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CALIFORNIA ENERGY COMMISSION

CALIFORNIA NATURAL RESOURCES AGENCY

STATEMENT OF STAFF APPROVAL OF POST CERTIFICATION CHANGE

COSUMNES POWER PLANT
(01-AFC-19C)

On January 23, 2025, the Sacramento Municipal Utility District Finance Authority (SFA), the project owner, filed a Post Certification Petition for Changes in Project Design, Operation or Performance and Amendments to the Commission Decision (Petition) (TN 261258) with the California Energy Commission (CEC) requesting to amend the Cosumnes Power Plant (CPP) Final Commission Decision (Final Decision).

The CPP is a 603-megawatt, combined-cycle, natural gas-fired power facility, certified by the CEC in September 2003. CPP began commercial operation in February 2006 and is located at 14295 Clay East Road in Sacramento County.

DESCRIPTION OF PROPOSED CHANGE

The Axial Fuel Staging (AFS) Combustor Upgrade Project would allow the turbine to turn down from 40 percent to 26 percent of turbine load while maintaining current NOx and CO emission concentrations. This modification would reduce the minimum fuel burn up to 25 percent and expands the turbine lower load range by approximately 100 MWs. This change is not expected to result in an increase in either criteria or toxic air emissions.

To access the petition to amend, go to the CEC's project webpage, https://www.energy.ca.gov/powerplant/combined-cycle/cosumnes-power-plant. In the box labeled "Compliance Proceeding" click on the Docket Log (01-AFC-19C) and locate the petition by the transaction number noted above.

CEC STAFF REVIEW AND CONCLUSIONS

California Code of Regulations, Title 20, Section 1769(a)(1) requires a project owner to petition the CEC for the approval of any change the project owner proposes to the project design, operation, or performance requirements of a certified facility. Pursuant to 1769(a)(3)(A), the petition may be approved by CEC staff (staff) only if the following criteria are met:

i. There is no possibility that the change may have a significant impact on the environment, or the change is exempt from the California Environmental Quality Act;

ii. The changes would not cause the project to fail to comply with any applicable laws, ordinances, regulations, or standards (LORS); and

iii. The changes will not require a change to, or deletion of, a condition of certification adopted by the Commission in the Final Decision or subsequent amendments.

Section 1769(a)(3)(B) allows staff to approve changes to air quality conditions of certification provided that:

i. The criteria in subdivisions (a)(3)(A)(i) and (ii) are met; and

ii. No daily, quarterly, annual or other emission limit will be increased as a result of the change.

Staff reviewed the petition for potential environmental effects and consistency with LORS. Staff's conclusions for all technical and environmental areas are summarized in **Table 1**.

TABLE 1
Summary of Conclusions for all Technical and Environmental Areas

Technical Areas Reviewed	CEQA				Conforms with applicable LORS
	Potentially Significant Impact	Less Than Significant Impact with Mitigation (with Revised or New COCs)	Less Than Significant Impact (with or without Existing COCs)	No Impact	
Air Quality		X			X
Biological Resources			X		X
Cultural Resources				X	X
Efficiency				X	
Facility Design					X
Geological and Paleontological Resources			X		X
Hazardous Materials Management			X		X
Land Use			X		X
Noise and Vibration			X		X
Public Health			X		X
Reliability				X	
Socioeconomics				X	X
Soil and Water Resources				X	X
Traffic and Transportation			X		X
Transmission Line Safety and Nuisance			X		X
Transmission System Engineering					X
Visual Resources			X		X
Waste Management				X	X
Worker Safety and Fire Protection			X		X
Areas shown in gray are not subject to CEQA consideration or have no applicable LORS the project must comply with.					

Staff has determined that the modified project would continue to comply with applicable LORS, and the project change would not result in any significant adverse environmental impacts or require a change to any conditions of certification (COCs), other than the changes to air quality conditions of certification. The bases for each of staff's conclusions are provided below:

AIR QUALITY

During construction and installation of the AFS turbine upgrade and the carbon monoxide analyzers, the project is expected to have minor emissions from construction equipment and vehicle use. These emissions would be mitigated with dust control practices and cleanest available tier engine construction equipment. Construction would be short-term of approximately 35 days. The implementation of **AQ-SC1** through **AQ-SC4** would minimize construction impacts to a less than significant level.

During operations, the proposed project would not result in an increase in any air quality or greenhouse gas impacts beyond those analyzed in the Commission Decision or subsequently approved petitions to amend. These turbine upgrades are not expected to result in any increase in criteria pollutants or greenhouse gas emissions during operations after the AFS turbine upgrade. CEC staff proposes to revise Conditions of Certification **AQ-7**, **AQ-10**, **AQ-16**, **AQ-21**, **AQ-23**, **and AQ-24** to be consistent with the revised District permit. These revisions would decrease quarterly and annual emission limits for nitrogen oxides (NOx), carbon monoxide (CO) and particulate matter with a diameter of 10 micrometers or less (PM10) and allow for source testing of volatile organic compound (VOC) and PM10 to once every other year. Staff also proposes to modify COCs **AQ-8**, **AQ-9**, and **AQ-10** to now show fine particulate matter with a diameter of 2.5 micrometers or less (PM2.5) emission limits in separate rows to be consistent with the South Coast Air Quality Management District (SMAQMD) permit conditions. No actual emission limit is changing in these conditions for PM2.5. Staff also proposes to incorporate a permit condition from the District permit that is not present in the current COCs, with a new COC **AQ-35**. This new condition would incorporate new monitoring and reporting requirements for the project.

The project would continue to comply with applicable federal, state, and local air quality LORS after the implementation of the proposed changes. Please see the Air Quality, Public Health, and Greenhouse Gas analysis for more details located at the end of this document.

BIOLOGICAL RESOURCES

The proposed modifications would occur in previously disturbed and developed areas. The proposed activities would be located within Unit 2 and Unit 3 turbine areas

between September to November. No ground disturbance, vegetation removal, or work outside the project footprint would be required. However, the use of heavy equipment (e.g., cranes and welding units) and increased vehicle traffic has the potential to impact the California tiger salamander (*Ambystoma californiense*), specifically the Central California Distinct Population Segment (DPS).

The California tiger salamander (Central California DPS) is listed as a threatened species under both the federal Endangered Species Act (ESA) and the California Endangered Species Act (CESA). At the time the facility was originally licensed the species was not listed and was considered a federal candidate and a California species of special concern. The species is generally active during the rainy season (November through March), and several individuals were observed onsite in February 2025, including near the proposed work areas. Although construction is planned to occur primarily prior to the peak activity season (November through April), individuals may be present during November depending on rainfall conditions. Potential impacts include direct mortality from vehicle or equipment strikes, particularly if individuals are present on paved or gravel surfaces during construction work activities.

The project owner has obtained coverage under the Sacramento Municipal Utility District Operations, Maintenance, and New Construction Habitat Conservation Plan (June 2024), a U.S. Fish and Wildlife Service (USFWS) Section 10 Habitat Conservation Plan (HCP) that includes incidental take authorization for the California tiger salamander. In accordance with Condition of Certification (COC) **BIO-5**, the HCP and its applicable avoidance and minimization measures would be incorporated into the Biological Resources Mitigation Implementation and Monitoring Plan (BRMIMP) upon review and approval by the CEC Compliance Project Manager (CPM). In addition, the project owner is coordinating with the California Department of Fish and Wildlife (CDFW) to obtain a Section 2081 Incidental Take Permit under CESA for activities covered under the SMUD HCP. Once issued, the permit and its conditions would also be submitted to the CPM and, upon approval, incorporated into the BRMIMP.

Until the state 2081(b) permit is finalized, full avoidance of take of California tiger salamander is required in compliance with CESA. Full avoidance of take includes having an approved Designated Biologist conduct pre-activity surveys, delay vehicle or equipment movement if the species is detected, and implement protective measures such as biological monitoring, exclusion zones, and strict adherence to equipment and vehicle movement protocols to prevent potential take in compliance with existing COCs. Any California tiger salamanders encountered during implementation of the proposed project modifications must be avoided and allowed to leave the area unharmed. The

Designated Biologist must also possess a valid Federal 10(a)(1)(A) permit to conduct any activities that could result in take. While this requirement is not currently included in **BIO-1**, it will need to be incorporated once all applicable state and federal authorizations to handle and relocate California tiger salamander are issued.

Impacts would be minimized or avoided with the implementation of existing conditions of certification, including **BIO-1** (Designated Biologist Selection), **BIO-2** (Designated Biologist Duties), **BIO-3** (Designated Biologist Authority), **BIO-4** (Worker Environmental Awareness Program), **BIO-13** (Construction Mitigation Management to Avoid Harassment or Harm), and **BIO-18** (Surveys). By implementing these conditions, impacts to biological resources would be less than significant and the project would remain in compliance with all LORS.

CULTURAL RESOURCES

There are three known archaeological sites within or adjacent to the project site, and during construction of the project facility an additional 3 prehistoric isolates were found. However, there are currently no known cultural resources within the project area that could be impacted by the proposed project changes. The proposed project changes do not include any ground disturbing activities, so there is no potential to impact potentially buried cultural resources. Additionally, the proposed project changes would use existing onsite equipment laydown/parking areas used for the construction of the original facility. As such, there are no potential for significant impacts to cultural resources. The project would comply with applicable LORS.

