01/30/2020	**BatchID:**	193222
Date Analyzed:	01/30/2020	**Extraction Method:**	E300.1
Instrument:	IC4	**Analytical Method:**	E300.1
Matrix:	Water	**Unit:**	mg/L
Project:	DDSD: Annual: Marsh Landing	**Sample ID:**	MB/LCS/LCSD-193222

QC Summary Report for E300.1

Analyte	MB Result	MDL	RL	SPK Val	MB SS %REC	MB SS Limits
Sulfate	ND	0.0860	0.100	-	-	-
Surrogate Recovery						
Formate	0.0976			0.1	98	85-115

Analyte	LCS Result	LCSD Result	SPK Val	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Limit
Sulfate	0.942	0.943	1	94	94	85-115	0.136	15
Surrogate Recovery								
Formate	0.0947	0.0946	0.10	95	95	90-115	0.0962	10

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

Quality Control Report

Client:	NRG Energy, LLC	**WorkOrder:**	2001C55
Date Prepared:	01/31/2020	**BatchID:**	193253
Date Analyzed:	01/31/2020	**Extraction Method:**	SM4500-S^{-2} D-2000
Instrument:	SPECTROPHOTOMETER	**Analytical Method:**	SM4500 S^{-2} D
Matrix:	Water	**Unit:**	mg/L
Project:	DDSD: Annual: Marsh Landing	**Sample ID:**	MB/LCS/LCSD-193253 2001C55-001AMS/MSD

QC Summary Report For SM4500 S-2D

Analyte	MB Result	MDL	RL			
Total Sulfide	ND	0.00730	0.0500	-	-	-

Analyte	LCS Result	LCSD Result	SPK Val	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Limit
Total Sulfide	0.506	0.505	0.50	101	101	80-120	0.107	20

Analyte	MS DF	MS Result	MSD Result	SPK Val	SPKRef Val	MS %REC	MSD %REC	MS/MSD Limits	RPD	RPD Limit
Total Sulfide	1	0.514	0.504	0.50	ND	93	91	80-120	2.02	20

McCampbell Analytical, Inc.
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Pittsburg, CA 94565-1701
(925) 252-9262

CHAIN-OF-CUSTODY RECORD

WorkOrder: 2001C55 **ClientCode: GOA**

☐ 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: DDSD: Annual: Marsh Landing

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

Requested TAT: **5 days;**

Date Received: **01/30/2020**
Date Logged: **01/30/2020**

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
2001C55-001	FAC Combined Wastewater	Water	1/30/2020 13:30	☐	B	A	A									

Test Legend:

1	300_1_W	2	PRDisposal Fee	3	SULFIDE_W	4	
5		6		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.

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: DDSD: Annual: Marsh Landing
Comments: Use QUOTE 192976 for any Marsh Landing projects to get correct analyte list.

Work Order: 2001C55
QC Level: LEVEL 2
Date Logged: 1/30/2020

☐ 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
2001C55-001A	FAC Combined Wastewater	Water	SM4500S2D (Total Sulfide)	1	250mL HDPE w/ NaOH+ZnAc	☐	1/30/2020 13:30	5 days	None	☐	
2001C55-001B	FAC Combined Wastewater	Water	E300.1 (Inorganic Anions) <Sulfate>	1	125mL HDPE, unprsv.	☐	1/30/2020 13:30	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 1-Annual

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

2001C55

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:	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.	Sulfide (E376.2)	Sulfate (E300.1)		
ML-20-032	30-Jan-20	1330	DDSD	Annual	Wastewater	Grab	FAC Combined Wastewater	1	HDPE Bottle	250	NaOH & ZnAc (ZHS, 4°C)	X	X*		
ML-20-033	30-Jan-20	1330	DDSD	Annual	Wastewater	Grab	FAC Combined Wastewater	1	HDPE Bottle	125	Unpreserved (4°C)	X*	X		
											HOLDING TIME:	7 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.
Title:	Environmental Specialist/Engineer		
Address:	P.O. Box 1687		**RESULTS AND PRICING PER QUOTE ID: 192976.**
	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	30-Jan-20	1330
Relinquished by:	James E. Robinson	James E. Robinson	NRG	30-Jan-20	1445
Received by:	Lilly Ortiz	Lilly Ortiz	MAI	30-Jan-20	1445
Relinquished by:					
Received by:					
Relinquished by:					
Received by:					

*DID NOT Rec'd Container for these analysis.

