

DOCKETED

Docket Number:	93-AFC-03C
Project Title:	Compliance - Application for Certification for SMUD's Campbell Soup Cogeneration Project
TN #:	212335
Document Title:	Order Approving Petition to Amend to Replace Potable Water with Recycled Water
Description:	N/A
Filer:	Cody Goldthrite
Organization:	California Energy Commission
Submitter Role:	Commission Staff
Submission Date:	7/18/2016 11:37:03 AM
Docketed Date:	7/18/2016

STATE OF CALIFORNIA

STATE ENERGY RESOURCES
CONSERVATION AND DEVELOPMENT COMMISSION

In the Matter of:
**SACRAMENTO POWER AUTHORITY
CAMPBELL COGENERATION
PROJECT**

Docket No. 93-AFC-03C

**SACRAMENTO MUNICIPAL UTILITY
DISTRICT**

**ORDER APPROVING PETITION TO
AMEND TO REPLACE POTABLE
WATER WITH RECYCLED WATER**

On November 24, 2015, Sacramento Power Authority (SPA) filed a petition with the California Energy Commission requesting to amend the 1994 Energy Commission Final Decision for the SPA Campbell Cogeneration project (SPAC). The modifications proposed include providing an option to replace the use of potable water with recycled water in the cooling tower when available in suitable quantities and quality; construction of additional water treatment facilities; and increasing discharge amounts to the city of Sacramento's sanitary sewer system, resulting from the use of recycled water. An addendum to the petition was filed on May 19, 2016, to provide additional information on the likely location and depth of the recycled water line, the air quality impacts from construction equipment, and to modify the project description to address the addition of a small metering building near the cooling tower. On May 25, 2016, the applicant provided a draft of the Sacramento Metropolitan Air Quality Management District's Authority to Construct, and its emission evaluation.

STAFF RECOMMENDATION

Energy Commission staff reviewed all project related information and issued a staff analysis assessing the impacts on the environment from the project and recommended mitigation. Through the staff analysis, staff finds the petition, complies with the requirements of Title 20, section 1769 (a) of the California Code of Regulations, and recommends approval of Sacramento Power Authority's petition to modify the Campbell Cogeneration project and amend related Conditions of Certification. Technical staff in the areas of **Air Quality, Geology and Paleontology, Public Health, and Soil and Water Resources** proposes the modification, addition and/or deletion of a number of conditions of certification to ensure the proposed changes would not have a significant

impact on the environment and that the project continues to comply with all laws, ordinances, regulations and standards (LORS).

ENERGY COMMISSION FINDINGS

Based on the entire record, including staff's analysis, the Energy Commission concludes that the proposed modifications will not result in any significant impacts to public health and safety, or to the environment. The Energy Commission finds that:

- The petition meets all the filing criteria of Title 20, section 1769 (a), of the California Code of Regulations, concerning post-certification project modifications;
- The modification will not change the findings in the Energy Commission's Final Decision, pursuant to Title 20, section 1748, of the California Code of Regulations;
- The project will remain in compliance with all applicable laws, ordinances, regulations, and standards, subject to the provisions of Public Resources Code, section 25525;
- The modification will be beneficial to the public and the project owner because the option to use recycled water (when available) instead of potable water will reduce the consumption of potable water in the Sacramento Area. This is particularly helpful because the State of California is in the middle of its fifth consecutive drought year. It is consistent with the Governor's Executive Order B-29-5 that proclaims a state of emergency throughout California due to severe drought conditions; and
- There has been a substantial change in circumstances since the Energy Commission certification, justifying the modifications, and the modifications are based on information that was not available to the parties prior to Energy Commission's October 1994 certification, specifically the unavailability of recycled water.

CONCLUSION AND ORDER

The California Energy Commission hereby adopts staff's recommendations and approves the following changes to the Commission Decision for the Campbell Cogeneration Project.

New language from staff's analysis is shown as **bold underlined**, and deleted language is shown in ~~strikethrough~~. Changes added from Sacramento Power Authority's Comments on staff's analysis are shown in **bold double underline**.

AIR QUALITY CONDITIONS OF CERTIFICATION

STAFF COMPLIANCE REQUIREMENTS

AQ-SC1 The cooling towers shall not use any chromium-containing water treatment chemicals. **and must keep the hexavalent chromium concentration in the**

cooling tower circulating water less than 0.15 milligrams hexavalent chromium per liter.