EFFICIENCY

The Axial Fuel Staging Combustor Upgrade would increase the effective capacity output, expand the operational load range, and slightly increase thermal efficiency through reduced fuel consumption. This would increase the power plant's maximum net output at the interconnection point. New CO analyzers would also be installed upstream of the oxidation catalysts to support combustion tuning; these analyzers do not impact the power plant's efficiency. No LORS apply to power plant efficiency. There would be no adverse impact on power plant efficiency.

FACILITY DESIGN

The modifications proposed in this petition would not involve construction. Therefore, the proposed project modifications would not affect the facility design or require any changes to the existing COCs. The project would comply with applicable LORS.

GEOLOGICAL AND PALEONTOLOGICAL RESOURCES

This Petition to Amend (PTA) proposes to upgrade the existing combustion turbines of the CPP. According to the PTA, the proposed modification would not result in any ground disturbance and therefore geological and paleontological resources would not be impacted. The modification would conform to applicable LORS related to geological and paleontological resources and changes to the existing COCs would not be required.

HAZARDOUS MATERIALS MANAGEMENT

The proposed modifications to install the AFS technology and carbon monoxide analyzers would not use extremely hazardous materials during construction. Hazardous materials such as gasoline, solvents, lubricants, paints, and welding gases would be used in minimal quantities during the construction phase, posing no significant risk to workers or the offsite public. Hazardous materials would be stored, handled, and used in accordance with applicable LORS. Compliance with applicable LORS would ensure that impacts related to hazardous materials management would be less than significant. Therefore, the proposed project modification would have a less than significant impact on the offsite public or the environment.

LAND USE

The proposed modifications to install the AFS technology and carbon monoxide analyzers are equivalent to maintenance and software update activities. All installation activities would take place within CPP's HRSGs and CEMs buildings. The proposed modifications would not affect land use or require any changes to the existing land use COCs. The project would remain in compliance with all applicable LORS related to land use.

NOISE AND VIBRATION

Activities associated with this petition to amend would be identical to those that take place during normal maintenance events and scheduled outages. Any noise generated during these activities would be low, temporary, and intermittent. Therefore, the generated noise would result in a less-than-significant impact with the implementation of the existing noise COCs in the Decision.

The Axial Fuel Staging Combustor Upgrade and CO analyzer installation would not increase noise at nearby residences. The operational noise would not be affected as a result of this petition to amend. Furthermore, the project would continue to meet operational noise requirements established in the Decision. Therefore, the modifications proposed in this petition would create a less than significant impact due to operational noise. The project would comply with applicable LORS.

PUBLIC HEALTH

During construction and installation of the AFS turbine upgrade and the carbon monoxide analyzers the project is expected to have minor emissions from construction equipment and vehicle use. These emissions would be mitigated with dust control practices and cleanest available tier engine usage. Construction would be short-term of approximately 35 days. Implementation of **AQ-SC1** through **AQ-SC4** would minimize construction impacts to a less than significant level.

During operations, the proposed project would not result in an increase in public health impacts beyond those analyzed in the Commission Decision or subsequently approved petitions to amend and is not expected to result in any increase in either criteria or toxic air emissions during operations after the AFS turbine upgrade. The proposed modifications do not require changes to the COCs for Public Health. The project would remain in compliance with all LORS related to public health.

Therefore, the public health impacts of the proposed modifications would be less than significant and would not require additional mitigation measures. Please see the Air Quality, Public Health, and Greenhouse Gas analysis for more details.

RELIABILITY

The modifications proposed in this petition would not adversely affect the power plant's overall reliability. The additional MW output enabled by the Axial Fuel Staging upgrade would enhance grid reliability by serving the transmission grid to which the project is connected. No LORS apply to power plant reliability.

SOCIOECONOMICS

The proposed modifications to install the AFS technology and carbon monoxide analyzers are equivalent to maintenance and software update activities. CPP operations and maintenance staff would conduct the installation of the new components so no new workforce employees would be retained by the project owner therefore, the proposed project modifications would not affect socioeconomics., The project would remain in compliance with all LORS related to socioeconomics.

SOIL AND WATER

The petition proposes to upgrade the existing combustion turbines of the CPP. According to the PTA, the proposed modification would not result in any ground disturbance and therefore soil and water resources would not be impacted. The modification would conform to applicable LORS related to soil and water resources and changes to the existing COCs would not be required.

TRAFFIC AND TRANSPORTATION

The proposed installation of the AFS technology and carbon monoxide analyzers are equivalent to maintenance and software update activities. These activities would not create more traffic above the existing background traffic identified in the Decision. Therefore, the proposed project modifications would not affect traffic and transportation or require any changes to the existing traffic and transportation COCs. The project would remain in compliance with all applicable LORS related to traffic and transportation.

TRANSMISSION LINE SAFETY AND NUISANCE

The installation of the AFS technology and carbon monoxide analyzers would take place within the existing HRSGs and CEMS buildings, therefore the proposed project modifications would not affect Transmission Line Safety and Nuisance or require any changes to the existing Transmission Line Safety and Nuisance COCs. The project would remain in compliance with all applicable LORS related to Transmission line safety and Nuisance.

TRANSMISSION SYSTEM ENGINEERING

The proposed installation of the AFS upgrade components would not cause additional downstream transmission impacts other than those identified in the approved CPP. The project will comply with applicable LORS and will not require a change to any of the COCs.

VISUAL RESOURCES

The installation of the AFS technology and carbon monoxide analyzers would take place within the existing HRSGs and CEMS buildings, therefore the proposed project modifications would not affect visual resources or require any changes to the existing visual resources COCs. The project would remain in compliance with all applicable LORS.

WASTE MANAGEMENT

The PTA proposes to upgrade the existing combustion turbines of the CPP. According to the PTA, the proposed modification would not result in an increase of waste generation at the site. Therefore, no impacts to waste management are expected. The modification would conform to applicable LORS related to waste management and changes to the existing COCs would not be required.

WORKER SAFETY AND FIRE PROTECTION

During the proposed modifications to install the AFS technology and carbon monoxide analyzers, continued compliance with existing COC **WORKER SAFETY-1** would ensure

that the proposed project modification would comply with applicable LORS. Therefore, the proposed project modification would have a less than significant impact to worker health and safety or the public offsite.

CALENVIROSCREEN 4.0

Staff reviewed CalEnviroScreen 4.0 data to determine whether the United States census tract where the Consumnes Power Plant is located (06067009406) is identified as a disadvantaged community. This science-based mapping tool is used by the California Environmental Protection Agency (CalEPA) to identify disadvantaged communities based on geographic, socioeconomic, public health, and environmental hazard criteria pursuant to Health and Safety Code section 39711 as enacted by Senate Bill 535 (De León, Chapter 830, Statutes of 2012). The CalEnviroScreen 4.0 overall percentile score for this census tract is 6.4 and, thus, is not identified as a disadvantaged community[1].

ENVIRONMENTAL JUSTICE

Environmental Justice Figure 1 shows 2020 census blocks in the six-mile radius of the Consumnes Power Plant with a minority population greater than or equal to 50 percent. The population in these census blocks represents an environmental justice (EJ) population based on race and ethnicity as defined in the United States Environmental Protection Agency's *Guidance on Considering Environmental Justice During the Development of Regulatory Actions*. Staff conservatively obtains demographic data within a six-mile radius around a project site based on the parameters for dispersion modeling used in staff's air quality analysis. Air quality impacts are generally the type of project impacts that extend the furthest from a project site. Beyond a six-mile radius, air emissions have either settled out of the air column or mixed with surrounding air to the extent the potential impacts are less than significant. The area of potential impacts would not extend this far from the project site for most other technical areas included in staff's EJ analysis.