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

Sample Receipt Checklist

Client Name:	**NRG Energy, LLC**	Date and Time Received:	**1/30/2020 14:45**
Project:	**DDSD: Annual: Marsh Landing**	Date Logged:	**1/30/2020**
		Received by:	Kena Ponce
WorkOrder №:	**2001C55** 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: 0.8°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:

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	**27-Jan-20**
Location	**NEXT TO ADMIN BUILDING**	Scheduled	**26-Jan-21**

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	4.01	0.06%	4.01	0.06%
3.00	Gal/M	5.60	mA	5.60	0.00%	5.60	0.00%
10.00	Gal/M	9.33	mA	9.33	0.00%	9.33	0.00%
30.00	Gal/M	20.00	mA	20.00	0.00%	20.00	0.00%
10.00	Gal/M	9.33	mA	9.33	0.00%	9.33	0.00%
3.00	Gal/M	5.60	mA	5.60	0.00%	5.60	0.00%
0.00	Gal/M	4.00	mA	4.01	0.06%	4.01	0.06%

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

Totalizer Readings:	As Found	As Left
Gross:		
Net:		

Test Instruments Used During Calibration

Description	Manufacturer	Model Number	Serial Number	NIST Cert. Number
Hart Communicator	Emerson	Trex		N/A
Flow Simulator	Rosemount	8714D	14611770	14611770 (Trace#)

Notes about this calibration

All checks good, no problems identified.

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: *Matthew Nixon*

Checkout By:

Quality Management System
Certified by DNV
======ISO 9001:2008======

CALIBRATION DUE: **26-Jan-21**

Ft-950002

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

Delta Diablo

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	**April 1-June 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	Joe Moura
Duly Authorized Representative Print	**Joe Moura**
Date	7/7/2020

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

July 7, 2020

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

Subject: **2020 Second Quarterly (April 1-June 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 Second 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 April 1 through June 30, 2020. This report includes monthly flow data and quarterly analytical data required to be collected in 2020. Semiannual analytical data was submitted with the first quarterly report for 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
Marsh Landing LLC
Marsh Landing Generating Station

Attachments

Table 1:	Quarterly Analytical Results for Combined Wastewater (FAC Combined)
Table 2:	April 2020 Monthly Flow Data
Table 3:	May 2020 Monthly Flow Data
Table 4:	June 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	April - June 2020
Report Type	Quarterly

Constituent	Sample Date	Permit Limit	Result	Units
Field pH	4/23/2020	6-10	7.5	S.U.
BOD	4/23/2020	-	ND	mg/L
COD	4/23/2020	-	ND	mg/L
Arsenic	4/23/2020	0.15	0.00043 J	mg/L
Cadmium	4/23/2020	0.1	ND	mg/L
Chromium	4/23/2020	0.5	ND	mg/L
Copper	4/23/2020	0.5	0.0035	mg/L
Iron	4/23/2020	-	0.071 J	mg/L
Lead	4/23/2020	0.5	ND	mg/L
Mercury	4/23/2020	0.003	ND	mg/L
Molybdenum	4/23/2020	-	0.0013	mg/L
Nickel	4/23/2020	0.5	0.0022	mg/L
Selenium	4/23/2020	0.25	ND	mg/L
Silver	4/23/2020	0.2	ND	mg/L
Zinc	4/23/2020	1.0	0.026	mg/L
TDS	4/23/2020	-	257	mg/L
TSS	4/23/2020	-	ND	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.

