



South Coast Air Quality Management District

21865 Copley Drive, Diamond Bar, CA 91765-4178
(909) 396-2000 • www.aqmd.gov

November 18, 2011

Mr. Gerardo Rios
Chief – Permits Office
U. S. EPA, Region IX
75 Hawthorne Street, Air 3
San Francisco, CA 94105

Dear Mr. Rios:

Subject: Burbank Water and Power, SCPPA (ID 128243) – Title V Permit
Revision (Application No. 524485)

Burbank Water and Power, SCPPA has proposed to revise their Title V permit by adding their existing soda ash and lime storage silos to the permit description. This proposed permit revision is considered as a “de-minimis significant permit revision” to their Title V permit. Attached for your review are the permit evaluation and proposed Section D. With your receipt of the proposed Section D today, we will note that the EPA 45-day review period begins on November 18, 2011.

If you have any questions or need additional information regarding the proposed permit revision, please call Chris Perri at (909) 396-2696.

Very truly yours,

A handwritten signature in black ink, appearing to read 'Brian L. Yeh', is written over a faint, larger version of the same signature.

Brian L. Yeh
Senior Manager
Mechanical, Chemical, and Public Services

Cc: Devin Burns, Burbank Water and Power

BLY:AYL:cgp

Attachments



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PERMIT TO OPERATE EVALUATION

APPLICANT:

Burbank City, Burbank Water and Power, SCPPA
164 W. Magnolia Blvd
Burbank, CA 91502
ID# 128243

EQUIPMENT LOCATION:

164 W. Magnolia Blvd
Burbank, CA 91502

EQUIPMENT DESCRIPTION:

Section D of the Reclaim/Title V Permit, ID# 128243

Equipment	ID No.	Connected To	RECLAIM Source Type/ Monitoring Unit	Emissions and Requirements	Conditions
PROCESS 5: DRY STORAGE					
STORAGE SILO, SODA ASH, DIAMETER 9 FT., HEIGHT 48 FT, 3000 CUBIC FEET, WITH PASSIVE VENT FILTER, 25 TOTAL CARTRIDGES 307 FT2 FILTER AREA A/N: 524486	D14				E193.3
STORAGE SILO, LIME, DIAMETER 8 FT., HEIGHT 40 FT, 2000 CUBIC FEET, WITH PASSIVE VENT FILTER, 25 TOTAL CARTRIDGES 307 FT2 FILTER AREA A/N: 524487	D15				E193.3
TRUCK UNLOADING STATION, WITH 1 PNEUMATIC HOSE A/N: 524486	D16				E193.3



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FACILITY DESCRIPTION

This is a combined cycle gas turbine power plant facility located in the City of Burbank. The plant is owned jointly by several cities and irrigation districts in Southern California, collectively known as the Southern California Public Power Authority (SCPPA). Power from the plant is distributed to the member agencies. The plant is operated by the City of Burbank.

BACKGROUND:

The facility submitted 3 applications on June 24, 2011 to permit 2 existing storage silos at the site. The applications were in response to N/C D-20375. After an April 2011 inspection, the AQMD issued the N/C and asked the facility to demonstrate that the equipment did not need a permit. Since then, the facility has contacted AQMD engineering and compliance several times to discuss the issue. AQMD has maintained that a permit is needed because even though the silos are part of the waste water treatment system, they store chemicals in a dry state. Although the facility still feels a permit is not necessary, they filed these applications to avoid receiving an NOV.

The following table summarizes the application submittal and associated processing fees.

A/N	Submittal Date	Equip	Bcat	Fee Sch	Fee
524486	June 24, 2011	Soda Ash Storage Silo	706920	A	1,998.98 ⁽¹⁾
524487	June 24, 2011	Lime Storage Silo	703920	A	1,998.98 ⁽¹⁾
524485	June 24, 2011	Title V Revision	555009	C	1,747.19
Total					\$5,745.15

⁽¹⁾ includes 50% penalty for operating without a permit. does not qualify for amnesty due to NC

PROCESS DESCRIPTION:

The soda ash and lime storage silos are part of the Zero Liquid Discharge (ZLD) system at SCPPA. ZLD is a water treatment process that treats the turbine cooling water on site for re-use. The system eliminates the need to discharge spent cooling water into the local sewer system.