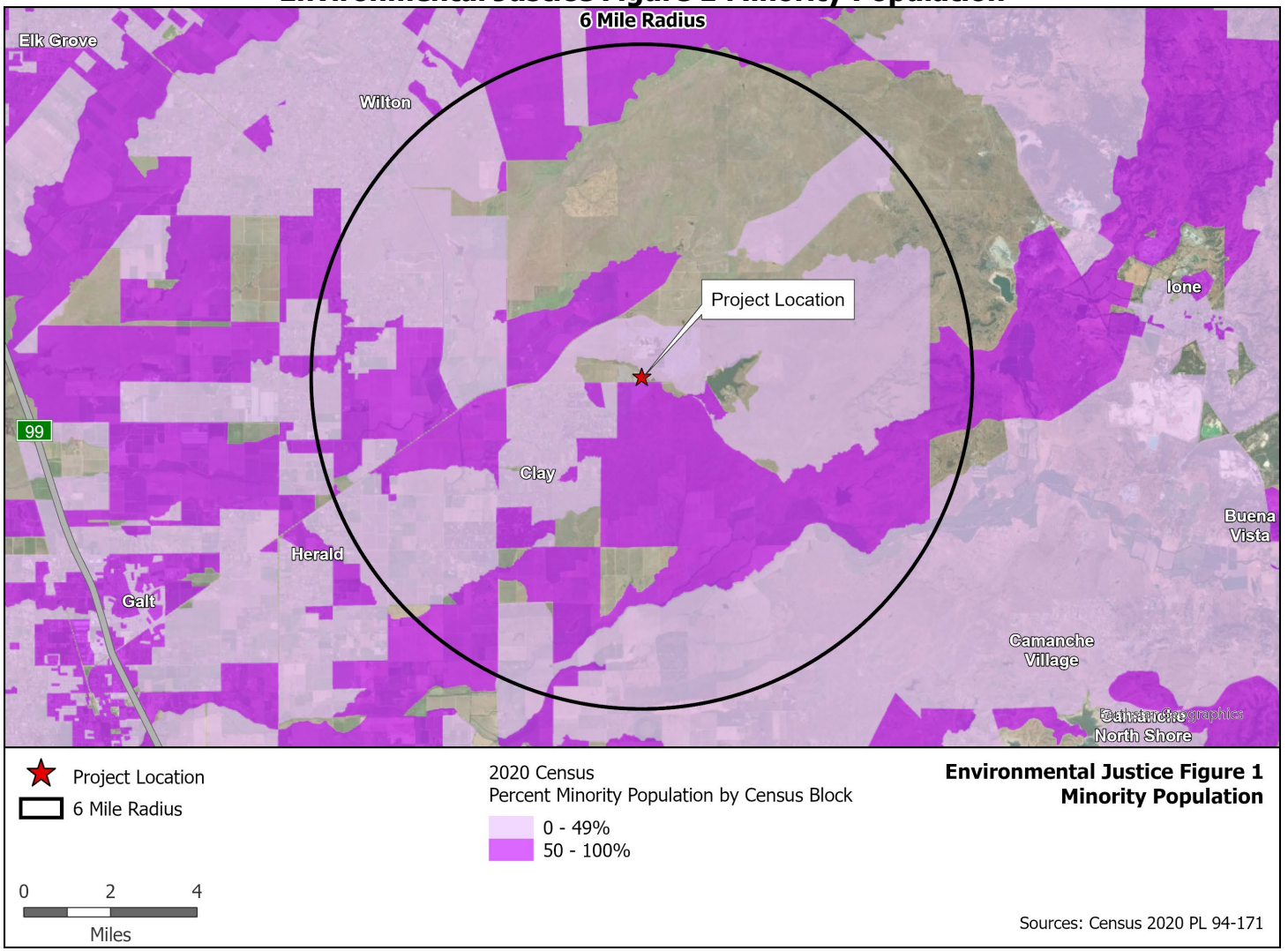
[1] The four categories of geographic areas identified by CalEPA as disadvantaged are: 1) Census tracts receiving the highest 25 percent of overall scores in CalEnviroScreen 4.0, 2) Census tracts lacking overall scores in CalEnviroScreen 4.0 due to data gaps, but receiving the highest 5 percent of CalEnviroScreen 4.0 cumulative pollution burden scores, 3) Census tracts identified in the 2017 DAC designation, regardless of their scores in CalEnviroScreen 4.0, and 4) Lands under the control of federally recognized Tribes. Source: CalEPA Final Designation of Disadvantaged Communities: May 2022 https://calepa.ca.gov/envjustice/ghginvest/

Environmental Justice – Table 1
Low Income Data within the Project Area

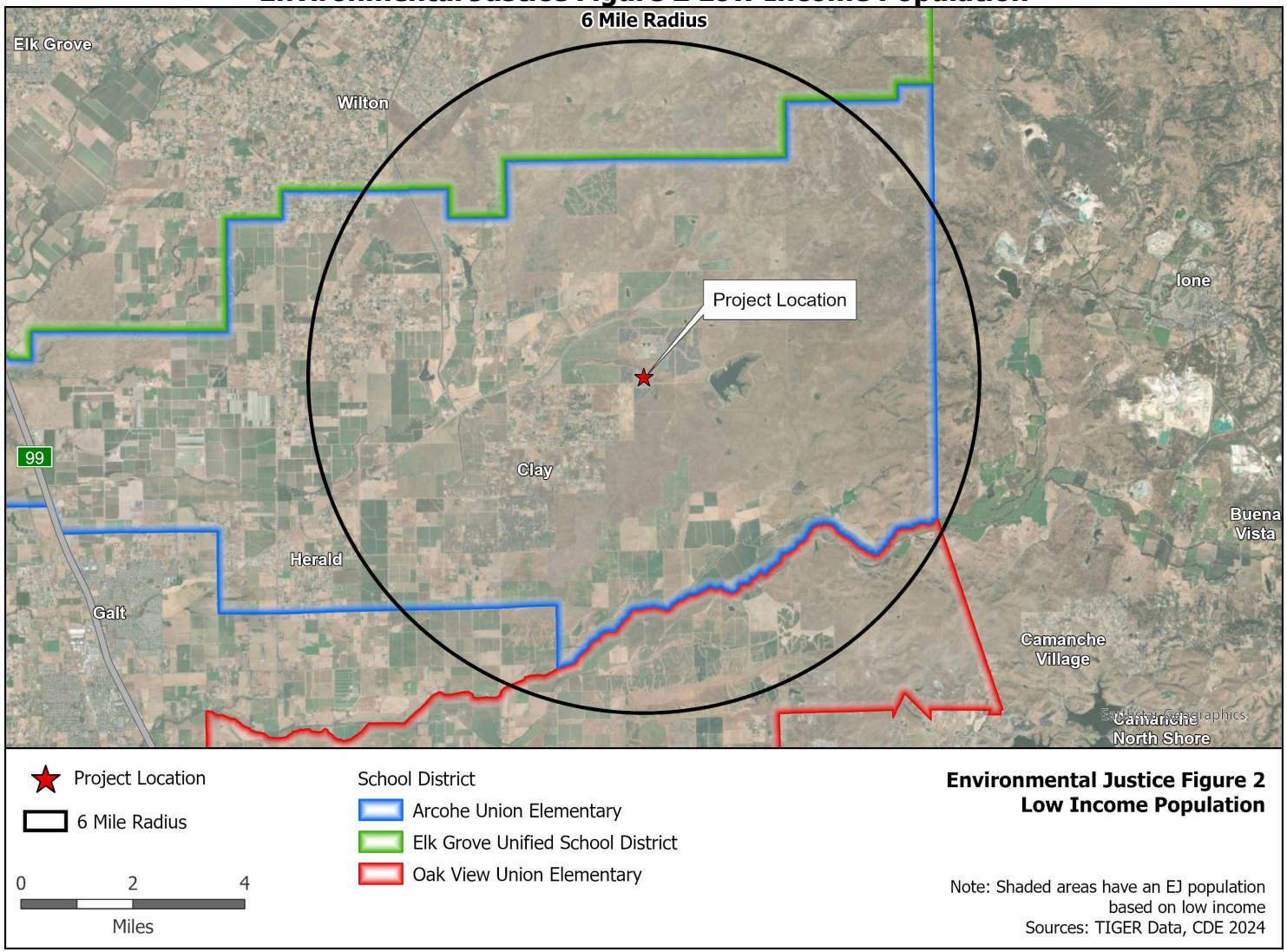
SACRAMENTO COUNTY SCHOOL DISTRICTS IN SIX-MILE RADIUS	Enrollment Used for Meals	Free or Reduced Price Meals	
Elk Grove Unified	63,518	32,866	51.7%
Arcohe Elementary	501	153	30.5%
REFERENCE GEOGRAPHY			
Sacramento County	253,331	155,138	61.2%
SAN JOAQUIN COUNTY SCHOOL DISTRICT IN SIX-MILES RADIUS	Enrollment Used for Meals	Free or Reduced Price Meals	
Oak View Union Elementary	380	126	33.2%
REFERENCE GEOGRAPHY			
San Joaquin County	154,523	102.112	66.1%
Source: CDE 2024. California Department of Education, DataQuest, Free or Reduced Price Meals, District level data for the year 2023-2024, http://dq.cde.ca.gov/dataquest/.			

Based on California Department of Education data in the **Environmental Justice Table 1**, staff concluded that the percentage of those living in the Elk Grove Unified, Aroche Union Elementary, and Oak View Union Elementary school districts (in a six-mile radius of the project site) and enrolled in the free or reduced-price meal program is more than those in the reference geography. Thus, it is not considered an EJ population based on low income as defined in *Guidance on Considering Environmental Justice During the Development of Regulatory Actions*. **Environmental Justice – Figure 2** shows where the boundaries of the school district are in relation to the six-mile radius around the Consumnes Power Plant site.