Verification: The project owner shall maintain appropriate emission data records as required by Conditions **AQ-19** and **AQ-20**.

AQ-SC2 The total dissolved solids content of the circulating cooling water shall not exceed 3,000 ppm_w, averaged over any consecutive three hour period. **The 3-hour average TDS limit is on a clock-hour basis.**

Verification: The project owner shall maintain appropriate emission data records as required by Conditions **AQ-19** and **AQ-20**.

AQ-SC6 As part of the grading and erosion control plans to be submitted to the CPM under the requirement of Condition SOILS-1, the project owner shall include, but not be limited to the following fugitive dust mitigation measures as part of the grading and erosion control plans:

- a) **Area of disturbance within the construction site shall be watered so that it is visibly wet, twice or more daily, as necessary. This Condition shall not apply on rainy days where the ground is visibly wet.**
- b) **Except for emergency and site surveyor vehicles, vehicular movement on unpaved and undisturbed areas is prohibited.**
- c) **Except for trucks using the transmission corridor south of 47th Avenue, all truck tires shall be cleaned of dirt using water spraying, or operation of equivalent effectiveness, subject to the CPM approval, prior to entering public roadways.**
- d) **At least 500 yards of public roadways from the construction site or the transmission lines entrances shall be cleaned on a weekly basis, or when there are visible dirt tracks on the public roadways with either mechanical sweeper or water flushing.**
- e) **All trucks hauling excavated soils which have a potential to generate fugitive dust shall have the soil loads covered.**
- f) **All construction equipment shall be properly maintained to detect and prevent mechanical problems that may cause excess emissions.**
- g) **A speed limit sign shall be posted at the entrance of the construction site, to limit vehicle speed to no more than 15 miles per hour on unpaved areas.**

Verification: Not later than sixty (60) days prior to the start of construction, the project owner shall submit approved copies of the plan(s) from each local jurisdiction to the CPM for review and approval. The project owner shall maintain a daily log of water truck activities, including the number of gallons of water used to reduce the dust at the construction sites. This log shall be available for inspection by the CPM during the construction period. The project owner shall submit in its monthly construction reports of the area the project owner shall cover or treat with a dust suppressant. The project owner shall make the

construction site available to the District and the CPM for inspection and monitoring.

STARTUP CONDITIONS

AQ-S2 After completing the equipment installation authorized under this Authority to Construct (ATC), the permit holder must contact the SMAQMD to arrange a start-up inspection. SMAQMD may be contacted at (916) 874-4800. The CA Energy Commission Compliance Project Manager (CPM) must be notified of the startup inspection.

Verification: Within 30 days prior to the startup inspection, the project owner shall advise appropriate site personnel of this condition, and provide the Energy Commission CPM with a notification by letter that site personnel have been informed regarding the arranged start-up inspection described above.

AQ-S3 This Authority to Construct (ATC) may serve as a temporary Permit to Operate provided that:

- (A) The permit holder has notified SMAQMD that the equipment installation is complete and the facility is ready for a start-up inspection,
- (B) The equipment installed matches the equipment authorized in this Authority to Construct,
- (C) The equipment is operated in compliance with all conditions in this Authority to Construct, and
- (D) The equipment and its operation complies with SMAQMD, state and federal laws and regulations.

Verification: No verification necessary.

AQ-S4 The ATC has been reviewed through an Enhanced New Source Review process in accordance with the procedural requirements of Section 401 through 408 of Rule 207 Title V – Federal Operating Permit Program.

Verification: No verification necessary.

AQ-S5 The Sacramento Power Authority shall submit to the Air Pollution Control Officer (APCO) an application to modify the Title V permit with an Administrative Title V Permit Amendment prior to commencing operation with modifications authorized by this Authority to Construct.

Verification: Within fifteen (15) working days before the execution of the condition, the facility owner shall notify the SMAQMD APCO and the CPM.

GENERAL CONDITIONS

AQ-1 The equipment shall be properly maintained, and operated in accordance with the information submitted with the application and the manufacturer's recommendations at all times.

Verification: The project owner shall make the site available for inspection by representatives of the District, ARB, and the Commission upon request. As part of the Quarterly Emissions Report required by Condition of Certification AQ-20, the facility owner shall assert that they comply with this condition and report any instances of noncompliance.