The soda ash and lime are stored in dry form in the silos and introduced into the treatment process through internal hoppers and piping. The silos are filled as needed, generally from as much as twice per month, to as little as once per every 2-3 months, depending on the turbine usage.

The silos are each equipped with a passive fabric filter at the exhaust vent for entrapment of any dust. Air is exhausted through the vent during periods of loading from the truck into the silo and results both from air introduced into the silo from pneumatic transfer as well as air displaced from the silo.



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Soda Ash Silo

The soda ash silo is 48 ft high X 9 ft in diameter, and has a capacity of 3000 cubic feet, or about 180,000 lbs of soda ash at 60 lbs/ft³. The silo is filled through a flexible hose from the unloading bulk trucks with the use of pneumatic pressure.

Lime Bin

The lime storage bin is 40 ft high X 8 ft in diameter, and has a capacity of 2000 cubic feet, or about 60,000 lbs of lime at 30 lbs/ft³. The filling procedure is similar to that of the soda ash silo.

EMISSIONS:

Emission from the storage silo are released in the form of entrained dust from the filter vent. . AP-42 Chapter 8.12 Table 8.12-2 shows a controlled particulate emission factor of 0.0051 lbs/ton Product for soda ash unloading/storage.

The applicant provided the following information:

Delivery Time	240 minutes
Deliveries per day	1
Deliveries per month	2
Bin Vent Maximum Exhaust Rate	1200 acfm
Soda Ash Delivery Rate	12,500 lbs/hr
Lime Delivery Rate	7,500 lbs/hr

Based on the above data, emissions of PM are calculated as follows:

Soda Ash:

$$12,500 \text{ lbs/hr} \times (\text{ton}/2000 \text{ lbs}) \times 2 \text{ hours} \times 0.0051 \text{ lbs/ton}$$

PM emissions per delivery: 0.06 lbs
PM emissions per hour: 0.015 lbs/hr

Lime:

$$7,500 \text{ lbs/hr} \times (\text{ton}/2000 \text{ lbs}) \times 2 \text{ hours} \times 0.0051 \text{ lbs/ton}$$

PM emissions per delivery: 0.04 lbs
PM emissions per hour: 0.01 lbs/hr

Assuming the worst case scenario where deliveries of lime and soda ash occur on the same day, then total emissions are as follows:

$$0.06 + 0.04 = 0.10 \text{ lbs/day}$$



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Emissions Summary

Pollutant	Emissions			
	lbs/hr	lbs/day	30 Day Average	lbs/yr
PM10*	0.025	0.10	0.007	2.4

* Assume all PM emissions are PM10

EVALUATION:

Rule 212 – Standards for Approving Permits

The facility is not located within 1,000 ft of a school, the emissions of PM10 do not exceed the rule thresholds, and there are no toxic emissions from this equipment. Therefore, the addition of the soda ash silo and lime bin is not considered a significant project and a public notice is not required under this rule.

Rule 219 – Equipment Not Requiring a Written Permit

Rule 219(p)(16) exempts “industrial wastewater treatment equipment which does pH adjustment, precipitation, gravity separation and/or filtration of wastewater.” The lime bin and soda ash storage silo would not be considered treatment equipment, but storage equipment, so this exemption does not apply. Paragraph (m)(16) wouldn’t apply because its only for temporary storage less than 550 gallons. And paragraph (m)(1)(c) wouldn’t apply because it’s only for water based solutions of salts or sodium hydroxide. The lime and soda ash are stored as dry material.

Rule 401 – Visible Emissions

Visible emissions exceeding the limits of this rule are not expected given the efficiency of the vent filters on this equipment.

Rule 403 – Fugitive Dust

The purpose of this rule is to reduce the amount of particulate matter entrained in the ambient air as a result of man-made fugitive dust sources by requiring actions to prevent, reduce, or mitigate fugitive dust emissions. The provisions of this rule apply to any activity or man-made condition capable of generating fugitive dust. This rule prohibits emissions of fugitive dust beyond the property line of the emission source. The use of the vent filter on the storage silos will reduce the emissions of particulates, and there should be no dust beyond the property line from the equipment. Compliance is expected.

Rule 402 – Nuisance

Nuisance problems are not expected under normal operation.