Environmental Justice Figure 1 Minority Population



Environmental Justice Figure 2 Low Income Population



Environmental Justice Conclusions

For this petition, the following technical areas consider impacts to EJ populations: Air Quality; Cultural and Tribal Cultural Resources; Hazards, Hazardous Materials/Waste, and Wildfire; Water Resources; Land Use, Agriculture, and Forestry; Noise and Vibration; Public Health; Socioeconomics; Solid Waste Management; Transportation; and Visual Resources. Cultural and Tribal Cultural Resources considers impacts to Native American populations. Of the 13 technical areas listed above that address EJ, Cultural and Tribal Cultural Resources; Hazards, Hazardous Materials/Waste, and Wildfire; Water Resources; Land Use, Agriculture, and Forestry; Noise and Vibration; Socioeconomics; Solid Waste Management; Transportation; and Visual Resources staff determined that impacts are less than significant, or less than significant with implementation of existing COCs. For these technical areas, staff concludes that impacts would be less than significant, and thus would be less than significant on the EJ population represented in **Environmental Justice Figure 1**, **Figure 2**, and **Table 1**.

In the Air Quality and Public Health analysis, CEC staff proposes to revise Conditions of Certification **AQ-7**, **AQ-8**, **AQ-9**, **AQ-10**, **AQ-16**, **AQ-21**, **AQ-23**, and **AQ-24**. These revisions would decrease quarterly and annual emission limits for nitrogen oxides (NOx), CO, and particulate matter of 10 micrometers or less in diameter (PM10) to be consistent with the SMAQMD permit and allow for source testing of volatile organic compound (VOC) and PM10 to once every other year. Staff also proposes to incorporate a permit condition from the District permit that is not present in the current COCs, with a new COC **AQ-35**. This new condition would incorporate new monitoring and reporting requirements for the project. Staff has determined that by adopting the proposed new conditions of certification and revisions to the existing conditions of certification, the proposed project change would not cause significant impacts for any population in the project's six-mile radius, including the EJ population. Impacts to the EJ population are less than significant.

CEC STAFF DETERMINATION

Staff has determined that the petition meets the criteria for approval by staff, and therefore, submission to the CEC for approval is not required. Specifically, based on the environmental and other analysis set forth above, staff has determined the proposed changes described in the petition, including changes to air quality conditions of certification, meet the following requirements:

1. There is no possibility that the change may have a significant impact on the environment, or the change is exempt from the California Environmental Quality Act;

2. The changes would not cause the project to fail to comply with any applicable laws, ordinances, regulations, or standards;
3. The changes will not require a change to, or deletion of, a condition of certification adopted by the Commission in the final decision or subsequent amendments; and
4. Regarding the changes to the air quality conditions of certification, no daily, quarterly, annual or other emission limit will be increased as a result of the change

Staff also concludes that none of the findings specified in section 1748(b) apply to the proposed changes and the proposed changes do not meet any of the criteria requiring the production of subsequent or supplemental review pursuant to Public Resources Code section 21166 and California Code of Regulations, tit. 14, section 15162.

WRITTEN COMMENTS

This statement of staff summary and approval of the proposed project changes has been filed in the docket for this project. Pursuant to California Code of Regulations, title 20, section 1769(a)(3)(C), any person may file an objection to the CEC staff's determination within 14 days of the filing of this statement on the grounds that the project change does not meet the criteria set forth in sections 1769(a)(3)(A) or (a)(3)(B). Absent any objections as specified in section 1769(a)(3)(C), this petition will be approved 14 days after this statement is filed.

The CEC's project webpage, https://www.energy.ca.gov/powerplant/combined-cycle/cosumnes-power-planthas a link to the petition and this Statement of Staff Approval on the right side of the webpage in the box labeled "Compliance Proceeding." Click on the "Docket Log (01-AFC-19C)" option.

Written comments or objections to staff's determination may be submitted using the CEC's e-Commenting feature, as follows: Go to the CEC's project webpage and click on either the "Comment on this Proceeding," or "Submit e-Comment" link. When your comments are filed, you will receive an email with a link to them.

Written comments or objections may also be mailed to:

California Energy Commission
Docket Unit, MS-4
Docket No. 01-AFC-19C
715 P Street
Sacramento, CA 95814-5512

All comments and materials filed with the Docket Unit will be added to the facility Docket Log and be publicly accessible on the CEC's project webpage.

If you have questions about this document, please contact Compliance Project Manager Ashley Gutierrez, Compliance Monitoring and Enforcement Unit, Safety and Reliability Branch, at (916) 839-0400, or via email at Ashley.Gutierrez@energy.ca.gov.

For information on public participation, please contact the CEC's Office of Public Advisor, Energy Equity, and Tribal Affairs at (916) 957-7910 or email at publicadvisor@energy.ca.gov.

News media inquiries should be directed to the CEC's Media Office at (916) 654-4989, or by email at mediaoffice@energy.ca.gov.

Cosumnes Power Plant Project (01-AFC-19C)
Petition to Amend – Gas Turbine Upgrade with Axial Fuel Staging (AFS)
Air Quality, Public Health, and Greenhouse Gases

INTRODUCTION AND SUMMARY

On January 25, 2025, the Sacramento Municipal Utility District Financing Authority (SFA or petitioner) filed a post certification petition to amend (PTA) with the California Energy Commission (CEC) for the Cosumnes Power Plant Project (CPP). The petition proposes to upgrade the existing General Electric (GE) model 7FA combustion turbine generators (CTGs) with Axial Fuel Staging (AFS) technology and install carbon monoxide (CO) analyzers upstream of the oxidation catalysts for each turbine (SFA 2025). This modification would reduce the minimum fuel burn up to 25 percent and would expand the facility's lower load range by approximately 100 MW total for the plant. The proposed change is not expected to result in an increase in criteria air pollutants, greenhouse gases, or toxic air contaminants emissions during operation.

The CPP was certified by the CEC in September of 2003 (CEC 2003) and began commercial operation on November 1, 2013. The facility is located at 14295A Clay East Rd. in Herald, as part of Sacramento County and within the Sacramento Valley Air Basin. The facility uses two GE natural gas CTGs, an associated heat recovery steam generator (HRSGs), combined into one steam turbine generator (STG).

Since the project was approved, the CEC has approved one air quality-related amendment: the modification of air quality Condition of Certifications (COCs) to operate previously installed Advanced Gas Path upgrade components, Dry-Low Nitrogen (DLN) 2.6+ combustors, and oxidation catalyst emission control systems. This amendment increased electrical production from each of the two licensed combustion turbine generators (CEC 2019).

Staff reviewed the PTA and the associated Sacramento Metropolitan Air Quality Management District (SMAQMD or District) Preliminary Authority to Construct (ATC) and Engineering Evaluation, dated March 17, 2025 (SMAQMD 2025). The preliminary Authority to Construct would act as a preliminary determination of compliance (PDOC), and prior to issuing the final Authority to Construct permit for the Project which would act as a final determination of compliance (FDOC) after a comment period from March 18, 2025, and concluded on May 5, 2025.

CEC staff proposes to revise Conditions of Certification **AQ-7**, **AQ-8**, **AQ-9**, **AQ-10**, **AQ-16**, **AQ-21**, **AQ-23**, and **AQ-24** to be consistent with the revised District permit. These revisions would decrease quarterly and annual emission limits for nitrogen oxides (NOx),

CO, and particulate matter of 10 micrometers or less in diameter (PM10) to be consistent with the SMAQMD permit and allow for source testing of volatile organic compound (VOC) and PM10 to once every other year. Staff also proposes to incorporate a permit condition from the District permit that is not present in the current COCs, with a new COC **AQ-35**. This new condition would incorporate new monitoring and reporting requirements for the project.

The following summarizes all the proposed changes to the Air Quality Conditions of Certification:

- Addition of a compliance requirement to include language for annual performance testing in existing Condition of Certification **AQ-7**.
- Modification of COCs **AQ-8**, **AQ-9**, and **AQ-10** to now show fine particulate matter with a diameter of 2.5 micrometers or less (PM2.5) emission limits in separate rows to be consistent with the SMAQMD permit conditions. No actual emission limit is changing in these conditions for PM2.5.
- Decrease of quarterly and annual CTG NOx and CO emission limits in **AQ-10**.
- Decrease of PM10 emission limits in **AQ-9** and **AQ-10** to be consistent with the SMAQMD permit conditions.
- Modification of existing Condition of Certification **AQ-16(c)** to include U.S. EPA method performance specification 4A for testing (left out in error).
- Modification of Condition of Certification **AQ-21** to show the provided emission reduction credits (ERCs) that have been surrendered to comply with emission offset requirements as stated in **AQ-20**.
- Modification of **AQ-23** to allow VOC and PM10 testing to be performed once every other year rather than once every year; and to allow for flexibility when digester gas is not available from the supplier during the source test.
- Modification of Condition of Certification **AQ-24** to have more clarity with specific due dates required for annual reporting needing to be submitted to the District and CEC staff.
- Addition of new Condition of Certification **AQ-35** to incorporate new monitoring and reporting requirements for General Monitoring Reports.

The modified project would comply with all laws, ordinances, regulations, and standards (LORS). Air quality, public health, and greenhouse gas impacts from the evaluated changes would be less than significant, including impacts to environmental justice populations. Therefore, there are no air quality, public health, or greenhouse gas environmental justice issues related to the evaluated facility modifications and no minority or low-income populations would be significantly or adversely impacted.