AQ-3a This Authority to Construct does not authorize the emission of air contaminants in excess of those allowed by Division 26, Part 4, Chapter 3, of the California Health and Safety Code or the Rules and Regulations of the SMAQMD.

Verification: No verification necessary.

AQ-3b The facility may not discharge air ~~contaminates~~ contaminants or other materials that cause injury, detriment, nuisance or annoyance to any considerable number of persons or to the public, or which endanger the comfort, repose, health or safety of any such persons of the public, or which cause, or have a natural tendency to cause, injury or damage to business or property.

Verification: As part of the Quarterly Emissions Report required by Condition of Certification AQ-20, the facility owner shall assert that they comply with this condition and report any instances of noncompliance.

EMISSION LIMITATION REQUIREMENTS

AQ-7 Emissions at the SPAC cogeneration project, from the combustion turbine, duct burner and cooling tower, on a pounds per calendar day basis, except as specified in Condition **AQ-CM11**, daily mass emissions from the following equipment at the facility shall not exceed the following limits.

Pollutant	Maximum Allowable Emissions ^(A) lb/day		
	Gas Turbine and Duct Burner	Cooling Tower	Total
<u>VOC/ROC</u>	146.7	NA <u>0.5</u>	146.7 <u>147.2</u>
NOx	384.5	NA	384.5
SO2	21.8	NA	21.8
PM10	142.1	9.7	151.8
<u>PM2.5 ^(B)</u>	<u>NA</u>	<u>9.7</u>	<u>NA</u>
CO	326.9	NA	326.9

(A) Including start-ups, shutdowns and short term excursions as defined in Conditions **AQ-13**, **AQ-14** and **AQ-15**.

(B) PM2.5 was not evaluated when the turbine was first permitted, PM10 limit is equivalent to PM2.5

Verification: The project owner shall maintain appropriate emission data records as required by Conditions **AQ-19** and **AQ-20**. A summary of significant operation and maintenance events and monitoring records shall be included in the quarterly operation report (**AQ-20**).

AQ-8 Combined mass emissions from the following equipment at the facility shall not exceed the following limits.

Pollutant	Maximum Allowable Emissions ^(A) Combined Emissions from: Gas Turbine and Duct Burner and Cooling Tower				
	Quarter 1 lb/quarter	Quarter 2 lb/quarter	Quarter 3 lb/quarter	Quarter 4 lb/quarter	Total lb/year
VOC/ROC	8,792 <u>8,836</u>	8,898 <u>8,943</u>	13,264 <u>13,309</u>	8,968 <u>9,013</u>	39,922 <u>40,101</u>
NOx	24,209	24,545	26,321	24,725	99,800
SOx	1,814	1,836	1,944	1,853	7,447
PM10	11,015	10,160	12,294	11,619	45,088
CO	21,265	21,601	22,803	21,708	87,377

(A) Including start-ups, shutdowns and short term excursions as defined in Conditions **AQ-13**, **AQ-14** and **AQ-15**.

Verification: The project owner shall maintain appropriate emission data records as required by Conditions AQ-19 and AQ-20. A summary of significant operation and maintenance events and monitoring records shall be included in the quarterly operation report (AQ-20).

AQ-CT1 The equipment must not discharge into the atmosphere any visible air contaminant other than uncombined water vapor for a period or periods aggregating more than three minutes in any one hour if the discharge is as dark or darker than Ringelmann No. 1 or is equal to or greater than 20% opacity.

Verification: As part of the Quarterly Air Quality Report (as required by AQ-20), the facility owner shall submit to the and Energy Commission CPM a copy of a statement of compliance with the above provisions and regulations.

AQ-CT2 The mass emissions from the cooling tower must not exceed the following:

Pollutant	Maximum Allowable Emissions Cooling Tower	
	lb/hour	lb/day
<u>VOC/ROC^a</u>	<u>N/A</u>	<u>0.5</u>
<u>NOx</u>	<u>N/A</u>	<u>NA</u>
<u>SO2</u>	<u>N/A</u>	<u>NA</u>

<u>PM10^b</u>	<u>0.41</u>	<u>9.7</u>
<u>PM2.5^b</u>	<u>0.41</u>	<u>9.7</u>
<u>CO</u>	<u>N/A</u>	<u>NA</u>

^a VOC emissions are estimated by tests conducted at the source of the reclaimed/recycled water. Further testing at the final use point, may show a lower VOC value that will be adjusted during the final permitting process, see AQ-CT8.