Rule 404 – Particulate Matter Concentration

At the maximum exhaust rate of 1200 cfm, the Rule 404 allowable concentration of particulate out of the vent is about 0.073 gr/cf. The storage silos are expected to comply based on the following calculation:

$$\text{Soda Ash} \quad (0.015 \text{ lbs/hr} * 7000 \text{ gr/lb}) / (1200 * 60) \text{ dscfh} \quad = \quad 0.001 \text{ gr/scf}$$



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Lime

$$(0.01 \text{ lbs/hr} * 7000 \text{ gr/lb}) / (1200 * 60) \text{ dscfh} = 0.001 \text{ gr/scf}$$

Rule 405 – Particulate Matter Weight

Soda Ash Silo

At the maximum process rate of 12,500 lbs/hr, the Rule 405 allowable mass of particulate out of the vent is about 9.5 lb/hr. The soda ash storage silo is expected to comply based on the calculated emission rate of 0.015 lbs/hr.

Lime Bin

At the maximum process rate of 7,500 lbs/hr, the Rule 405 allowable mass of particulate out of the vent is about 7.5 lb/hr. The lime storage silo is expected to comply based on the calculated emission rate of 0.01 lbs/hr.

Regulation XIII – New Source Review

The emissions from the equipment are below 0.5 lbs/day, therefore no offsets, BACT, or modeling is required.

Regulation XXX – Title V

This is a Title V source, and the addition of the storage silo and mixing tank to the permit is considered a de-minimis significant permit revision, because the emissions from the equipment are below the thresholds of significance. This is the first de-minimis significant revision since the permit was issued on 4/9/10. Emissions from all de-minimis significant revisions are tracked through the 5 year period of the permit, and if the sum of the emissions at any point exceed the threshold, that revision and all de-minimis revisions after, are then considered significant revisions until the new 5 year term begins.

RECOMMENDATION:

After the 45 day EPA review and comment period, a Permit to Operate is recommended for the storage silo, mixing tank, and truck unloading station subject to the conditions listed in the following section.

CONDITIONS:

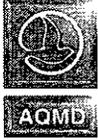
E193.3

The operator shall operate and maintain this equipment according to the following specifications:

The bin vent filter shall be in the ON position at all times during filling of the silo, and for at least 1 hour after filling has ended

Filling of the silo shall be stopped immediately if the high level switch is activated.

The storage silo shall not be filled past the high level switch.



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The unload truck hose shall be equipped with a dust cap. The dust cap shall be in place at all times except during the actual filling operation.

[Rule 1303 (a)(1), Rule 403]

FACILITY PERMIT TO OPERATE BURBANK CITY, BURBANK WATER & POWER, SCPPA

SECTION D: FACILITY DESCRIPTION AND EQUIPMENT SPECIFIC CONDITIONS

The operator shall comply with the terms and conditions set forth below:

Equipment	ID No.	Connected To	RECLAIM Source Type/ Monitoring Unit	Emissions * And Requirements	Conditions
Process 3: INTERNAL COMBUSTION: POWER GENERATION					
SELECTIVE CATALYTIC REDUCTION, SERVING UNIT NO. 1, CORMETECH, VANADIUM-TITANIUM, 1100 CU.FT.; WIDTH: 26 FT; HEIGHT: 67 FT; LENGTH: 1 FT 4 IN WITH A/N: 465931 AMMONIA INJECTION, GRID	C10	D4 D6		NH3: 5 PPMV (4) [RULE 1303(a) (1)-BACT, 5-10-1996; RULE 1303(a)(1)-BACT, 12-6-2002]	A195.1, D12.1, D12.2, D12.3, D29.1, D232.1, E73.1, E179.1, E179.2, E193.1
STACK, NO.1, HEIGHT: 150 FT; DIAMETER: 19 FT A/N: 464716	S12				
Process 4: RULE 219 EXEMPT EQUIPMENT SUBJECT TO SOURCE SPECIFIC RULES					
RULE 219 EXEMPT EQUIPMENT, COATING EQUIPMENT, PORTABLE, ARCHITECTURAL COATINGS	E13			VOC: (9) [RULE 1113, 11-8-1996; RULE 1113, 7-13-2007; RULE 1171, 11-7-2003; RULE 1171, 2-1-2008]	K67.1
Process 5: DRY STORAGE					
STORAGE SILO, SODA ASH, 3000 FT3, WITH PASSIVE VENT FILTER, 25 TOTAL CARTRIDGES 307 FT2 FILTER AREA, HEIGHT: 48 FT; DIAMETER: 9 FT A/N:	D15				E193.3
STORAGE SILO, LIME, 2000 FT3, WITH PASSIVE VENT FILTER, 25 TOTAL CARTRIDGES 307 FT2 FILTER AREA, HEIGHT: 40 FT; DIAMETER: 8 FT A/N:	D16				E193.3
UNLOADING STATION, WITH 1 PNEUMATIC HOSE A/N:	D17				E193.3