LAWS, ORDINANCES, REGULATIONS, AND STANDARDS COMPLIANCE

CEC staff reviewed the PTA and the District evaluation for consistency with all federal, state, and District LORS. **Air Quality Table 1** includes a summary of the air quality LORS relevant to the proposed changes. **Air Quality Table 1** in this analysis is not intended to be comprehensive of all LORS applicable to the facility. The conditions of certification in the Final Commission Decision and amendments thereafter ensure that the facility would remain in compliance with all LORS.

Air Quality Table 1
Laws, Ordinances, Regulations, and Standards (LORS)

Applicable LORS	Description	Compliance
Federal	**U.S. Environmental Protection Agency**	
40 CFR 60, Subpart KKKK (Standards of Performance for Stationary Combustion Turbines)	This subpart establishes emission standards and compliance schedules for the control of emissions from stationary combustion turbines with a heat input at peak load equal to or greater than 10 million British thermal units (MMBtu) per hour, based on the higher heating value of the fuel, that commenced construction, modification, or reconstruction after February 18, 2005. The pollutants regulated by this subpart are NOx and SO_2.	Continued compliance with the NOx and SO_2 limits is expected with the use of the CTG's selective catalytic reduction (SCR) system to control NOx emissions and the use of PUC-quality pipeline natural gas.
40 CFR Part 64 (Compliance Assurance Monitoring)	The Compliance Assurance Monitoring (CAM) regulation applies to emission units at major stationary sources, required to obtain a Title V Permit, which use control equipment to achieve a specified emission limit.	The facility uses Continuous Emission Monitoring Systems (CEMS) to monitor, report and record both NOx and CO emissions continuously downstream of the control equipment. VOC emissions are also subject to an emission limit and are partially controlled by the oxidation catalyst. The VOC emission limit is verified through source test required once every 12 months and the oxidation catalyst is continuously monitored by the CO CEMS, which can be used as a surrogate monitor for the reliable operation of the oxidation catalyst for VOC control. Continued compliance is expected.
40 CFR Part 72 and 75 (Acid Rain Provisions)	The Acid Rain Program requires the monitoring and reporting of emissions of acidic compounds and their	In order to determine the amount of SO_2 emitted from the turbine, the SO_2 emissions are required to be

Applicable LORS	Description	Compliance
Federal	**U.S. Environmental Protection Agency**	
	precursors from combustion equipment owned by a utility. Under the Acid Rain Provisions, SO_2 emissions from the unit are required to be offset with SO_2 allowances. SO_2 allowances are, however, not required in any year when the unit emits less than 1,000 lbs of SO_2.	monitored through the use of fuel gas meters and gas constituent analyses, or, if fired with pipeline quality natural gas, as in the case of this facility, a default emission factor of 0.060 lb/MMBtu is allowed. SO_2 mass emissions are to be recorded every hour. NOx and O_2 must be monitored with CEMS in accordance with the specifications of Part 75. Under this program, NOx and SOx emissions will be reported directly to the U.S. EPA. Continued compliance is expected.
Local	**Sacramento Metropolitan Air Quality Management District**	
Regulation II – Permits Rule 201 General Permit Requirements	Rule 201 states that any facility building, erecting, installing, altering, or replacing non-exempt equipment that causes or controls the emission of air pollutants must first obtain an authority to construct from the SMAQMD.	Since both CTGs would be altered as a result of this modification, the petitioner submitted an application for an authority to construct to SMAQMD and CEC for review. SMAQMD issued a preliminary ATC on April 12, 2025.
Regulation II – Permits Rule 202 New Source Review	The SMAQMD adopted Rule 202 to provide for preconstruction review of new or modified facilities, to ensure that affected sources do not interfere with the attainment of ambient air quality standards.	CPP is a "major stationary source" per Rule 202, section 228 for NOx, VOC, PM2.5 and CO. **Air Quality Table 3** compares these historic actual emission values to the potential to emit for the facility for comparison to the 80percent threshold. As indicated in **Air Quality Table 3**, no pollutant emissions are greater than 80 percent of the CPP facility potential to emit during the baseline period. SFA is proposing to decrease the annual emissions limit for NOx and CO in order to avoid triggering a major modification. Annual NOx emissions will be limited to 95.5 tons/year and CO emissions will be limited to 99.9 tons per year in COC **AQ-10**.
Regulation II – Permits Rule 203 Prevention of Significant	Rule 203 incorporates the Federal PSD program by reference (40 CFR 52.21). PSD applies to pollutants that have been classified as attainment for the	CPP is no longer an existing PSD major source because its emissions are no longer permitted to exceed 100 tons per year for CO per the discussion regarding the Rule 202

Applicable LORS	Description	Compliance
Federal	**U.S. Environmental Protection Agency**	
Deterioration (PSD)	National Ambient Air Quality Standards.	"major modification" requirements above. Therefore, no PSD significant increase determination is required because the facility is no longer a PSD major stationary source. The analysis found that the air quality impacts of the proposed modifications would be less than significant.
Regulation II – Permits Rule 207 – Title V Federal Operating Permit Program	Title V Federal Operating Permit Programs – CPP is an existing Title V facility. CPP requested the application be reviewed through the enhanced NSR process. Enhanced NSR will allow the SMAQMD to administratively amend the Title V permit to reflect the proposed project modifications. The permit action is subject to a 30-day public notice and 45-day U.S. EPA review process.	This facility is subject to this rule and has received their Title V Operating Permit. The proposed AFS Turbine Upgrade Project would require a significant modification to CPP's Title V permit, because NOx and CO emission limits and associated permit conditions will be revised as a result of the proposed modifications. The CPP has requested this modification be reviewed through the District's Enhanced New Source Review Process for their Title V permit. The District has forwarded to U.S. EPA, for a 45-day review period (ended on May 5, 2025), the application review which includes the proposed modified Title V permit and the compliance certification form which demonstrates compliance with the permit modification requirements. Compliance with this rule is expected and staff proposes to add a new COC **AQ-35** to be consistent with the monitoring and reporting requirements per Rule 207 as required in the District permit.
Regulation II – Permits Rule 217 Public Notification Requirements for Permits	Rule 217, Section 102 notes that notification requirements shall not apply if the application is for any new or modified emissions unit where the combined potential to emit from the project would have an increase in potential to emit less than the limits specified in the rule and provided that offsets are not triggered.	There would be no increase in potential to emit from the CPP AFS Turbine Upgrade Project and offsets are not triggered by the proposed modifications. Therefore, the AFS Turbine Upgrade Project does not trigger the Rule 217 public notice requirements. However, publication and public notification are required under Rule 207, the Title V Federal Operating Permit Program.

Applicable LORS	Description	Compliance
Federal	**U.S. Environmental Protection Agency**	
Regulation II – Permits Rule 2540 Acid Rain Program	This rule incorporates the Acid Rain Standards from Part 72, Title 40, Code of Federal Regulations (CFR).	The CTGs are subject to the acid rain program that is implemented through the Title V operating permit. The facility currently complies with the requirements of the rule. Continued compliance with this rule is expected.
Regulation IV – Prohibitions Rule 401 Visible Emissions	This rule states that no person shall discharge into the atmosphere emissions of any air contaminant aggregating more than 3 minutes in any hour which is as dark as or darker than Ringelmann 1 (or 20 percent opacity).	As the CTGs are fired solely on natural gas, visible emissions are not expected to exceed Ringelmann 1 or 20 percent opacity and based on past inspections of the facility, continued compliance is expected.
Regulation IV – Prohibitions Rule 402 Nuisance	This rule prohibits the discharge of air contaminants in quantities that cause injury, detriment, nuisance, or annoyance to any considerable number of persons or to the public. The SMAQMD regulates new and modified sources of toxic air contaminants (TACs) under this rule by implementing its health risk assessment (HRA) Modeling Guidelines dated February 2016.	Under the SMAQMD's toxics policy, modified projects with TAC emission increases are required to perform a screening-level health risk assessment. CPP was evaluated for health risk when it was originally permitted and the previous turbine upgrade amendment. The AFS Turbine Upgrade Project would not result in an increase in TAC emissions above the levels evaluated previously. However, since the evaluation was performed under the previous risk assessment guidelines, the District performed a screening HRA utilizing the newer risk calculation methodologies and concluded that the health risk for the project is considered acceptable to the SMAQMD.
Regulation IV – Prohibitions Rule 404 Particulate Matter Concentration	Rule 404 prohibits discharge of dust, fumes, or total particulate matter into the atmosphere from any single source operation in excess of 0.1 grain per dry standard cubic foot (gr/dscf).	Particulate matter (PM) emissions for the CTG are less than 0.1 gr/dscf. Continued compliance is expected.
Regulation IV – Prohibitions Rule 406 Specific Contaminants and Sulfur Compounds	Rule 406 prohibits emissions of combustion contaminants in excess of 0.1 gr/dscf @ 12 percent CO_2. Rule 406 also limits sulfur compound emissions to 0.2 percent (2,000 ppm) dry volume.	Annual source tests have demonstrated compliance with the Rule 406 requirements. The AFS Turbine Upgrade Project will not change turbine PM or SOx emission rates. Therefore, the modified project is expected to continue to comply with the Rule 406 PM and sulfur compound emission limits.