S.U. = Standard units

Table 2
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	April-20
Report Type	Quarterly
Constituent	Flow
Sample Type	Continuous, measured by flow meter
Sample Date	4/1/2020 - 4/30/2020
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	4,649	19.39	
2	8,624	19.37	
3	5,559	19.10	
4	4,545	19.08	
5	0	0.00	
6	6,307	19.21	
7	11,023	19.09	
8	969	19.45	
9	3,995	19.13	
10	10,298	19.17	
11	7,504	19.08	
12	447	15.63	
13	5,240	19.26	
14	21,566	19.10	
15	0	0.00	
16	0	0.00	
17	0	0.00	
18	0	0.00	
19	0	0.00	
20	544	15.96	
21	0	0.00	
22	13,191	19.43	
23	27,359	19.09	
24	4,670	19.13	
25	7,712	19.07	
26	0	0.00	
27	2,748	19.32	
28	9,357	19.10	
29	3,536	19.18	
30	19,808	20.00	

Total Monthly Flow (gal)	179,650	Did flow exceed limits?	NO
Daily Max Flow (gpd)	27,359	Flow above daily max (30,240 gpd)?	NO
Average Monthly Flow (gpd)	5,988		

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	May-20
Report Type	Quarterly
Constituent	Flow
Sample Type	Continuous, measured by flow meter
Sample Date	5/1/2020 - 5/31/2020
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	5,884	19.15	
2	2,000	19.08	
3	0	0.00	
4	6,050	19.11	
5	6,978	19.08	
6	8,958	19.20	
7	6,061	19.10	
8	4,338	19.14	
9	6,157	19.09	
10	0	0.00	
11	0	0.00	
12	5,404	19.11	
13	6,602	19.21	
14	4,990	19.32	
15	4,400	19.10	
16	7,529	19.08	
17	0	0.00	
18	20,440	19.63	
19	21,870	19.21	
20	14,684	20.33	
21	13,448	19.12	
22	2,874	19.09	
23	8,800	19.10	
24	0	0.00	
25	4,898	20.76	
26	12,462	19.38	
27	27,360	19.12	
28	27,361	19.11	
29	27,359	19.10	
30	27,254	19.10	
31	610	19.04	

Total Monthly Flow (gal)	284,771	Did flow exceed limits?	NO
Daily Max Flow (gpd)	27,361	Flow above daily max (30,240 gpd)?	NO
Average Monthly Flow (gpd)	9,186		

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	June-20
Report Type	Quarterly
Constituent	Flow
Sample Type	Continuous, measured by flow meter
Sample Date	6/1/2020 - 6/30/2020
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	6,499	19.23	
2	12,688	19.20	
3	13,154	19.27	
4	27,224	19.26	
5	4,658	19.08	
6	0	0.00	
7	0	0.00	
8	0	0.00	
9	0	0.00	
10	4,128	20.93	
11	3,786	19.10	
12	0	0.00	
13	4,326	19.27	
14	0	0.00	
15	2,710	19.57	
16	2,633	19.05	
17	5,144	19.23	
18	5,173	19.08	
19	11,589	20.13	
20	1,821	19.07	
21	0	0.00	
22	3,074	19.13	
23	8,018	19.07	
24	3,112	19.71	
25	8,354	19.63	
26	15,257	19.17	
27	0	0.00	
28	0	0.00	
29	6,074	19.85	
30	4,031	19.13	

Total Monthly Flow (gal)	153,454	Did flow exceed limits?	NO
Daily Max Flow (gpd)	27,224	Flow above daily max (30,240 gpd)?	NO
Average Monthly Flow (gpd)	5,115		

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-20-047	4/23/20	1400	4/23/20	1400	Wastewater	Grab	7.5

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

Environmental Engineer David Frandsen

Signature: David Frandsen

Date: April 24, 2020

Sampling Technologist: James E Robinson

Signature : James E. Robinson

Date : 23-Apr-20

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Analytical Report

WorkOrder: 2004A33

Report Created for: NRG Energy, LLC

3201 Wilbur Avenue
Antioch, CA 94509

Project Contact: David Frandsen
Project P.O.: 4501896168
Project: DDSD; Quarterly