^b Based on a water circulation rate of 45,000 gal/min, cooling tower drift rate of .0006%, and a TDS level of 3,000 ppmw, based on a 3-hour average.

<u>Pollutant</u>	<u>Maximum Allowable Emissions Cooling Tower (lb/quarter)</u>			
	<u>Q1</u>	<u>Q2</u>	<u>Q3</u>	<u>Q4</u>
<u>VOC/ROC^a</u>	<u>44</u>	<u>45</u>	<u>45</u>	<u>45</u>
<u>NOx</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>
<u>SO2</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>
<u>PM10^b</u>	<u>875</u>	<u>885</u>	<u>895</u>	<u>895</u>
<u>PM2.5^b</u>	<u>875</u>	<u>885</u>	<u>895</u>	<u>895</u>
<u>CO</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>

^a VOC emissions are estimated by tests conducted at the source of the reclaimed/recycled water. Further testing at the final use point, may show a lower VOC value that will be adjusted during the final permitting process, see AQ-CT8.

^b Based on a water circulation rate of 45,000 gal/min, cooling tower drift rate of .0006%, and a TDS level of 3,000 ppmw.

Verification: The project owner shall maintain appropriate emission data records as required by Conditions AQ-19 and AQ-20. A summary of significant operation and maintenance events and monitoring records shall be included in the quarterly operation report (AQ-20).

MONITORING SYSTEM CONDITIONS

AQ-CT3 The Sacramento Power Authority shall operate a continuous monitoring system that has been approved by the Air Pollution Control Officer that either measures or calculates and records the following.

<u>Parameter to be Monitored</u>	<u>Units</u>
<u>Total dissolved solids content of the circulating water in the cooling towers</u>	<u>PPMV</u>

Verification: The facility owner shall make the site available for inspection by representatives of the SMAQMD, the ARB, and the CPM to verify the continuous monitoring and recordkeeping system is properly installed and operational.

EMISSIONS TESTING CONDITIONS

AQ-CT4 Testing for VOC/ROC and Hexavalent Chrome (measured as compounds of chrome) of the reclaimed/recycled water inlet to the cooling tower must be performed within 60 days of startup (or if revising the VOC emission limits testing must occur before startup with reclaimed/recycled water) and once every second calendar year thereafter to verify compliance with Condition AQ-CT2 and AQ-SC1.

- A. Submit a source test plan to the Air Pollution Control Officer for approval at least 30 days before the test is to be performed.**
- B. Notify the Air Pollution Control Officer at least 7 days prior to the source test date of the exact date and time of test if the date has changed from that approved in the source test plan.**
- C. Submit the source test report to the Air Pollution Control Officer within 60 days from the completion of the test(s).**

Verification: At least thirty (30) days before conducting a source test, the facility owner shall submit to the SMAQMD and the CPM for their review and approval, a source test plan. The facility owner shall notify the SMAQMD and the CPM within seven (7) working days before the project begins initial operation and/or plans to conduct a source test. All source test results shall be submitted to the CPM and the SMAQMD within sixty (60) days of the date of the tests.

RECORD KEEPING & REPORTING CONDITIONS

AQ-CT5 The following records must be continuously maintained onsite for the most recent five year period and must be made available to the Air Pollution Control Officer upon request. Monthly, quarterly, and annual records must be made available within 30 days of the end of the reporting period.

<u>Frequency</u>	<u>Information to be Recorded</u>
<u>Hourly</u>	<ul style="list-style-type: none"> <u>A. Total dissolved solids content of the circulating water in the cooling towers In ppmw.</u> <u>B. Cooling Tower hourly PM10 mass emission rate. The hourly emissions shall be calculated based on the cooling water circulation rate multiplied by the cooling tower drift rate, density of water, and the measured TDS level.</u>

<u>Daily</u>	C. <u>Cooling Tower PM10 daily emissions.</u> D. <u>Total daily PM10 emissions from all equipment at the Sacramento Power Authority Facility.</u>
<u>Quarterly</u>	E. <u>Total facility PM10 quarterly mass emissions.</u>

Verification: The facility owner shall make the site available for inspection by representatives of the SMAQMD, the ARB, and the CPM to verify the continuous monitoring and recordkeeping system is properly installed and operational.

