

DOCKETED

Docket Number:	93-AFC-03C
Project Title:	Compliance - Application for Certification for SMUD's Campbell Soup Cogeneration Project
TN #:	241278
Document Title:	Campbell Soup Cogen Authority to Construct Permit Public Comment Draft
Description:	N/A
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Submitter Role:	Applicant Consultant
Submission Date:	1/25/2022 5:07:50 PM
Docketed Date:	1/25/2022

AIR QUALITY

MANAGEMENT DISTRICT

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A/C NO.: 26874

ISSUED BY:

DRAFT

DATE ISSUED: TBD

BRIAN F. KREBS

DATE EXPIRES: TBD

ISSUED TO: SMUD FINANCING AUTHORITY DBA CAMPBELL POWER PLANT

LOCATION: 3215 47TH AVE., SACRAMENTO, CA 95824

DESCRIPTION: MODIFICATION OF SAC AIR QUALITY PERMIT 27117 CONSISTING OF THE FOLLOWING:

- 1) INCREASE VOC EMISSIONS FROM THE COOLING TOWER AS A RESULT OF INCREASE VOC FROM THE RECYCLED WATER BEING DELIVERED
- 2) MODIFY SOURCE TESTING FOR VOC TO SOURCE TO COINCIDE WITH RECYCLED WATER AVAILABILITY.

AUTHORITY TO CONSTRUCT CONDITIONS

START-UP REQUIREMENTS

S1. After completing the equipment installation authorized under this Authority to Construct (ATC), the permit holder must contact the Sacramento Metropolitan Air Quality Management District (SMAQMD) to arrange a start-up inspection. SMAQMD may be contacted at (916) 874-4800.

[Basis: SMAQMD Rule 201, Section 405]

S2. This Authority to Construct 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.

[Basis: SMAQMD Rule 201, Section 303.1, 405]

S3. This Authority to Construct 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.

[Basis: SMAQMD Rule 202, Section 404]

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S4. The applicant must submit to the Air Pollution Control Officer an application to modify the Title V permit with an Administrative Title V Permit Amendment no later than 12 months after commencing operation with modifications authorized by this Authority to Construct.

[Basis: SMAQMD Rule 207, Section 301.2]

GENERAL

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

[Basis: SMAQMD Rule 201, Section 405 and Rule 202, Section 408.1]

2. The Air Pollution Control Officer and/or authorized representatives must be permitted to do all of the following:

A. Enter the source premises or any location at which any records required by this ATC are kept.

B. Access and copy any records required by this ATC.

C. Inspect or review any equipment, operation, or method required under this ATC.

D. Sample emissions from the source or require samples to be taken.

[Basis: SMAQMD Rule 201, Section 405]

3. This ATC 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 SMAQMD Rules and Regulations.

[Basis: SMAQMD Rule 201, Sections 303.1, 405]

4. The facility may not discharge air 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 or the public, or which cause, or have a natural tendency to cause, injury or damage to business or property.

[Basis: SMAQMD Rule 402, Section 301]

5. A legible copy of this ATC must be maintained on the premises with the equipment.

[Basis: SMAQMD Rule 201, Section 401]

EMISSION LIMITATIONS

6. 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.

[Basis: SMAQMD Rule 401, Section 301]

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7. The mass emissions from the cooling tower must not exceed the following:
[Basis: SMAQMD Rules 201, Section 405 and 202, Section 408.2]

Pollutant	Maximum Allowable Emissions Cooling Tower	
	lb/hour	lb/day
VOC	N/A	6.5 (B)
NOx	N/A	NA
SO2	N/A	NA
PM10 (A)	0.41	9.7
PM2.5 (A)	0.41	9.7
CO	N/A	NA

(A) Based on a water circulation rate of 45,000 gal/min, cooling tower drift rate of 0.0006%, and a TDS level of 3,000 ppmw, based on a 3 hour average.

(B) The permit limit is 6.5 lb/day, for calculation purposes to calculate quarterly, 6.4852 lb/day was used

Pollutant	Maximum Allowable Emissions Cooling Tower lb/qtr			
	Q1	Q2	Q3	Q4
VOC	584	590	597	597
NOx	N/A	N/A	N/A	N/A
SO2	N/A	N/A	N/A	N/A
PM10 (C)	875	885	895	895
PM2.5 (C)	875	885	895	895
CO	N/A	N/A	N/A	N/A

(C) Based on a water circulation rate of 45,000 gal/min, cooling tower drift rate of 0.0006%, and a TDS level of 3,000 ppmw.

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8. Emissions of VOC, PM10 and PM2.5 from all equipment at the facility including start-ups and shut-downs must not exceed the following limits.

[Basis: SMAQMD Rules 201, Section 405 and 202, Section 408.2]

Pollutant	Maximum Allowable Emissions (lb/day)		
	Combined cycle CTG with D.B.	Cooling tower	Total
VOC	146.7	6.5	153.2
PM10	142.1	9.7	151.8
PM2.5 (A)	NA	9.7	NA

(A) PM2.5 was not evaluated when the turbine was first permitted.

9. Combined mass emissions from the following equipment at the facility must not exceed the following limits:

[Basis: SMAQMD Rules 201, Section 405 and 202, Section 408.2]

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	9,376	9,488	13,861	9,565	42,290
NOx	24,209	24,545	26,321	24,725	99,800
SO2	1,814	1,836	1,944	1,853	7,447
PM10	11,015	10,160	12,294	11,619	45,088
CO	47,599	47,599	47,599	47,599	190,396

(A) Including start-ups, shutdowns and short term excursions

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

[Basis: SMAQMD Rule 201, Section 405]

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EQUIPMENT OPERATION

11. The cooling towers must 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.

[Basis: 17 CCR Section 93103]

MONITORING SYSTEMS

12. The facility must operate a continuous monitoring system that has been approved by the Air Pollution Control Officer that either measures or calculates, and records the following.