Project Received: 04/23/2020

Analytical Report reviewed & approved for release on 04/29/2020 by:

Christine Askari
Project Manager

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Glossary of Terms & Qualifier Definitions

Client: NRG Energy, LLC
Project: DDSD; Quarterly
WorkOrder: 2004A33

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: DDSD; Quarterly
WorkOrder: 2004A33

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: DDSD; Quarterly

Work Order: 2004A33
April 29, 2020

j1:

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:**	2004A33
Date Received:	04/23/2020 16:16	**Extraction Method:**	SM5210B
Date Prepared:	04/23/2020	**Analytical Method:**	SM5210 B-2001
Project:	DDSD; Quarterly	**Unit:**	mg/L

Biochemical Oxygen Demand (BOD)

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
FAC Combined Wastewater	**2004A33-001B**	**Water**	**04/23/2020 14:00**	**WetChem**	**197544**

Analytes	Result	MDL	RL	DF	Date Analyzed
BOD	ND	4.0	4.0	1	04/28/2020 11:16

Analyst(s): AL

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Analytical Report

Client:	NRG Energy, LLC	**WorkOrder:**	2004A33
Date Received:	04/23/2020 16:16	**Extraction Method:**	SM5220 D-1997
Date Prepared:	04/26/2020	**Analytical Method:**	SM5220 D-1997
Project:	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	**2004A33-001A**	**Water**	**04/23/2020 14:00**	**SPECTROPHOTOMETER**	**197610**

Analytes	Result	MDL	RL	DF	Date Analyzed
COD	ND	7.2	10	1	04/26/2020 16:08

Analyst(s): RB

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Analytical Report

Client:	NRG Energy, LLC	**WorkOrder:**	2004A33
Date Received:	04/23/2020 16:16	**Extraction Method:**	E200.8
Date Prepared:	04/25/2020	**Analytical Method:**	E200.8
Project:	DDSD; Quarterly	**Unit:**	mg/L

Metals

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
FAC Combined Wastewater	**2004A33-001E**	**Water**	**04/23/2020 14:00**	**ICP-MS3 021SMPL.D**	**197559**

Analytes	Result	Qualifiers	MDL	RL	DF	Date Analyzed
Arsenic	**0.00043**	J	0.00012	0.00050	1	04/27/2020 13:26
Cadmium	ND		0.000060	0.00050	1	04/27/2020 13:26
Chromium	ND		0.00036	0.00050	1	04/27/2020 13:26
Copper	**0.0035**		0.00043	0.00050	1	04/27/2020 13:26
Iron	**0.071**	J	0.0058	0.10	1	04/27/2020 13:26
Lead	ND		0.00032	0.00050	1	04/27/2020 13:26
Mercury	ND		0.000033	0.000050	1	04/27/2020 13:26
Molybdenum	**0.0013**		0.00021	0.00050	1	04/27/2020 13:26
Nickel	**0.0022**		0.00058	0.00050	1	04/27/2020 13:26
Selenium	ND		0.00018	0.00050	1	04/27/2020 13:26
Silver	ND		0.000042	0.00050	1	04/27/2020 13:26
Zinc	**0.026**		0.011	0.020	1	04/27/2020 13:26

Surrogates	REC (%)	Limits	
Terbium	108	70-130	04/27/2020 13:26

Analyst(s): MIG

Analytical Comments: j1

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Analytical Report

Client:	NRG Energy, LLC	**WorkOrder:**	2004A33
Date Received:	04/23/2020 16:16	**Extraction Method:**	SM2540 C-1997
Date Prepared:	04/23/2020	**Analytical Method:**	SM2540 C-1997
Project:	DDSD; Quarterly	**Unit:**	mg/L

Total Dissolved Solids

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
FAC Combined Wastewater	**2004A33-001C**	**Water**	**04/23/2020 14:00**	**WetChem**	**197539**