AQ-CT6 The project owner shall, 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.)

Verification: ~~The facility owner shall notify the CPM within fifteen (15) working days after receipt of notification from SMAQMD of the applicability of this condition.~~ The facility owner shall notify the SMAQMD and the CPM within fifteen (15) working days before the execution of this condition.

EMISSION OFFSETS CONDITIONS

AQ-CT7 Prior to commencing operation, the permittee must surrender sufficient ERCs to the SMAQMD Air Pollution Control Officer to offset the following amount of emissions:

<u>Pollutant</u>	<u>Qtr1 lb/qtr</u>	<u>Qtr2 lb/qtr</u>	<u>Qtr3 lb/qtr</u>	<u>Qtr4 lb/qtr</u>
<u>VOC</u>	<u>44 lbs</u>	<u>45 lbs</u>	<u>45 lbs</u>	<u>45 lbs</u>

The applicant has identified three possible credits that individually are sufficient to offset the project VOC emissions. One of the credit certificates originated from the reduction in rice straw burning from the Feather River Air Quality Management District (FRAQMD). The locations of the reduction in rice straw burning are located greater than 15 miles from SCA but less than 50 miles. Two other credits that could potentially be submitted were generated from a shutdown of the compound application process at Campbell Soup Company which is located adjacent to the SPA facility. Therefore, the table below depicts the total quantity of offsets that would be needed to be surrendered for the project.

<u>Emission Reduction Credit Certificate No.</u> (A)	<u>Pollutant</u>	<u>Amount of ERC's Surrendered lb/quarter</u>				<u>Offset Ratio</u>	<u>Value Applied To The Project Emission Liability lb/quarter</u>			
		<u>Qtr 1</u>	<u>Qtr 2</u>	<u>Qtr 3</u>	<u>Qtr 4</u>		<u>Qtr 1</u>	<u>Qtr 2</u>	<u>Qtr 3</u>	<u>Qtr 4</u>

<u>FRAQMD #99001-T2, or</u>	<u>VOC</u>	<u>88</u>	<u>90</u>	<u>90</u>	<u>90</u>	<u>2.0</u>				
<u>SMAQMD #04-00916, or</u>	<u>VOC</u>	<u>52.8</u>	<u>54</u>	<u>54</u>	<u>54</u>	<u>1.2</u>	<u>44</u>	<u>45</u>	<u>45</u>	<u>45</u>
<u>SMAQMD #04-00920</u>	<u>VOC</u>	<u>52.8</u>	<u>54</u>	<u>54</u>	<u>54</u>					

^A The applicant has requested that 3 certificates be listed as options to be used for this project.

Verification: At least thirty (30) days prior to the start of construction, the facility owner must provide to the CPM a copy of one of the three certificates listed as follows: SMAQMD #04-00916, or SMAQMD #04-00920 or the signed recertification from Feather River Air Quality Management District and Sacramento Metropolitan Air Quality Management District demonstration the banking certificate (Certificate FRAQMD #99001-T2) which must have been validated.

AQ-CT8 The applicant must provide the District, prior to commencing operation under this permit, emission reduction credit certificates in sufficient quantity to offset the emissions increase specified in Condition AQ-CT7. If further source testing of the cooling tower reclaimed/recycled water shows a lower VOC concentration in the reclaimed/recycled water, then the amount of VOC credits submitted may be adjusted downward provided the VOC emission limitations in Conditions AQ-CT2, AQ-7, and AQ-8 are correspondingly adjusted to reflect the revised lower reclaimed/recycled water VOC concentration. Any adjustment of the VOC emission limits and corresponding reduction of VOC credits must occur prior to startup of the cooling tower with reclaimed/recycled water. Source testing must include sampling of the reclaimed/recycled water prior to entering the cooling tower basin.

Verification: Prior to commencing operating of the above activities, the facility owner must provide written notice to the District and the CPM. Any adjustment of the VOC emission limits and corresponding reduction of VOC credits, shall also be in a written notification to the CPM regarding any changes to ERCs.