Applicable LORS	Description	Compliance
Federal	**U.S. Environmental Protection Agency**	
Regulation IV – Prohibitions Rule 413 Stationary Gas Turbines	Rule 413 prohibits NOx emissions in excess of 9 ppmv @ 15 percent O_2 based on a 15-min average, with exceptions for excursions, from gaseous fuel-fired turbines with a maximum electrical output rating of 10 MW or greater operating 877 hours or more per year.	The modified project would continue to meet the 2.0 ppmvd NOx at 15 percent O_2 and 2 ppmv CO at 15 percent O_2, which are well below the limits set in Rule 413. Continued compliance is expected.
Regulation VIII – Rule 801 New Source Performance Standards (NSPS) 40 CFR Part 60 Subpart KKKK	This rule incorporates NSPS from Part 60, Chapter 1, Title 40, CFR; and applies to all new sources of air pollution and modifications of existing sources of air pollution listed in 40 CFR Part 60.	The CTGs are regulated under 40 CFR Subpart KKKK and are therefore exempt from the requirements of 40 CFR Subpart GG. 40 CFR Subpart KKKK contains standards of performance for CTGs and limits NOx and SOx emissions as well as requiring CEMS monitoring. The NOx emissions of the CTGs would continue to be no more than 2.0 parts per million by volume on a dry basis (ppmvd) at 15 percent oxygen (O_2). The CTGs will continue to meet the SOx emissions standard by only combusting pipeline quality natural gas. Continued compliance with the NSPS NOx and SOx limits is expected. Continued compliance with NSPS continuous monitoring requirement is also expected.

ANALYSIS

Air Quality

Construction

The installation of the AFS upgrade and the carbon monoxide analyzers would not require any ground disturbance and would use the existing onsite equipment laydown/parking used during construction of CPP. Installation of the upgraded AFS components would require approximately 35 days to complete and include approximately 40 workers. Construction equipment is expected to include two cranes, welding units, and other handheld construction equipment (SFA 2025). Work is expected to commence on both turbines at the same time. Staff expects the emissions and impacts during construction would be less than significant with existing Conditions of Certification **AQ-SC1** through **AQ-SC4**.

Operation

According to the application, the AFS turbine upgrade Project is not expected to affect turbine startup or shutdown times, and the turbines would continue to comply with all current permit conditions. No changes are needed to the current hourly, daily, or quarterly permit emission limits as part of the AFS turbine upgrade Project. The applicant is proposing to take a facility project limit of NOx of 95.5 tons per year (tpy) and CO of 99.9 tpy, as part of COC **AQ-10**. The reason for taking this limit was so the District used this new potential to emit (PTE) to calculate the historic emission calculation to determine the project's major source designation. The reduction of NOx and CO also removes the site from the PSD program, due to the 100 tpy major source threshold designation, and for NOx as a PM2.5 precursor. This comparison is shown in **Air Quality Table 2**, Proposed Changes to CPP Annual Emission Limits.

Air Quality Table 2
Proposed Changes to CPP Annual Emission Limits

Pollutant	CPP Current Emission Limits (tpy)	CPP Proposed Emission Limits (tpy)	Change in Emission Limits (tpy)	% Change in Annual Emission Limits
VOC	30.0	30.0	0.0	0%
NOx	**96.0**	**95.5**	**-0.5**	**-0.5%**
CO	**123.1**	**99.9**	**-23.2**	**-18.8%**
PM10	80.6	80.6	0.0	0%
SOx	16.7	16.7	0.0	0%

Air Quality Table 3 compares the historic Actual Emission Baseline values to the potential to emit for the facility for comparison to the 80 percent threshold.

Air Quality Table 3
SMAQMD Rule 202
80% of Potential to Emit Comparison

Pollutant	CPP Actual Emissions Baseline (tpy)[1]	CPP Turbines PTE Permit Limit (tpy)	Percent of Potential to Emit	Actual at Least 80% of PTE?
VOC	20.5	30.0	68%	No
NOx	70.6	96.0	74%	No
CO	2.9	123.1	2%	No

Note: [1] Baseline period March 2020 through February 2022

As indicated in **Air Quality Table 3**, no pollutant emissions are greater than 80 percent of the CPP facility potential to emit during the baseline period; therefore, the next step is to compare the "emission increase" calculated by subtracting the historic actual emissions from the potential (permitted) emissions and comparing this difference to the "major modification" emission increase thresholds in Rule 202, or the current **AQ-10** annual emission limits for NOx an CO.

As COC **AQ-10** currently exists, the project would be a major modification for NOx and CO, since the project would be over 25 tpy and 100 tpy, respectively which would result in a "major modification" and would trigger Best Available Control Technology (BACT), offsets, air quality impact analysis, and public notification requirements.

However, the petition proposes to decrease the annual emissions limit for NOx and CO in order to avoid triggering a major modification. With this requested change by the petitioner, the annual NOx emissions would be limited to 95.5 tons/year (0.5 tpy decrease) and CO emissions would be limited to 99.9 tons per year (23.2 tpy decrease; see **Air Quality Table 2**, above). In **Air Quality Table 4**, below shows the Revised Major Modification Applicability Determination.

Air Quality Table 4
Revised Major Modification Applicability Determination

Pollutant	CPP Actual Emissions Baseline (tpy)[1]	Proposed CPP Potential to Emit (tpy)	Actual to Potential Increase (tpy)	Major Modification Threshold (tpy)	Major Modification?
VOC	20.5	30.0	9.5	25	No
NOx	70.6	95.5	24.9	25	No
CO	2.9	99.9	97	100	No

Note: 1 Baseline period March 2020 through February 2022

According to the new revised annual emission limits proposed for NOx and CO, the CPP would not be considered a major modification under SMAQMD Rule 202. All other CPP emission limits for all other pollutants including hourly, daily, and quarterly would not change from the current permitted values in the Air Quality Conditions of Certification. Therefore, the Proposed Potential to Emit Emissions minus the Actual Emissions Baseline is less than the major modification threshold and offsets would not be required.

The petition proposes to use the existing continuous emission monitoring system (CEMS), data acquisition and handling system (DAHS), and balance of plant controls to monitor and document that the modified turbines are in compliance with their permitted emission and operating limits (SFA 2025).

GE, the manufacturer of the turbine and the AFS turbine upgrade project, has guaranteed the turbines would meet current air permit emission limits at low loads after the AFS Project finalizes (SFA 2025). Both CPP turbines have certified NOx and CO CEMS that would verify compliance for these pollutants at the lower operating loads.

CPP will be expected to perform its annual RATAs and compliance tests in the first quarter of 2026, after completion of the AFS turbine Upgrade Project (SMAQMD 2025).

Since the purpose of the AFS upgrade is to operate the turbines at a lower load, compliance would be verified through the certified NOx and CO CEMS. Source testing is done at higher operating loads thus a source test will not be required as part of this upgrade. Routine compliance testing would still be required.

As part of this modification the source testing time frame for VOC and PM10 is expected to be revised to remove the Air Pollution Control Officer discretion in requiring testing as part of **AQ-23**. The approval for testing these pollutants has been required every other year and will be continued on this schedule. This change would eliminate the project's need to request a waiver and keep a consistent schedule per COC **AQ-23**.

The change of **AQ-23** would be changing the source testing to remove the discretionary testing for VOC and PM and require testing every other year for these pollutants. There are no changes in testing for all other pollutants.

Public Health

During construction and installation of the AFS turbine upgrade and the carbon monoxide analyzers, the project is expected to have minor emissions from construction equipment and vehicle use. These emissions would be mitigated with dust control practices and cleanest available tier engine usage. Construction would be short-term of approximately 35 days. Implementation of **AQ-SC1** through **AQ-SC4** would minimize construction impacts to a less than significant level.

During operations, the proposed project would not result in an increase in public health impacts beyond those analyzed in the Commission Decision or subsequently approved petitions to amend and is not expected to result in any increase in either criteria or toxic air emissions during operations after the AFS turbine upgrade. The proposed modifications do not require changes to the COCs for Public Health. The project would remain in compliance with all LORS related to public health.

Therefore, the public health impacts of the proposed modifications would be less than significant and would not require additional mitigation measures.

Greenhouse Gas Emissions (GHGs)

During construction and installation of the AFS turbine upgrade and the carbon monoxide analyzers, the project is expected to have minor emissions from construction equipment and vehicle use. These emissions would be mitigated with dust control practices and cleanest available tier engine construction equipment. Construction would be short-term of approximately 35 days. Implementation of **AQ-SC1** through **AQ-SC4** would minimize construction impacts to a less than significant level.

During operations, the proposed project would not result in an increase in greenhouse gas impacts beyond those analyzed in the Commission Decision or subsequently approved petitions to amend and is not expected to result in any increase in greenhouse gas emissions during operations after the AFS turbine upgrade. The proposed modifications do not require changes to the COCs for Greenhouse Gases. The project would continue to comply with applicable federal, state, and local greenhouse gas LORS after the implementation of the proposed changes.

Therefore, the proposed modifications would not create a significant greenhouse gas impact and would not require additional mitigation measures.

CONCLUSIONS AND RECOMMENDATIONS

Staff recommends approval of the proposed upgrade of the CPP's combustion gas turbine units and addition of carbon monoxide analyzers with accompanying changes to the air quality conditions of certification. All proposed changes would conform with the applicable LORS related to air quality and would not result in significant impacts to ambient air quality and public health, nor would it result in greenhouse gas emissions that would have a significant impact on the environment.

