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Project Title:	Palomar Energy Project Compliance
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Description:	Q3 2024 - Quarterly Operational Report
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Mo (Moses) Peram
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2300 Harveson, Place,
Escondido CA 92029
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Compliance Project Manager
California Energy Commission (CEC)
Siting, Transmission and Environmental Protection Division
1516 Ninth Street
Sacramento, CA 95814

October 30, 2024

SUBJECT: Palomar Energy Project (PEC) Quarterly Operational Report

Dear CEC Compliance Project Manager:

In accordance with Docket No. 01-AFC-24C, Finalized Conditions of Certification #AQ-SC7, I am submitting the Quarterly Operational Report for the period of July 1, 2024, through September 30, 2024 and certify accuracy of the statements therein.

APCD issued a notice of violation (NOV) to SDG&E, Palomar Energy Center for not providing proper records during a unit 2 startup on February 10, 2023. The NOV was cited on May 30, 2024. We corrected the error on June 6, 2024.

San Diego Gas & Electric is committed to the safe and environmentally responsible operation of its facilities. If you have any questions or concerns, please contact me via phone or email.

Sincerely,

Moses Peram

Mo (Moses) Peram

Enclosures:

- Palomar Energy Project, 3rd Quarter 2024, Quarterly Operational Report (AQ-SC7)
- Attachment 1: SDAPCD Quarterly Report
- Attachment 2: PEC – Hazardous Air Pollutants

cc: Counts, Kevin: SDG&E- Electric Generation
Dobbs, Jason: SDG&E- Electric Generation
Lyons, Steve: SDG&E – Electric Generation
Mesquita, David: SDG&E – Electric Generation
Yerbury, Stephen: SDG&E – Electric Generation
Sarosa, Sugandi: SDG&E – Electric Generation
Hardman, Charles: SDG&E – Environmental Services

Palomar Energy Project

3rd Quarter 2024 Quarterly Operational Report (AQ-SC7)

Submitted:

October 30, 2024

1. Introduction

The Palomar Energy Project, also known as the Palomar Energy Center (PEC), is a 588 MW (nominal) combined cycle gas turbine electric generating plant. The facility is comprised of two General Electric Frame 7FA combustion turbine generators (CTG's), each with a nominal rating of 176 MW. Each of the CTG's is equipped with a Dry Low NO_x burner system, a heat recovery steam generator, auxiliary duct burners, an oxidation catalyst, and a selective catalytic reduction (SCR) unit to control atmospheric emissions. The Palomar Energy Project fires pipeline quality natural gas exclusively.

On-going operational performance of the Palomar Energy Project must be reported to the San Diego Air Pollution Control District (SDAPCD) and the California Energy Commission (CEC) on a quarterly basis. Specific parameters that must be reported are referenced in the various Final Conditions of Certification (FCOC) issued by the California Energy Commission. Final conditions were amended and approved by the CEC on December 13, 2017 (Docket Number 01-AFC-24C). This report is submitted in accordance with Condition AQ-SC7 of the FCOC demonstrating compliance with the on-going conditions.

2. On-going Operations Commencement Dates

The on-going conditions began applying to each CTG on the dates shown below:

Unit	Commencement of On-Going Operations	
	Date	Time
CTG-1	27-Jan-2006	12:00
CTG-2	27-Jan-2006	12:00

3. Compliance with Specific FCOC Conditions

As described in conditions of the FCOC, the Quarterly Operational Report must include project owner certification of compliance with the specific conditions of the FCOC. This information is presented in the following sections. Instances of non-compliance and any corrective measures taken are specifically noted where applicable. As required by FCOC

conditions the site and data are available for inspection by representatives of the District, ARB, or Energy Commission. Data is retained for a minimum of 5 Years.