GEOLOGY AND PALEONTOLOGY CONDITIONS OF CERTIFICATION

~~**GEO-1**— Prior to the start of construction, the project owner shall assign to the project an engineering geologist(s), certified by the State of California, to carry out the duties required by the Uniform Building Code (UBC), section 7006(d), 1991 edition. The certified engineering geologist(s) assigned must be approved by the CEC CPM.~~

~~**Verification:** At least 30 days prior to the start of construction, the project owner shall submit to the CEC CPM for approval the name(s) and license number(s) of the certified engineering geologist(s) assigned to the project. The submittal shall include a statement that CEC CPM approval is needed. The CEC CPM will approve or disapprove of the engineering geologist(s) and will notify the project owner of its findings~~

~~within 10 days of receipt of the submittal. If the engineering geologist(s) is subsequently replaced, the project owner shall submit for approval the name(s) and license number(s) of the newly assigned individual to the CEC CPM. The CEC CPM will approve or disapprove of the engineering geologist(s) and will notify the project owner of its findings within 10 days of receipt of the notice of personnel change. Superseded by **GEO-3**.~~

~~**GEO-2**—The assigned engineering geologist shall carry out the duties required by UBC (1991 or most recently adopted edition) sections 7006(d) and 7015(a)3:~~

- ~~• Prepare the Engineering Geology Report.~~
- ~~• Monitor geologic conditions during construction.~~
- ~~• Prepare the Final Geologic Report.~~

~~Protocol: The Engineering Geology Report required by subsection 7006(d) shall include an adequate description of the geology of the site, conclusions and recommendations regarding the effect of geologic conditions on the proposed development, and an opinion on the adequacy of the site as affected by geologic factors.~~

~~The Final Geologic Report to be completed after completion of grading, as required by UBC section 7015(a)3, shall contain the following: a final description of the geology of the site; any new information disclosed during the grading and the effect of same on recommendations incorporated in the approved grading plan; and statements that, to the best of the engineering geologist's knowledge, the actual mitigation measures used to protect the facilities from geologic hazards are adequate and that, to the best of his/her knowledge, the work within his/her area of responsibility is in accordance with the approved Engineering Geology Report. Superseded by **GEO-3**.~~

~~**Verification:** a) Within 10 days of submittal of the application(s) for grading permit(s) to the Chief Building Official (CBO), other designated authority or the CEC's duly authorized representative, the project owner shall submit a signed statement to the CEC CPM stating that the Engineering Geology Report has been submitted to the CBO as a supplement to the plans and specifications and that the recommendations contained in the report are incorporated into the plans and specifications; b) Within 90 days following completion of the final grading, the project owner shall submit copies of the Final Geologic Report required by UBC section 7015(a)3 to the CEC CPM and the CBO.~~

~~**GEO-3** A Soils Engineering Report as required by Section 1803 of the California Building Code (CBC 2013), or its successor in effect at the time construction of the project were to commence, shall specifically include laboratory test data, associated geotechnical engineering analyses, and a thorough discussion of seismicity; liquefaction; dynamic compaction; compressible soils; corrosive soils; and tsunamis. In accordance with CBC, the report must also include recommendations for ground improvement and/or foundation systems necessary to mitigate these potential geologic hazards, if present.~~

Verification: The project owner shall include in the application for a grading permit a copy of the Soils Engineering Report which addresses the potential for strong seismic shaking; liquefaction; dynamic compaction; settlement due to compressible soils; and corrosive soils; and a summary of how the results of the analyses were incorporated into the project foundation and grading plan design for review and comment by the delegate chief building official (CBO). A copy of the Soils Engineering Report, application for grading permit and any comments by the CBO are to be provided to the Compliance Project Manager (CPM) at least 30 days prior to grading for review and approval.

PUBLIC HEALTH CONDITIONS OF CERTIFICATION

PUBLIC HEALTH-1 The project owner shall develop and implement a Biocide Use and Monitoring program to ensure that the potential for bacterial growth in cooling water is kept to a minimum. The Biocide Use and Monitoring program shall incorporate, as applicable, the Best Practices and Recommendations for Minimization of Risks Associated with Legionella as outlined in the Cooling Tower Technology Institute July 2008 publication titled "Legionellosis, Guideline: Best Practices for Control of Legionella." The Biocide Use and Monitoring Program shall specifically address full- and part-load plant operation, and short- and long-term shutdowns.