AMENDED CONDITIONS OF CERTIFICATION

The modifications to the Air Quality conditions of certification are included below. **Bold underline** indicates new language. ~~Strikethrough~~ indicates deleted language. **Air Quality Table 7** includes a summary of the proposed modifications and justification.

Air Quality Table 7
Air Quality Conditions of Certification (COCs)
with Proposed Modifications and Justification

CEC Conditions of Certification	District Permit Conditions	Proposed Modifications and Justification
AQ-7	7	Staff proposes to include language to the compliance requirement for annual performance testing. The District and CEC staff agree the project was already submitting these reports on an annual basis per **AQ-7**.
AQ-8	8	Staff proposes to modify COC **AQ-8**, to now show PM2.5 emission limits in a separate row to be consistent with the SMQAMD permit conditions. No actual emission limit is changing in the condition for PM2.5.
AQ-9	9	Staff proposes to modify COC **AQ-9**, to now show PM2.5 emission limits in a separate row to be consistent with the SMQAMD permit conditions. No actual emission limit is changing in the condition for PM2.5. Staff also proposes decreasing the daily PM10 emission limits to be consistent with the current limits in the District permit.
AQ-10	10	Staff proposes to decrease quarterly and annual NOx, CO, and PM10 emission limits. The reason for taking the NOx and CO limits was so the District used this new potential to emit (PTE) to calculate the historic emission calculation to determine the project's major source designation. The reduction of NOx and CO also removes the site from the PSD program, due to the 100 tpy major source threshold designation, and for NOx as a PM2.5 precursor. Staff agrees to this reduction. Staff also proposes decreasing the quarterly and annual emission limits to be consistent with the current limits in the District permit.
AQ-16(c)	16 (c)	Staff proposes modification of existing Condition of Certification **AQ-16(c)** to include U.S. EPA method performance specification 4A for testing (left out in error). CEC staff recommends this test method addition since it was left out in error in previous analyses.
AQ-21	21	Staff proposes to modify Condition of Certification **AQ-21** to show the new surrendered amount of ERCs with the lowered limits in **AQ-10**. The changes correspond with the new limits proposed in **AQ-10**. CEC staff recommends this change.
AQ-23	23	Staff proposes to modify **AQ-23** which would require VOC and PM10 testing to be performed once every other year; and to allow for flexibility when digester gas is not available from the supplier during the source test. The District and CEC staff have agreed that the air quality impacts of the project with the proposed modifications would be less than significant.
AQ-24	24	Staff proposes to update Condition of Certification **AQ-24** to have more clarity with a March 15 due date required for annual reporting needing to be submitted to the District and CEC staff.

CEC Conditions of Certification	District Permit Conditions	Proposed Modifications and Justification
AQ-35	25	Staff proposes to add a new Condition of Certification **AQ-35** to incorporate new monitoring and reporting requirements for General Monitoring Reports. The proposed new condition of certification requires semiannual reporting period for reporting dates of January 01 through June 30 and July 01 through December 31 to be submitted by July 30 and January 30 following each reporting period respectively. Staff agrees to this reporting schedule.

DISTRICT CONDITIONS OF CERTIFICATION:

EMISSION LIMITS

AQ-7 Emissions from the following equipment must not exceed the following emission limits. [Basis: SMAQMD Rule 202, Rule 413, Section 302.1(d), and 40 CFR Part 60.4320(a)]

Pollutant	Maximum Allowable Emissions	
	Gas Turbine No. 2	Gas Turbine No. 3
VOC	A. 1.17 ppmvd corrected to 15% O_2, averaged over any 3-hour period (A)	A. 1.17 ppmvd corrected to 15% O_2, averaged over any 3-hour period (A)
NOx	B. 2.0 ppmvd corrected to 15% O_2, averaged over any 1 hour period (A) (B) C. 9.0 ppmvd corrected to 15% O_2 (C), the average of three runs for 15 minutes, determined by using EPA Method 20. D. 30 ppmvd corrected to 15% O_2, averaged over any 1-hour period (D) E. 15 ppmvd corrected to 15% O_2 (E)	B. 2.0 ppmvd corrected to 15% O_2, averaged over any 1 hour period (A) (B) C. 9.0 ppmvd corrected to 15% O_2 (C), the average of three runs for 15 minutes, determined by using EPA Method 20. D. 30 ppmvd corrected to 15% O_2, averaged over any 1-hour period (D) E. 15 ppmvd corrected to 15% O_2 (E)
CO	F. 4.0 ppmvd at 15% O_2 averaged over any 3-hour period (A)	F. 4.0 ppmvd at 15% O_2 averaged over any 3-hour period (A)
Ammonia	G. 10 ppmvd corrected to 15% O_2 averaged over any 3-hour period (A)	G. 10 ppmvd corrected to 15% O_2 averaged over any 3-hour period (A)

(a) Excluding periods containing startups or shutdowns as defined in **AQ-14**.

(b) Excluding periods containing short term excursions as defined in **AQ-14**.

(c) Excluding the startup, shutdown, short term excursion periods defined in **AQ-15**. Compliance with the 9-ppm NOx emission standard is determined pursuant to SMAQMD Rule 413, as amended March 24, 2005.

(d) Applicable only for periods containing short term excursions as defined in **AQ-14**.

(e) Compliance requirements are listed in 40 CFR Part **60.4340 and** 60.4400; **compliance will be based on annual performance tests**.

Verification: As part of the quarterly and annual compliance reports, the project owner shall include information on the date, time, and duration of any violation of this permit condition.

AQ-8 Emissions from the following equipment shall not exceed the following emission limits, excluding periods containing start-ups, shutdowns, and short-term excursions as defined in **AQ-14**. [Basis: SMAQMD Rule 202]

Pollutant	Maximum Allowable Emissions	
	Gas Turbine No. 2 (lb/hr)	Gas Turbine No. 3 (lb/hr)
NOx	16.21 (a)	16.21 (a)
CO	19.73 (b)	19.73 (b)
VOC	3.30 (c)	3.30 (c)
SOx	1.91 (d)	1.91 (d)
PM10~~/2.5~~	9.00 (e)	9.00 (e)
PM2.5	**8.98 (f)**	**8.98 (f)**

(a) Emissions based on data submitted in the SMAQMD Rule 201 permit application and is monitored by the turbine's NOx CEM system (1-hour average).

(b) Emissions based on data submitted in the SMAQMD Rule 201 permit application and is monitored by the turbine's CO CEM system (3-hour average)

(c) Emissions based on a turbine VOC emission factor of 0.0015 lb/mmbtu operating at maximum capacity.

(d) Emissions based on a turbine aggregate usage of 2,500 scfm (92.63 mmbtu/hr) digester gas (4.626577E-3 lb SO_2/mmbtu) and 2,107.37 mmbtu/hr natural gas (7.00967E-4 lb SO_2/mmbtu.

(e) Emissions based on a turbine PM10 emission factor of 0.004091 lb/mmbtu and firing at full capacity.

(f) PM2.5 emissions are based on a 0.998 PM2.5 to PM10 ratio; limits established for inventory purposes only.

Verification: As part of the quarterly and annual compliance reports, the project owner shall include information on the date, time, and duration of any violation of this permit condition.

AQ-9 Emissions from the following equipment must not exceed the following emission limits, including periods containing start-ups, shut-downs or short term excursions as defined in **AQ-14**. [Basis: SMAQMD Rule 202]

Pollutant	**Maximum Allowable Emissions (lb/day)**				
	Gas Turbine No. 2	**Gas Turbine No. 3**	**Cooling Tower**	**Perlite Storage Silo**	**Facility Total**
NOx	580.4	580.4	NA	NA	1,160.8
CO	3,120.3	3,120.3	NA	NA	6,240.6
VOC	117.3	117.3	NA	NA	234.6
SOx	45.8(a)	45.8(a)	NA	NA	82.8(a)
PM10~~/2.5~~	216.0	216.0	~~13.9~~ **9.4** (b)	0.2(b)	~~523.9~~ **441.6** (b)
PM2.5	**215.5 (c)**	**215.5 (c)**	**3.6 (b)**	**0.2 (b)**	**434.8 (b)**

(a) Facility SO_2 total equates to the total usage of the proposed natural gas/digester gas mixture. Individual turbines equate to the total usage of the digester gas and the balance using natural gas.
(b) Values of PM10 reflect changes proposed in SMAQMD applications 22673, cooling tower TDS change, and 22702, perlite storage silo dust collector addition.
(c) PM2.5 limits established for inventory purposes only.

Verification: As part of the quarterly and annual compliance reports, the project owner shall include information on the date, time, and duration of any violation of this permit condition.