4. Project owner complied with all conditions for current quarter. See complete list of certifications below.

a. Cooling Tower

Project owner certifies compliance with **AQ-SC8, AQ-SC9, and AQ-22**. The Palomar Energy Project's cooling tower circulating water daily flow is monitored and recorded. Total Dissolved Solids (TDS) and PM10 emissions (based on quarterly flow and water quality testing) are below applicable limits. The site and data are available for inspection.

b. Emergency Engine

Project owner certifies compliance with **AQ-SC13** The Palomar Energy Project conducts testing and maintenance of the emergency engine only during allowable times (between 10:00 am and 3:00 pm). The emergency engine runs on Public Utility Commission (PUC) pipeline quality natural gas. The engine is maintained according to manufacturer's specifications, without visible emissions, and did not contribute to a public nuisance. The engine was operated exclusively during emergencies, testing and maintenance. The site and data are available for inspection. Initial source testing was completed in 2021 and source testing shall be conducted every three years as required in accordance with permit condition 14. The most recent annual source test was completed on June 26, 2024. The test protocol was emailed to SDAPCD, Alex Nyul on May 29, 2024 and the final report will be emailed to Keith Winstead.

c. General Maintenance

Project owner certifies compliance with **AQ-1** All equipment at the Palomar Energy Project has been properly maintained and kept in good operating condition at all times.

d. Natural Gas Quality

Project owner certifies compliance with **AQ-2, and AQ-EEG4**. The Palomar Energy Project's combustion devices are fueled exclusively by Public Utility Commission (PUC) pipeline quality natural gas. The site and data are available for inspection.

e. SO2 Offsets

Project owner certifies compliance with **AQ-3**. Palomar Energy Project complies with provisions of 40 CFR 73 to offset, hold and retire SO2 allowances. The site and data are available for inspection.

f. RATA/Source Testing & Source Testing Based Emission Limits

Project owner certifies compliance with RATA/source testing requirements, and NOx, CO, VOC, Ammonia and Particulate Matter limits as listed in **AQ-8, AQ-12, AQ-34, and AQ-35**. Initial source testing was completed in 2006 and annual RATA/source testing has been conducted each year as required. In accordance with AQ-4, AQ-11, AQ-32, AQ-33, and AQ-35, the most recent annual RATA/source test was completed on May 6, 2022. The test protocol was emailed to SDAPCD, Nathan Gutzwiller on May 24, 2023 and the final report was emailed to Keith Winstead on October 31, 2023 for unit 1 and November 19, 2023 for unit 2 re-test.

g. CEMS & CEMS Based Emission Limits

Project owner certifies compliance with NOX, CO and VOC limits as listed in **AQ-5, AQ-6, AQ-7, AQ-9, AQ-10, AQ-14, AQ-15, AQ-16, AQ-17, AQ-36, AQ-38, AQ-39, and AQ-40**. Compliance is based on Continuous Emission Monitors which have been certified, maintained and operated in accordance with CEMS Protocol approved by the District and as required by AQ-31, and AQ-36 through AQ-41. All exceedances, if any, are reported to the SDAPCD within 96 hours and included in the SDAPCD Quarterly Excess Emissions Reports in accordance with AQ-39. CEMS records are typically inspected semi-annually by the SDAPCD and Quarterly Excess Emission and Monitor Downtime Reports are sent to SDAPCD. See Attachment 1: *PEC – SDAPCD Quarterly Report*. The site and data are available for inspection.

h. Visible Emissions

Project owner certifies compliance with **AQ-13 and AQ-EEG5**. There were no documented visible emissions during the quarter.

i. 12-Month Rolling Mass Emissions

Project owner certifies compliance with **AQ-18, AQ-19, AQ-20, and AQ-21**. There were no exceedances of rolling 12-calendar-month mass emission limits for NO_x, CO, VOC, PM₁₀, SO₂ and Hazardous Air Pollutants (HAPs). There were no changes to the annual emission calculation protocol (initial approval received by District). Rolling 12-calendar month HAPs emissions data are provided in Attachment 2: *PEC – Hazardous Air Pollutants*. The site and data are available for inspection.

j. Ammonia Injection

Project owner certifies compliance with **AQ-23, AQ-24, AQ-25, and AQ-26**. The Palomar Energy Project's automatic ammonia injection system delivers 19% aqueous ammonia at all times that SCR outlet temperature is 510 degrees Fahrenheit or greater. Flow control equipment is installed, calibrated and maintained in accordance with District approved protocol. Flow rate is continuously controlled and recorded. The site and data are available for inspection.

k. Startup/Shutdown/Tuning/Low Load Operations & Operational Monitoring

Project owner certifies compliance with **AQ-27, AQ-28, AQ-29, AQ-30, AQ-42, AQ-43 and AQ-44**. The Palomar Energy project has complied with all time limitations for startup, shutdown, tuning and low load periods of operation. Tuning, if any in current quarter, is only conducted on one turbine at any given time. All operational data monitors measuring fuel flow, ammonia injection rates, SCR outlet temperatures, turbine power output (MW), turbine reheat bowl temperatures and operating hours are installed, recording and maintained in accordance with Final Conditions. The site and data are available for inspection.