Verification: At least 60 days prior to the commencement of modified cooling tower operations, the Biocide Use and Monitoring program shall be provided to the CPM for review and approval.

SOIL AND WATER RESOURCES CONDITIONS OF CERTIFICATION

WATER-5: Prior to site discharge of generated industrial wastewater to the sanitary sewer for ultimate disposal to the Regional San's Sacramento Regional Wastewater Treatment Plant (SRWTP), the project owner shall obtain a Permit for Industrial Wastewater Discharge and comply with the wastewater discharge limitations, pretreatment requirements, peak flow restrictions, payment of fees, and monitoring and reporting requirements of SRWTP as applicable for construction.

Verification: At least 30 days prior to SPAC's discharge of industrial wastewater generated using recycled water for project operation, the project owner shall provide the CPM with a copy of its Permit for Industrial Wastewater Discharge from Regional San as applicable for construction. The CPM shall be notified in writing within 10 days of any reported non-compliance with Regional San's SRWTP discharge requirements, including corrective measures for non-compliance and the results of implementing those measures.

WATER-6: Prior to use of recycled water for wet cooling operations, the project owner shall provide the CPM a copy of the executed Recycled Water Purchase Agreement (agreement) with the recycled water producer,

Regional San, for the supply and delivery of tertiary treated recycled water to SPAC. SPAC shall not connect to the Regional San's recycled water pipeline without the final agreement in place. The project owner shall comply with the requirements of Title 22 and Title 17 of the California Code of Regulations and section 13523 of the California Water Code.

Verification: No later than 30 days prior to the connection to the Regional San's recycled water pipeline, the project owner shall submit a copy of the executed agreement for the long-term supply and delivery of tertiary treated recycled water to SPAC. The agreement shall specify a maximum delivery rate of 1 MGD and total maximum use of 1,120 AFY and shall specify all terms and costs for the delivery and use of recycled water by SPAC.

No later than 30 days prior to connection to the Regional San's recycled water main, the project owner shall submit to the CPM a copy of the Engineering Report and Cross Connection inspection and approval report from the California Department of Public Health and all water reuse requirements issued by the CVRWQCB.

WATER-7: The project owner shall use tertiary treated recycled water supplied from the Regional San's Water Reclamation Facility (WRF) as its primary source for evaporative cooling of the steam cycle in the cooling towers and landscape irrigation. Annual usage (excluding fire suppression) shall not exceed 1,120 acre-feet per year (AFY). Prior to the use of recycled water for commercial operation, the project owner shall install and maintain metering devices as part of the water supply and distribution system or verify that the recycled water supplier will provide adequate metering or billing to the project owner to document project water use as required to monitor and record in gallons per day the total volume(s) of water supplied to the SPAC from this water source. The metering devices shall be operational for the life of the project. The project may use potable water for backup and blending purposes in cases of interruptions in delivery of the recycled water, and when recycled water quantities or water quality are not sufficient for project use. Potable water shall not be used exclusively for evaporative cooling unless the source of recycled water is unavailable in the event of an emergency. For purposes of this condition, the term emergency shall mean the inability for SPAC to take or for Regional San to deliver recycled water to the SPAC in a quantity and quality sufficient to meet SPAC's water constituent criteria limits for plant performance demand due to natural disaster or other circumstances beyond the control of the project owner and it is necessary for SPAC to continue to operate.

Verification: The project owner shall prepare an annual summary, which will include the monthly range and monthly average of daily water usage in gallons per day, and total water used on a monthly and annual basis in acre-feet. For years subsequent to the initial year of operation, the annual summary will also

include the yearly range and yearly average water use by source. For calculating the total water use, the term “year” will correspond to the date established for the annual compliance report submittal. The project owner shall report to the CPM any upsets in the delivery of the recycled water, deliveries of insufficient quantities, and water quality for use by SPAC.

IT IS SO ORDERED.

CERTIFICATION

The undersigned Secretariat to the Commission does hereby certify that the foregoing is a full, true, and correct copy of an Order duly and regularly adopted at a meeting of the California Energy Commission held on July 13, 2016.

AYE: Weisenmiller, Douglas, McAllister, Hochschild, Scott

NAY: None

ABSENT: None

ABSTAIN: None

Original Signed by

Cody Goldthrite
Secretariat