AQ-10 Emissions from the following equipment must not exceed the following emission limits, including periods containing start-ups, shut-downs or shortterm excursions as defined in **AQ-14**. [Basis: SMAQMD Rule 202]

Pollutant	Maximum Allowable Emissions							
	Qtr 1 (lbs/quarter)		Qtr 2 (lbs/quarter)		Qtr 3 (lbs/quarter)		Qtr 4 (lbs/quarter)	
	CT No. 2	CT No. 3	CT No. 2	CT No. 3	CT No. 2	CT No. 3	CT No. 2	CT No. 3
NOx	31,010	31,010	31,321	31,321	31,632	31,632	31,632	31,632
CO	73,965	73,965	74,343	74,343	74,722	74,722	74,722	74,722
VOC	7,403	7,403	7,479	7,479	7,555	7,555	7,555	7,555
SOx	4,126	4,126	4,171	4,171	4,217	4,217	4,217	4,217
PM10~~/2.5~~	19,440	19,440	19,656	19,656	19,872	19,872	19,872	19,872
PM2.5 [a]	**19,401**	**19,401**	**19,617**	**19,617**	**19,832**	**19,832**	**19,832**	**19,832**

(a) PM2.5 limits established for inventory purposes only.

Pollutant	Maximum allowable emissions Gas Turbine No. 2, Gas Turbine No. 3, Perlite Storage Silo Dust Collector and Cooling Tower Combined				
	Qtr 1 (lbs/quarter)	Qtr 2 (lbs/quarter)	Qtr 3 (lbs/quarter)	Qtr 4 (lbs/quarter)	Total (tons/year)
NOx	62,021	62,643	63,265	63,265	~~96.0~~**95.5**
CO	147,929	148,687	149,444	149,444	~~123.1~~**99.9**
VOC	14,807	14,958	15,110	15,110	30.0
SOx	8,252	8,342	8,434	8,434	16.7
PM10~~/2.5~~ [a]	~~40,138~~ **39,725**	~~40,584~~ **40,167**	~~41,030~~ **40,608**	~~41,030~~ **40,608**	~~81.4~~ **80.6**
PM2.5 [b]	**39,129**	**39,564**	**39,998**	**39,998**	**79.3**

(a) Values reflect changes to cooling tower TDS change and perlite storage silo addition.

(b) A conversion factor of 0.998 was used to convert PM10 to PM2.5 as referenced in SMAQMD document "COMMUNITY BANK AND PRIORITY RESERVE BANK PM2.5 EMISSION REDUCTION CREDIT EVALUATION" 8-9-2012, The factor of PM2.5 for the cooling tower is based on submitted data from the applicant as part of permit 22672 which showed PM2.5 is 26.6% of the total PM from the drift eliminator. PM2.5 is assumed to be equal to PM10 for the perlite storage silo. PM2.5 is included for inventory purposes only.

Verification: As part of the quarterly and annual compliance reports, the project owner shall include information on the date, time, and duration of any violation of this permit condition.

MONITORING SYSTEMS

AQ-16 The project owner shall operate a continuous emission monitoring system (CEMS) that has been approved by the Air Pollution Control Officer for each combined cycle turbine's emissions.

A. The (CEMS) shall monitor and record nitrogen oxides (NOx), carbon monoxide (CO), and oxygen (O_2).
B. For NOx and O2, the CMS must comply with U.S. EPA Performance Specification in 40 CFR 75 Appendix A.
C. For CO, the CEMS must comply with U.S. EPA Performance Specification in 40 CFR 60 Appendix B Performance Specification 4 **or 4A**. [Basis: SMAQMD Rules 201 and 202]

Verification: The project owner shall make the site and records available for inspection by representatives of the District and Energy Commission upon request**.**

EMISSION REDUCTION CREDITS

AQ-21 The following ERCs have been surrendered to the SMAQMD Air Pollution Control Officer to comply with the emission offset requirements as stated in **AQ-20**. [Basis: SMAQMD Rules 202 Section 302]

Equipment - Gas Turbine No. 2 Gas Turbine No. 3 Cooling Tower & Perlite Storage Silo	**Amount Of Emission Offsets ~~For Which ERCs Are To Be~~ Provided by ERCs That Have Been Surrendered Lb/Quarter**			
	Quarter 1	**Quarter 2**	**Quarter 3**	**Quarter 4**
VOC – See Attachment A	14,807	14,958	15,110	15,110
NOx– See Attachment B	62,021	62,643	63,265	63,265
PM10– See Attachment C	39,724.6	~~40,166.6~~ **40,168.3**	~~40,607.6~~ **40,608.4**	~~40,607.6~~ **40,607.7**

Verification: The project owner shall make the site and records available for inspection by representatives of the District and Energy Commission upon request.

EMISSION TESTING REQUIREMENTS

AQ-23 The project owner must perform a ~~VOC,~~ NOx, SO_2, ~~PM10,~~ CO and Ammonia source test and CEM accuracy (RATA) test of each gas turbine once each calendar year (no more than 14 calendar months following the previous performance test). ~~The SMAQMD Air Pollution Control Officer may waive the annual PM10 and/or VOC source test requirement if, in the SMAQMD Air Pollution Control Officer's sole judgment, prior source test results indicate an adequate compliance margin has been maintained.~~ **VOC and PM10 testing must be performed once every other year.**

A. The project owner shall submit a test plan to the SMAQMD Air Pollution Control Officer for approval at least 30 days before the source test is to be performed.
B. The SMAQMD Air Pollution Control Officer shall be notified at least 7 days prior to the emission testing date.
C. During the test(s), each turbine is to be operated at its maximum firing capacity defined as 90% of rated heat input capacity and taking into account ambient conditions.
D. The source test results shall be submitted to the SMAQMD Air Pollution Control Officer within 60 days from the completion of the source test(s).
E. Source testing shall occur with a representative flow of digester gas into the pipeline feeding the fuel supply to the turbine being tested. **If digester gas is not available from the supplier during the source test, and digester gas fuel use is not expected during the remainder of the calendar year, then the representative flow of digester gas would be zero during the source test.** ~~so that the turbine being tested is using the digester gas.~~ [Basis: SMAQMD Rule 201, Section 405, 40 CFR Part 60.4400, 40 CFR Part 60.4415, and 40 CFR Part 60.4375]

Verification: The project owner shall notify the District and the CPM within 7 working days prior to the planned source testing date. The source test results shall be submitted to the District and the CPM within 60 days from the completion of the source test.

AQ-24 **Unless otherwise directed by SMAQMD, the permit holder must submit their applicable Annual Report to the District by March 15th of every calendar year. The Annual Report can be submitted online at www.airquality.org/AnnualReporting. SMAQMD may require the permit holder to supply additional information under the Air Toxics "Hot Spots" Information and Assessment Act (California Health and Safety Code**

Section 44300 et seq.) and CARB's Criteria Pollutant and Toxics Emissions Reporting (California Code of Regulations, Title 17, Division 3, Chapter 1, Subchapter 7.7). If additional information is required, the SMAQMD will notify the permit holder. ~~The project owner permittee must, upon determination of applicability and written notification by the SMAQMD, comply with all applicable requirements of the Air Toxics "Hot Spots" Information and Assessment Act (California Health and Safety Code Section 44300 et seq.)~~ [Basis: SMAQMD Rule 201, Section 303.1]

Verification: The project owner shall make the site and records available for inspection by representatives of the District and Energy Commission upon request.

MONITORING REPORTS

AQ-35

A. **The permittee shall submit to the SMAQMD Air Pollution Control Officer at least once every six months, unless required more frequently by an applicable requirement, reports of all required monitoring.**

i. **All instances of deviations from Title V permit monitoring conditions must be clearly identified in such reports.**

B. **The reporting periods for this permit shall be January 01 through June 30 and July 01 through December 31. The reports shall be submitted by July 30 and January 30 following each reporting period respectively.**

C. **All required reports must be certified by the responsible official and shall state that, based on information and belief formed after reasonable inquiry, the statements and information in the document are true, accurate and complete.**

[Basis: SMAQMD Rule 207 Section 501.1]

Verification: The project owner shall include information on the date, time and duration of any violation of this permit condition in the quarterly and annual reports.

References

CEC 2003 – California Energy Commission (CEC). (TN 29879) Cosumnes Power Plant (01-AFC-19) Commission Decision, docketed August 10, 2003. Accessed online at: https://efiling.energy.ca.gov/Lists/DocketLog.aspx?docketnumber=01-AFC-19

CEC 2019 – California Energy Commission (CEC). (TN 226231) Cosumnes Power Plant (01-AFC-19C) Cosumnes Power Plant Order Approving Petition to Amend to Operate previously installed Advanced Gas Path upgrades, docketed January 7, 2019. Accessed online at: https://efiling.energy.ca.gov/Lists/DocketLog.aspx?docketnumber=01-AFC-19C

SFA 2025 – Sacramento Municipal Utility District Financing Authority (SFA). (TN 261258) SMUD Finance Authority Cosumnes Power Plant Axial Fuel Staging Petition to Amend, docketed January 23, 2025. Accessed online at: https://efiling.energy.ca.gov/Lists/DocketLog.aspx?docketnumber=01-AFC-19C

SMAQMD 2025 – Sacramento Metropolitan Air Quality Management District (SMAQMD). Authority To Construct Evaluation (Cosumnes Power Plant), dated March 17, 2025. Accessed online at: https://www.airquality.org/StationarySources/Documents/ev25800%203-17-25.pdf