[Basis: SMAQMD Rule 201, Section 405 and Rule 202]

Parameter to be monitored	Units
Total dissolved solids content of the circulating water in the cooling towers	PPMW

EMISSIONS TESTING

13. Testing for VOC and Hexavalent Chrome (measured as compounds of chrome) of the recycled water inlet to the cooling tower (not the cooling tower basin) must be performed within 60 days of the initial startup of the modified recycled water and once every second calendar year thereafter to verify compliance with **Condition Nos. 7 and 11.**

- 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).
- D. Upon completion of the initial source test required pursuant to this modification, subsequent biennial compliance tests may be delayed when recycled water is not available for delivery to the facility. Under these circumstances the source must notify the Air Pollution Control Officer and must complete testing within 14 days of resupply of the recycled water to the cooling tower.

[Basis: SMAQMD Rule 201, Section 303.2]

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RECORD KEEPING & REPORTING

14. 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.

[Basis: SMAQMD Rule 201, Section 405]

Frequency	Information to be Recorded
Hourly	A. Total dissolved solids content of the circulating water in the cooling towers in PPMW. B. Cooling Tower hourly PM10 mass emission rate. The hourly emissions must be calculated based on the cooling water circulation rate multiplied by the cooling tower drift rate, density of water, and the measured TDS level.
Daily	C. Cooling Tower PM10 daily emissions. D. Total daily PM10 emissions from all equipment at the facility.
Quarterly	E. Total facility PM10 quarterly mass emissions.

15. Unless otherwise directed by SMAQMD, the permit holder must submit their applicable Annual Report to the District by January 31st of every calendar year. The Annual Report forms can be found 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.

[Basis: SMAQMD Rule 201, Sections 303.1 & 405]

EMISSION OFFSETS

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

[Basis: SMAQMD Rule 202, Section 302]

Pollutant	Qtr1 Lb/qtr	Qtr2 Lb/qtr	Qtr3 Lb/qtr	Qtr4 Lb/qtr
VOC	540 lbs	545 lbs	552 lbs	552 lbs

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The applicant has identified two possible credits that in combination or individually are sufficient to offset the project VOC emissions. The 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 facility. Therefore, the table below depicts the total quantity of offsets that would be needed to be surrendered for the project.

Emission Reduction Credit Certificate No. (A)	Pollutant	Amount of ERC's Surrendered lb/quarter				Offset Ratio	Value Applied To The Project Emission Liability lb/quarter			
		Qtr 1	Qtr 2	Qtr 3	Qtr 4		Qtr 1	Qtr 2	Qtr 3	Qtr 4
SMAQMD #04-00917, OR	VOC	648	654	662.4	662.4	1.2	540	545	552	552
SMAQMD #04-00920	VOC	648 (B)	654 (C)	662.4	662.4					

(A) The applicant has requested that 2 certificates be listed as options to be used for this project.

(B) There is only 458 lbs available in this certificate for Q1, additional offsets would need to be provided from the other certificate at the ratio specified.

(C) There is only 354 lbs available in this certificate for Q2, additional offsets would need to be provided from the other certificate at the ratio specified.

17. 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 No. 16**. If further source testing of the cooling tower recycled water shows a lower VOC concentration in the recycled water, then the amount of VOC credits submitted may be adjusted downward provided the VOC emission limitations in **Conditions 7, 8, and 9** are correspondingly adjusted to reflect the revised lower 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 recycled water under this Authority to Construct. Source testing must include sampling of the recycled water prior to entering the cooling tower basin.

[Basis: SMAQMD Rule 202, Section 302]

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Your application for this air quality Authority to Construct was evaluated for compliance with Sacramento Metropolitan Air Quality Management District (SMAQMD), state and federal air quality rules. The following list identifies the rules that most commonly apply to the operation of your equipment. Other rules may also be applicable.

<u>SMAQMD RULE NO.</u>	<u>RULE TITLE</u>
201	GENERAL PERMIT REQUIREMENTS (8-24-06)
202	NEW SOURCE REVIEW (8-23-12)
401	RINGELMANN CHART (4-19-83)
402	NUISANCE (8-3-77)
<u>STATE</u>	<u>REGULATION TITLE</u>
TITLE 17, CCR SECTION 93103	CARB AIR TOXICS CONTROL MEASURES FOR CHROMATE TREATED COOLING TOWERS (TITLE 17, CCR SECTIONS 93103)
<u>FEDERAL</u>	<u>REGULATION TITLE</u>
40 CFR 63 SUBPART Q	NATIONAL EMISSION STANDARDS FOR HAZARDOUS AIR POLLUTANTS FOR INDUSTRIAL PROCESS COOLING TOWERS

The conditions on this Authority to Construct reflect some, but not all, of the requirements of these rules. Because other rule requirements may apply to the operation, the permit holder should be familiar with all of the rules and related requirements. In addition, because future changes in prohibitory rules may establish more stringent requirements that may supersede the conditions listed here, the permit holder should monitor proposed rules and rule adoption actions at SMAQMD.

For further information please consult your SMAQMD rulebook or contact the SMAQMD for assistance.