l. Site Access & Additional Data Requests

Project owner certifies compliance with **AQ-45, AQ-47, AQ-49, and AQ-EEG14**. All records required by the District Permit are maintained on site for a minimum of five years. Site access and required safety equipment are provided upon request to the SDAPCD. Additional source testing for specific toxic air contaminants listed in AQ-47

and additional requirements of the Air Toxics “Hot Spots” Information and Assessment Act shall be met upon written request from the district.



Mo (Moses) Peram
Sr. Environmental Specialist
2300 Harveson Place.
Escondido, CA 92029
Ph: 760-432-2507

APCD Compliance
San Diego Air Pollution Control District
10124 Old Grove Road
San Diego, CA 92131
Email: apcdcomp@sdcounty.ca.gov

October 21, 2024

SUBJECT: Quarterly Excess Emission and Monitor Downtime Reports

Dear APCD Compliance:

On behalf of SDG&E, I am submitting Quarterly Excess Emissions and Monitor Downtime Reports for SDG&E – Palomar Energy Center in accordance with SDAPCD Rule 19.2.

San Diego Gas & Electric is committed to the highest level of safety and environmental stewardship. If you have any questions, please feel free to contact me via phone or email.

Sincerely,

A handwritten signature in black ink, appearing to read "Mo (Moses) Peram", is written over a light blue horizontal line.

Mo (Moses) Peram

cc: Counts, Kevin: SDG&E – Electric Generation
Hardman, Charles: SDG&E – Environmental Services
Wheeler, Devin: San Diego Air Pollution Control District
Lyons, Steve: SDG&E – Electric Generation
Mesquita, David: SDG&E – Electric Generation
Dobbs, Jason: SDG&E - Electric Generation
Sarosa, Sugandi: SDG&E – Electric Generation
Sterling Ross – SDG&E - Environmental Services



SDG&E – Palomar Energy Center
Quarterly Excess Emissions and Monitor Downtime Report

Name of Company: SDG&E – Palomar Energy Center, Unit 1
Address: 2300 Harveson Place
Escondido, CA 92029

Report Period 2024 Q3

Operating Time

974 Hrs

EXCESS EMISSIONS	SU/SD	Control Equip Malfunction	Process Problems	Other Known	Other Unknown	Total (Hrs)	Total (%)
NOx		0	0	0	0	0	0.0
CO		0	0	0	0	0	0.0

Downtime	Monitor Malfunction	Non- Monitor Malfunction	QA / Calibration	Other Known	Other Unknown	Total (Hrs)	Total (%)
NOx		0	4	0	0	4	0.4
CO		0	4	0	0	4	0.4

The information in these reports was compiled by the facility's CEMS using Custom Instrumentation Services Corporation (CiSCO) CeDAR software and is believed to be true, accurate and complete.

Name: Kevin Counts

Signature: 

Title: Production Manager, Electric Generation

Date: 10/21/2024



SDG&E – Palomar Energy Center
Quarterly Excess Emissions and Monitor Downtime Report

Name of Company: SDG&E – Palomar Energy Center, Unit 2
Address: 2300 Harveson Place
Escondido, CA 92029

Report Period 2024 Q3

Operating Time

1103 Hrs

EXCESS EMISSIONS	SU/SD	Control Equip Malfunction	Process Problems	Other Known	Other Unknown	Total (Hrs)	Total (%)
NOx		0	0	0	0	0	0.0
CO		0	0	0	0	0	0.0

Downtime	Monitor Malfunction	Non- Monitor Malfunction	QA / Calibration	Other Known	Other Unknown	Total (Hrs)	Total (%)
NOx		0	5	0	0	5	0.5
CO		0	5	0	0	5	0.5

The information in these reports was compiled by the Facility's CEMS using Custom Instrumentation Services Corporation (CiSCO) CeDAR software and is believed to be true, accurate and complete.