Analytes	Result	MDL	RL	DF	Date Analyzed
Total Dissolved Solids	**257**	10.0	10.0	1	04/27/2020 10:05

Analyst(s): AL

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Analytical Report

Client:	NRG Energy, LLC	**WorkOrder:**	2004A33
Date Received:	04/23/2020 16:16	**Extraction Method:**	SM2540 D-1997
Date Prepared:	04/24/2020	**Analytical Method:**	SM2540 D-1997
Project:	DDSD; Quarterly	**Unit:**	mg/L

Total Suspended Solids

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
FAC Combined Wastewater	**2004A33-001D**	**Water**	**04/23/2020 14:00**	**WetChem**	**197561**

Analytes	Result	MDL	RL	DF	Date Analyzed
Total Suspended Solids	ND	1.00	1.00	1	04/24/2020 14:05

Analyst(s): AL

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Quality Control Report

Client:	NRG Energy, LLC	**WorkOrder:**	2004A33
Date Prepared:	04/23/2020	**BatchID:**	197544
Date Analyzed:	04/28/2020	**Extraction Method:**	SM5210B
Instrument:	WetChem	**Analytical Method:**	SM5210 B-2001
Matrix:	Water	**Unit:**	mg/L
Project:	DDSD; Quarterly	**Sample ID:**	MB/LCS/LCSD-197544

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	204	208	198	103	105	80-120	2.43	16

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Quality Control Report

Client:	NRG Energy, LLC	**WorkOrder:**	2004A33
Date Prepared:	04/26/2020	**BatchID:**	197610
Date Analyzed:	04/26/2020	**Extraction Method:**	SM5220 D-1997
Instrument:	SPECTROPHOTOMETER	**Analytical Method:**	SM5220 D-1997
Matrix:	Water	**Unit:**	mg/L
Project:	DDSD; Quarterly	**Sample ID:**	MB/LCS/LCSD-197610 2004A33-001AMS/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	98.0	96.0	100	98	96	90-110	2.06	20

Analyte	MS DF	MS Result	MSD Result	SPK Val	SPKRef Val	MS %REC	MSD %REC	MS/MSD Limits	RPD	RPD Limit
COD	1	106	101	100	ND	106	101	80-120	4.83	20

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Quality Control Report

Client:	NRG Energy, LLC	**WorkOrder:**	2004A33
Date Prepared:	04/25/2020	**BatchID:**	197559
Date Analyzed:	04/27/2020	**Extraction Method:**	E200.8
Instrument:	ICP-MS3	**Analytical Method:**	E200.8
Matrix:	Water	**Unit:**	µg/L
Project:	DDSD; Quarterly	**Sample ID:**	MB/LCS/LCSD-197559 2004A33-001EMS/MSD

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	543			500	109	70-130

(Cont.)

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Quality Control Report

Client:	NRG Energy, LLC	**WorkOrder:**	2004A33
Date Prepared:	04/25/2020	**BatchID:**	197559
Date Analyzed:	04/27/2020	**Extraction Method:**	E200.8
Instrument:	ICP-MS3	**Analytical Method:**	E200.8
Matrix:	Water	**Unit:**	µg/L
Project:	DDSD; Quarterly	**Sample ID:**	MB/LCS/LCSD-197559 2004A33-001EMS/MSD

QC Summary Report for Metals

Analyte	LCS Result	LCSD Result	SPK Val	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Limit
Arsenic	53.4	55.2	50	107	110	85-115	3.28	20
Cadmium	52.1	53.5	50	104	107	85-115	2.67	20
Chromium	50.2	52.0	50	100	104	85-115	3.52	20
Copper	52.9	53.9	50	106	108	85-115	1.78	20
Iron	4770	5080	5000	95	102	85-115	6.40	20
Lead	51.2	53.3	50	102	107	85-115	4.07	20
Mercury	1.15	1.24	1.25	92	99	85-115	7.37	20
Molybdenum	47.8	51.2	50	96	102	85-115	6.85	20
Nickel	52.9	53.9	50	106	108	85-115	1.80	20
Selenium	53.9	55.5	50	108	111	85-115	2.81	20
Silver	51.6	53.9	50	103	108	85-115	4.27	20
Zinc	543	558	500	109	112	85-115	2.80	20
Surrogate Recovery								
Terbium	518	540	500	104	108	70-130	3.99	20