* (1) (1A) (1B) Denotes RECLAIM emission factor
 (2) (2A) (2B) Denotes RECLAIM emission rate
 (3) Denotes RECLAIM concentration limit
 (4) Denotes BACT emission limit
 (5) (5A) (5B) Denotes command and control emission limit
 (6) Denotes air toxic control rule limit
 (7) Denotes NSR applicability limit
 (8) (8A) (8B) Denotes 40 CFR limit (e.g. NSPS, NESHAPS, etc.)
 (9) See App B for Emission Limits
 (10) See section J for NESHAP/MACT requirements

** Refer to section F and G of this permit to determine the monitoring, recordkeeping and reporting requirements for this device.

FACILITY PERMIT TO OPERATE BURBANK CITY, BURBANK WATER & POWER, SCPPA

SECTION D: FACILITY DESCRIPTION AND EQUIPMENT SPECIFIC CONDITIONS

The operator shall comply with the terms and conditions set forth below:

Condition Number 12-1

Condition Number 12-2

[RULE 1303(a)(1)-BACT, 5-10-1996; RULE 1303(a)(1)-BACT, 12-6-2002]

[Devices subject to this condition : C10]

- E179.2 For the purpose of the following condition number(s), continuously record shall be defined as recording at least once every month and shall be calculated based upon the average of the continuous monitoring for that month.

Condition Number 12-3

[RULE 1303(a)(1)-BACT, 5-10-1996; RULE 1303(a)(1)-BACT, 12-6-2002]

[Devices subject to this condition : C10]

- E193.1 The operator shall construct, operate, and maintain this equipment according to the following specifications:

In accordance with all mitigation measures stipulated in the Final California Energy Commission Certificate for 01-AFC-6 prepared for this project.

[CA PRC CEQA, 11-23-1970]

[Devices subject to this condition : D1, D4, D6, C10]

- E193.3 The operator shall operate and maintain this equipment according to the following specifications:

FACILITY PERMIT TO OPERATE BURBANK CITY, BURBANK WATER & POWER, SCPPA

SECTION D: FACILITY DESCRIPTION AND EQUIPMENT SPECIFIC CONDITIONS

The operator shall comply with the terms and conditions set forth below:

The bin vent filter shall be in the ON position at all times during filling of the silo, and for at least 1 hour after filling has ended

Filling of the silo shall be stopped immediately if the high level switch is activated

The storage silo shall not be filled past the high level switch

The unload truck hose shall be equipped with a dust cap. The dust cap shall be in place at all times except during the actual filling operation

[RULE 1303(a)(1)-BACT, 5-10-1996; RULE 1303(a)(1)-BACT, 12-6-2002; RULE 403, 4-2-2004; RULE 403, 6-3-2005]

[Devices subject to this condition : D15, D16, D17]

I. Administrative

1296.1 This equipment shall not be operated unless the operator demonstrates to the Executive Officer that the facility holds sufficient RTCs to offset the annual emissions increase for the first 12 months of operation. In addition, this equipment shall not be operated unless the operator demonstrates to the Executive Officer that, at the commencement of each compliance year after the start of operation, the facility holds sufficient RTCs in an amount equal to the annual emissions increase.

For the purposes of this condition, the annual emission increase is 132962 lbs. of NO_x

RTCs held for the purpose of demonstrating compliance with this condition either at the commencement of initial operation or of a compliance year may be sold only after 12 months of start of initial operation or after the fourth quarter of the applicable compliance year, respectively.

[RULE 2005, 5-6-2005]