Name: Kevin Counts

Signature: 

Title: Production Manager, Electric Generation

Date: 10/21/2024

SDG&E - Palomar Energy Center

2300 Harveson Place, Escondido, CA 92029

Rolling 12 Month HAPs: 1 of 3

September 2024 12-Month Rolling

ORGANIC HAPs

Month	Acetaldehyde	Acrolein	Benzene	1,3-Butadiene	Ethylbenzene	Formaldehyde	Hexane	Naphthalene	Propylene	Propylene Oxide	Toluene	Xylene (total)
10 2023	0.217	0.000	0.000	0.000	0.000	2.161	0.556	0.004	1.655	0.103	0.445	0.000
11 2023	0.208	0.000	0.000	0.000	0.000	2.089	0.535	0.003	1.593	0.099	0.427	0.000
12 2023	0.221	0.000	0.000	0.000	0.000	2.220	0.568	0.004	1.692	0.105	0.454	0.000
01 2024	0.221	0.000	0.000	0.000	0.000	2.233	0.568	0.004	1.692	0.105	0.452	0.000
02 2024	0.189	0.000	0.000	0.000	0.000	1.920	0.486	0.003	1.448	0.090	0.386	0.000
03 2024	0.178	0.000	0.000	0.000	0.000	1.808	0.458	0.003	1.362	0.084	0.363	0.000
04 2024	0.178	0.000	0.000	0.000	0.000	1.808	0.458	0.003	1.362	0.084	0.363	0.000
05 2024	0.178	0.000	0.000	0.000	0.000	1.809	0.458	0.003	1.363	0.084	0.363	0.000
06 2024	0.185	0.000	0.000	0.000	0.000	1.873	0.474	0.003	1.412	0.088	0.376	0.000
07 2024	0.220	0.000	0.000	0.000	0.000	2.237	0.565	0.004	1.681	0.104	0.447	0.000
08 2024	0.211	0.000	0.000	0.000	0.000	2.140	0.541	0.003	1.610	0.100	0.428	0.000
09 2024	0.205	0.000	0.000	0.000	0.000	2.090	0.527	0.003	1.569	0.097	0.417	0.000

All values in tons

SDG&E - Palomar Energy Center

2300 Harveson Place, Escondido, CA 92029

Rolling 12 Month HAPs: 2 of 3

September 2024 12-Month Rolling

COMPOSITE PAHs

Month	Acenaphthene	Acenaphthylene	Anthracene	Benzo(e) pyrene	Benzo(g,h,i) perylene	Dibenz(a,h) anthracene	Fluoranthene	Fluorene	Phenanthrene	Pyrene
10 2023	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.001	0.000
11 2023	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.001	0.000
12 2023	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.001	0.000
01 2024	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.001	0.000
02 2024	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.001	0.000
03 2024	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.001	0.000
04 2024	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.001	0.000
05 2024	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.001	0.000
06 2024	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.001	0.000
07 2024	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.001	0.000
08 2024	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.001	0.000
09 2024	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.001	0.000

All values in tons

SDG&E - Palomar Energy Center

2300 Harveson Place, Escondido, CA 92029

Rolling 12 Month HAPs: 3 of 3

September 2024 12-Month Rolling

Non-Composite PAHs

Month	Benzo(a) anthracene	Benzo(a) pyrene	Benzo(b) fluoranthene	Benzo(k) fluoranthene	Chrysene	Indeno(1,2,3-cd) pyrene	Facility Total HAPs
10 2023	0.000	0.000	0.000	0.000	0.000	0.000	5.140
11 2023	0.000	0.000	0.000	0.000	0.000	0.000	4.956
12 2023	0.000	0.000	0.000	0.000	0.000	0.000	5.265
01 2024	0.000	0.000	0.000	0.000	0.000	0.000	5.277
02 2024	0.000	0.000	0.000	0.000	0.000	0.000	4.523
03 2024	0.000	0.000	0.000	0.000	0.000	0.000	4.258
04 2024	0.000	0.000	0.000	0.000	0.000	0.000	4.258
05 2024	0.000	0.000	0.000	0.000	0.000	0.000	4.259
06 2024	0.000	0.000	0.000	0.000	0.000	0.000	4.412
07 2024	0.000	0.000	0.000	0.000	0.000	0.000	5.259
08 2024	0.000	0.000	0.000	0.000	0.000	0.000	5.035
09 2024	0.000	0.000	0.000	0.000	0.000	0.000	4.911

All values in tons