Analyte	MS DF	MS Result	MSD Result	SPK Val	SPKRef Val	MS %REC	MSD %REC	MS/MSD Limits	RPD	RPD Limit
Arsenic	1	58.0	56.2	50	ND	115	112	85-115	2.99	20
Cadmium	1	53.8	52.7	50	ND	108	105	85-115	2.14	20
Chromium	1	52.4	50.9	50	ND	105	102	85-115	2.88	20
Copper	1	57.7	56.2	50	3.48	108	105	85-115	2.63	20
Iron	1	5070	4940	5000	ND	100	97	85-115	2.72	20
Lead	1	56.0	54.9	50	ND	112	110	85-115	2.00	20
Mercury	1	1.34	1.24	1.25	ND	107	99	85-115	7.77	20
Molybdenum	1	53.4	53.6	50	1.26	104	105	85-115	0.430	20
Nickel	1	56.0	54.5	50	2.21	107	105	85-115	2.70	20
Selenium	1	54.9	56.2	50	ND	110	112	85-115	2.39	20
Silver	1	52.6	53.1	50	ND	105	106	85-115	0.965	20
Zinc	1	582	564	500	25.6	111	108	85-115	3.00	20
Surrogate Recovery										
Terbium	1	549	552	500		110	110	70-130	0.690	20

Analyte	DLT Result	DLTRef Val	%D	%D Limit

(Cont.)

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Quality Control Report

Client:	NRG Energy, LLC	**WorkOrder:**	2004A33
Date Prepared:	04/25/2020	**BatchID:**	197559
Date Analyzed:	04/27/2020	**Extraction Method:**	E200.8
Instrument:	ICP-MS3	**Analytical Method:**	E200.8
Matrix:	Water	**Unit:**	µg/L
Project:	DDSD; Quarterly	**Sample ID:**	MB/LCS/LCSD-197559 2004A33-001EMS/MSD

QC Summary Report for Metals

Analyte	DLT Result	DLTRef Val	%D	%D Limit
Arsenic	ND	ND	-	-
Cadmium	ND	ND	-	-
Chromium	ND	ND	-	-
Copper	3.23	3.479	7.16	-
Iron	ND	ND	-	-
Lead	ND	ND	-	-
Mercury	ND	ND	-	-
Molybdenum	ND	1.255	-	-
Nickel	ND	2.211	-	-
Selenium	ND	ND	-	-
Silver	ND	ND	-	-
Zinc	ND	25.59	-	-

%D Control Limit applied to analytes with concentrations greater than 25 times the reporting limits.

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Quality Control Report

Client:	NRG Energy, LLC	**WorkOrder:**	2004A33
Date Prepared:	04/23/2020	**BatchID:**	197539
Date Analyzed:	04/27/2020	**Extraction Method:**	SM2540 C-1997
Instrument:	WetChem	**Analytical Method:**	SM2540 C-1997
Matrix:	Water	**Unit:**	mg/L
Project:	DDSD; Quarterly	**Sample ID:**	MB/LCS/LCSD-197539 2004A33-001C

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	994	1030	1000	99	103	80-120	3.27	10

Analyte	SAMP Result	DUP Result	RPD	RPD Limit
Total Dissolved Solids	257	237	8.10	10

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Quality Control Report

Client:	NRG Energy, LLC	**WorkOrder:**	2004A33
Date Prepared:	04/24/2020	**BatchID:**	197561
Date Analyzed:	04/24/2020	**Extraction Method:**	SM2540 D-1997
Instrument:	WetChem	**Analytical Method:**	SM2540 D-1997
Matrix:	Water	**Unit:**	mg/L
Project:	DDSD; Quarterly	**Sample ID:**	MB/LCS/LCSD-197561 2004A33-001D

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	96.0	96.0	100	96	96	80-120	0	10

Analyte	SAMP Result	DUP Result	RPD	RPD Limit
Total Suspended Solids	ND	ND	N/A	10

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CHAIN-OF-CUSTODY RECORD

WorkOrder: 2004A33 **ClientCode: GOA**

☐ 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: 4501679786
Project: 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: **04/23/2020**
Date Logged: **04/23/2020**

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
2004A33-001	FAC Combined Wastewater	Water	4/23/2020 14:00	☐	B	A	E	A	C	D						

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: Agustina Venegas**

Comments: Use QUOTE 192976 for any Marsh Landing projects to get correct analyte list.

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.

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: DDSD; Quarterly
Comments: Use QUOTE 192976 for any Marsh Landing projects to get correct analyte list.

Work Order: 2004A33
QC Level: LEVEL 2
Date Logged: 4/23/2020

☐ 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
2004A33-001A	FAC Combined Wastewater	Water	SM5220D (COD)	2	aVOA w/ H2SO4	☐	4/23/2020 14:00	5 days	Present	☐	
2004A33-001B	FAC Combined Wastewater	Water	SM5210B (BOD)	1	500mL HDPE, unprsv.	☐	4/23/2020 14:00	7 days	Present	☐	
2004A33-001C	FAC Combined Wastewater	Water	SM2540C (TDS)	1	500mL HDPE, unprsv.	☐	4/23/2020 14:00	5 days	Present	☐	
2004A33-001D	FAC Combined Wastewater	Water	SM2540D (TSS)	1	1L HDPE, unprsv.	☐	4/23/2020 14:00	5 days	Present	☐	
2004A33-001E	FAC Combined Wastewater	Water	E200.8 (Metals) <Arsenic, Cadmium, Chromium, Copper, Iron, Lead, Mercury, Molybdenum, Nickel, Selenium, Silver, Zinc>	1	250mL HDPE w/ HNO3	☐	4/23/2020 14:00	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.

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

2004A33

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-20-042	23-Apr-20	1400	DDSD	Quarterly	Wastewater	C-24	FAC Combined Wastewater	2	Amber VOAs	43	H_2SO_4 (pH<2, 4°C)	X			
ML-20-043	23-Apr-20	1400	DDSD	Quarterly	Wastewater	C-24	FAC Combined Wastewater	1	HDPE Bottle	500	None (ZHS, 4°C)		X		
ML-20-044	23-Apr-20	1400	DDSD	Quarterly	Wastewater	C-24	FAC Combined Wastewater	1	HDPE Bottle	500	None (4°C)			X	
ML-20-045	23-Apr-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		**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		***Please REPORT IN PPM***
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		

	PRINTED NAME	SIGNATURE	COMPANY	DATE	TIME
Sampled by:	James E. Robinson	James E. Robinson	NRG	23-Apr-20	1400
Relinquished by:	James E. Robinson	James E. Robinson	NRG	23-Apr-20	
Received by:	TP		MAI	4/23/2020	16:14
Relinquished by:					
Received by:					
Relinquished by:					
Received by:					

0.2°C wet

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	
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-20-046	23-Apr-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		**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		***Please REPORT IN PPM***
	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	23-Apr-20	1400
Relinquished by:	James Robinson	James E. Robinson	NRG	23-Apr-20	
Received by:	TP		MAI	4/23/2020	16:10
Relinquished by:					
Received by:					
Relinquished by:					
Received by:					

10.2° wet

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Sample Receipt Checklist

Client Name: **NRG Energy, LLC**
Project: **DDSD; Quarterly**

WorkOrder №: **2004A33** Matrix: Water
Carrier: Client Drop-In

Date and Time Received: **4/23/2020 16:16**
Date Logged: **4/23/2020**
Received by: Tina Perez
Logged by: Agustina Venegas

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: 6.2°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: