

## Title V Permit Evaluation

**Site Number:** B1911

**Site Name:** C&H Sugar Company, Inc

**Site Address:** 830 Loring Ave, Crockett, CA 94525

### EMISSION LIMITS AND MONITORING REQUIREMENTS:

#### PM Sources

<b>S# &amp; Description</b>	<b>Emission Limit Citation</b>	<b>Federally Enforceable Emission Limit</b>	<b>Monitoring</b>
<b>WAREHOUSE/PSS SUGAR RECOVERY:</b> S201, S267	BAAQMD Regulation 6-301	Ringelmann 1.0	Pressure Drop Inspection
	BAAQMD Regulation 6-310	0.15 gr/dscf	Pressure Drop Inspection
	BAAQMD Regulation 6-311	S201: 4.2 lb/hr (throughput = 1.0 tons/hr) S267: 18.4 lb/hr (throughput = 9.0 tons/hr)	Pressure Drop Inspection
<b>PSS VACUUM CLEANING SYSTEM:</b> S202	BAAQMD Regulation 6-301	Ringelmann 1.0	Pressure Drop Inspection
	BAAQMD Regulation 6-310	0.15 gr/dscf	Pressure Drop Inspection
	BAAQMD Regulation 6-311	6.7 lb/hr (throughput = 2.0 tons/hr)	Pressure Drop Inspection
<b>POWDERED SUGAR PACKAGING OPERATIONS:</b> S203, S205, S206, S207, S208	BAAQMD Regulation 6-301	Ringelmann 1.0	Pressure Drop Inspection
	BAAQMD Regulation 6-310	0.15 gr/dscf	Pressure Drop Inspection

**PM Sources (continued)**

<b>S# &amp; Description</b>	<b>Emission Limit Citation</b>	<b>Federally Enforceable Emission Limit</b>	<b>Monitoring</b>
	BAAQMD Regulation 6-311	S203: 10.0 lb/hr (throughput = 3.6 tons/hr) S205: 35.5 lb/hr (throughput = 24.0 tons/hr) S206: 14.6 lb/hr (throughput = 6.4 tons/hr) S207: 8.8 lb/hr (throughput = 3.0 tons/hr) S208: 40.0 lb/hr (throughput = 47.0 tons/hr)	Pressure Drop Inspection
<b>POWDERED C/P PACKER: S204</b>	BAAQMD Regulation 6-301	Ringelmann 1.0	Pressure Drop Inspection
	BAAQMD Regulation 6-310	0.15 gr/dscf	Pressure Drop Inspection
	BAAQMD Regulation 6-311	12.1 lb/hr (throughput = 4.8 tons/hr)	Pressure Drop Inspection
	BAAQMD Condition #15205 part 2	0.01 gr/dscf	Pressure Drop Inspection
<b>POWDERED/FONDANT SUGAR PULVERIZERS: S209, S210, S211, S212, S213, S214</b>	BAAQMD Regulation 6-301	Ringelmann 1.0	Pressure Drop Inspection
	BAAQMD Regulation 6-310	0.15 gr/dscf	Pressure Drop Inspection
	BAAQMD Regulation 6-311	S209: 8.8 lb/hr (throughput = 3.0 tons/hr) S210: 8.8 lb/hr (throughput = 3.0 tons/hr) S211: 8.8 lb/hr (throughput = 3.0 tons/hr) S212: 8.8 lb/hr (throughput = 3.0 tons/hr) S213: 3.9 lb/hr (throughput = 0.9 tons/hr) S214: 3.9 lb/hr (throughput = 0.9 tons/hr)	Pressure Drop Inspection

**PM Sources (continued)**

<b>S# &amp; Description</b>	<b>Emission Limit Citation</b>	<b>Federally Enforceable Emission Limit</b>	<b>Monitoring</b>
<b>STARCH UNLOADING/ CONVEYING: S215, S216</b>	BAAQMD Regulation 6-301	Ringelmann 1.0	Visible Emissions Check
	BAAQMD Regulation 6-310	0.15 gr/dscf	None
	BAAQMD Regulation 6-311	S215: 32.4 lb/hr (throughput = 21.0 tons/hr) S216: 14.0 lb/hr (throughput = 6.0 tons/hr)	None
<b>PAPER BALER: S217</b>	BAAQMD Regulation 6-301	Ringelmann 1.0	Visible Emissions Check
	BAAQMD Regulation 6-310	0.15 gr/dscf	None
<b>PACKAGING STATIONS: S218, S219, S220</b>	BAAQMD Regulation 6-301	Ringelmann 1.0	Pressure Drop Inspection
	BAAQMD Regulation 6-310	0.15 gr/dscf	Pressure Drop Inspection
	BAAQMD Regulation 6-311	S218: 40.0 lb/hr (throughput = 54.0 tons/hr) S219: 40.0 lb/hr (throughput = 54.0 tons/hr) S220: 40.0 lb/hr (throughput = 54.0 tons/hr)	Pressure Drop Inspection
<b>MELT TANK S221</b>	BAAQMD Regulation 6-301	Ringelmann 1.0	None
	BAAQMD Regulation 6-310	0.15 gr/dscf	None
	BAAQMD Regulation 6-311	22.3 lb/hr (throughput = 12.0 tons/hr)	None
<b>CONFECTIONERS DRYER: S222</b>	BAAQMD Regulation 6-301	Ringelmann 1.0	Visible Emissions Check
	BAAQMD Regulation 6-310	0.15 gr/dscf	None

**PM Sources (continued)**

<b>S# &amp; Description</b>	<b>Emission Limit Citation</b>	<b>Federally Enforceable Emission Limit</b>	<b>Monitoring</b>
	BAAQMD Regulation 6-311	12.9 lb/hr (throughput = 5.3 tons/hr)	None
<b>PACKING HOUSE #1 VACUUM SYSTEM: S223</b>	BAAQMD Regulation 6-301	Ringelmann 1.0	Pressure Drop Inspection
	BAAQMD Regulation 6-310	0.15 gr/dscf	Pressure Drop Inspection
	BAAQMD Regulation 6-311	0.4 lb/hr (throughput = 0.03 tons/hr)	Pressure Drop Inspection
<b>BULK SUGAR LOADING: S224</b>	BAAQMD Regulation 6-301	Ringelmann 1.0	Visible Emissions Check
	BAAQMD Regulation 6-310	0.15 gr/dscf	None
	BAAQMD Regulation 6-311	40.0 lb/hr (throughput = 75.0 tons/hr)	None
<b>STEEL SILOS CONVEYING TO BULK LOADOUT: S225</b>	BAAQMD Regulation 6-301	Ringelmann 1.0	Visible Emissions Check
	BAAQMD Regulation 6-310	0.15 gr/dscf	None
	BAAQMD Regulation 6-311	40.0 lb/hr (throughput = 37.5 tons/hr)	None
<b>CONCRETE SILOS, CONVEYING, BULK LOADOUT: S226, S227</b>	BAAQMD Regulation 6-301	Ringelmann 1.0	Visible Emissions Check
	BAAQMD Regulation 6-310	0.15 gr/dscf	None
	BAAQMD Regulation 6-311	S226: 37.4 lb/hr (throughput = 26.0 tons/hr) S227: 40.0 lb/hr (throughput = 75.0 tons/hr)	None

**PM Sources (continued)**

<b>S# &amp; Description</b>	<b>Emission Limit Citation</b>	<b>Federally Enforceable Emission Limit</b>	<b>Monitoring</b>
<b>DRIVERT PRODUCTION:</b> S228	BAAQMD Regulation 6-301	Ringelmann 1.0	Pressure Drop Inspection
	BAAQMD Regulation 6-310	0.15 gr/dscf	Pressure Drop Inspection
	BAAQMD Regulation 6-311	9.0 lb/hr (throughput = 3.1 tons/hr)	Pressure Drop Inspection
<b>SCRAP PAPER RECOVERY:</b> S229	BAAQMD Regulation 6-301	Ringelmann 1.0	Visible Emissions Check
	BAAQMD Regulation 6-310	0.15 gr/dscf	None
<b>GRANULATORS:</b> S230, S231, S232, S233, S234, S235, S236	BAAQMD Regulation 6-301	Ringelmann 1.0	Visible Emissions Checks, Scrubber Operating Parameters
	BAAQMD Regulation 6-310	0.15 gr/dscf	None
	BAAQMD Regulation 6-311	S230: 27.8 lb/hr (throughput = 16.7 tons/hr) S231: 27.8 lb/hr (throughput = 16.7 tons/hr) S232: 27.8 lb/hr (throughput = 16.7 tons/hr) S233: 27.8 lb/hr (throughput = 16.7 tons/hr) S234: 40.0 lb/hr (throughput = 37.5 tons/hr) S235: 27.8 lb/hr (throughput = 16.7 tons/hr) S236: 40.0 lb/hr (throughput = 31.3 tons/hr)	None
<b>5<sup>TH</sup> FLOOR DISTRIBUTION:</b> S240, S241, S242	BAAQMD Regulation 6-301	Ringelmann 1.0	Scrubber Operating Parameters

**PM Sources (continued)**

<b>S# &amp; Description</b>	<b>Emission Limit Citation</b>	<b>Federally Enforceable Emission Limit</b>	<b>Monitoring</b>
	BAAQMD Regulation 6-310	0.15 gr/dscf	Scrubber Operating Parameters
	BAAQMD Regulation 6-311	S240: 40.0 lb/hr (throughput = 170.0 tons/hr) S241: 19.7 lb/hr (throughput = 10.0 tons/hr) S242: 40.0 lb/hr (throughput = 85.0 tons/hr)	Scrubber Operating Parameters
<b>BEMIS PACKERS #1 AND #2: S243, S244</b>	BAAQMD Regulation 6-301	Ringelmann 1.0	Pressure Drop Inspection, Scrubber Operating Parameters
	BAAQMD Regulation 6-310	0.15 gr/dscf	Pressure Drop Inspection
	BAAQMD Regulation 6-311	S243: 40.0 lb/hr (throughput = 30.0 tons/hr) S244: 40.0 lb/hr (throughput = 30.0 tons/hr)	Pressure Drop Inspection
<b>BEMIS PACKER #3 AND 1<sup>ST</sup> FLOOR SHREDDER: S245, S255</b>	BAAQMD Regulation 6-301	Ringelmann 1.0	Pressure Drop Inspection
	BAAQMD Regulation 6-310	0.15 gr/dscf	Pressure Drop Inspection
	BAAQMD Regulation 6-311	S245: 40.0 lb/hr (throughput = 30.0 tons/hr) S255: 6.7 lb/hr (throughput = 2.0 tons/hr)	Pressure Drop Inspection
<b>DRY UNSCREENED SUGAR SURGE OPERATIONS: S246, S247, S248, S249</b>	BAAQMD Regulation 6-301	Ringelmann 1.0	Scrubber Operating Parameters
	BAAQMD Regulation 6-310	0.15 gr/dscf	Scrubber Operating Parameters

**PM Sources (continued)**

<b>S# &amp; Description</b>	<b>Emission Limit Citation</b>	<b>Federally Enforceable Emission Limit</b>	<b>Monitoring</b>
	BAAQMD Regulation 6-311	S246: 40.0 lb/hr (throughput = 30.0 tons/hr) S247: 40.0 lb/hr (throughput = 125.0 tons/hr) S248: 22.3 lb/hr (throughput = 12.0 tons/hr) S249: 24.7 lb/hr (throughput = 14.0 tons/hr)	Scrubber Operating Parameters
<b>CHAR FURNACE: S250</b>	BAAQMD Regulation 6-301	Ringelmann 1.0	Scrubber Operating Parameters
	BAAQMD Regulation 6-310.3	0.15 gr/dscf @6%O2	Scrubber Operating Parameters
	BAAQMD Regulation 6-311	32.7 lb/hr (throughput = 21.3 tons/hr)	Scrubber Operating Parameters
<b>BULK BINS: S252, S253, S254</b>	BAAQMD Regulation 6-301	Ringelmann 1.0	Visible Emissions Check
	BAAQMD Regulation 6-310	0.15 gr/dscf	None
	BAAQMD Regulation 6-311	S252: 31.4 lb/hr (throughput = 20.0 tons/hr) S253: 31.4 lb/hr (throughput = 20.0 tons/hr) S254: 36.5 lb/hr (throughput = 25.0 tons/hr)	None
<b>BULK GRANULATED SILOS: S257, S258, S259, S260</b>	BAAQMD Regulation 6-301	Ringelmann 1.0	Visible Emissions Check
	BAAQMD Regulation 6-310	0.15 gr/dscf	None

**PM Sources (continued)**

<b>S# &amp; Description</b>	<b>Emission Limit Citation</b>	<b>Federally Enforceable Emission Limit</b>	<b>Monitoring</b>
	BAAQMD Regulation 6-311	S257: 36.5 lb/hr (throughput = 25.0 tons/hr) S258: 36.5 lb/hr (throughput = 25.0 tons/hr) S259: 36.5 lb/hr (throughput = 25.0 tons/hr) S260: 36.5 lb/hr (throughput = 25.0 tons/hr)	None
<b>VIBRO CONVEYING/ STORAGE: S261</b>	BAAQMD Regulation 6-301	Ringelmann 1.0	Visible Emissions Check
	BAAQMD Regulation 6-310	0.15 gr/dscf	None
	BAAQMD Regulation 6-311	S261: 7.2 lb/hr (throughput = 2.2 tons/hr)	None
<b>12/5 SUGAR CONVEYING/ STORAGE: S262</b>	BAAQMD Regulation 6-301	Ringelmann 1.0	Pressure Drop Inspection, Visible Emissions Check
	BAAQMD Regulation 6-310	0.15 gr/dscf	Pressure Drop Inspection
	BAAQMD Regulation 6-311	40.0 lb/hr (throughput = 60.0 tons/hr)	Pressure Drop Inspection
<b>DRIVERT PACKER:  S263</b>	BAAQMD Regulation 6-301	Ringelmann 1.0	Pressure Drop Inspection
	BAAQMD Regulation 6-310	0.15 gr/dscf	Pressure Drop Inspection
	BAAQMD Regulation 6-311	25.9 lb/hr (throughput = 15.0 tons/hr)	Pressure Drop Inspection
<b>AIRVEYORS/ AIRVEYOR BIN: S264, S265, S266</b>	BAAQMD Regulation 6-301	Ringelmann 1.0	Pressure Drop Inspection

**PM Sources (continued)**

<b>S# &amp; Description</b>	<b>Emission Limit Citation</b>	<b>Federally Enforceable Emission Limit</b>	<b>Monitoring</b>
	BAAQMD Regulation 6-310	0.15 gr/dscf	Pressure Drop Inspection
	BAAQMD Regulation 6-311	S264: 40.0 lb/hr (throughput = 47.0 tons/hr) S265: 15.5 lb/hr (throughput = 7.0 tons/hr) S266: 15.5 lb/hr (throughput = 7.0 tons/hr)	Pressure Drop Inspection
<b>6/10 HESSER PACKAGING STATIONS: S268, S269</b>	BAAQMD Regulation 6-301	Ringelmann 1.0	Visible Emissions Check
	BAAQMD Regulation 6-310	0.15 gr/dscf	None
	BAAQMD Regulation 6-311	S268: 22.3 lb/hr (throughput = 12.0 tons/hr) S269: 22.3 lb/hr (throughput = 12.0 tons/hr)	None
<b>CUBE PACKAGING: S270</b>	BAAQMD Regulation 6-301	Ringelmann 1.0	Visible Emissions Check
	BAAQMD Regulation 6-310	0.15 gr/dscf	None
	BAAQMD Regulation 6-311	7.2 lb/hr (throughput = 2.2 tons/hr)	None
<b>CUBE MOLDING: S-272</b>	BAAQMD Regulation 6-301	Ringelmann 1.0	None
	BAAQMD Regulation 6-310	0.15 gr/dscf	None
	BAAQMD Regulation 6-311	7.2 lb/hr (throughput = 2.2 tons/hr)	None
<b>WAREHOUSE/ PSS MELT SYSTEM: S271</b>	BAAQMD Regulation 6-301	Ringelmann 1.0	None
	BAAQMD Regulation 6-310	0.15 gr/dscf	None

**PM Sources (continued)**

<b>S# &amp; Description</b>	<b>Emission Limit Citation</b>	<b>Federally Enforceable Emission Limit</b>	<b>Monitoring</b>
	BAAQMD Regulation 6-311	9.6 lb/hr (throughput = 3.4 tons/hr)	None
<b>BULK GRANULATED ELEVATORS: S273, S274, S275</b>	BAAQMD Regulation 6-301	Ringelmann 1.0	Visible Emissions Check
	BAAQMD Regulation 6-310	0.15 gr/dscf	None
	BAAQMD Regulation 6-311	S273: 20.8 lb/hr (throughput = 10.8 tons/hr) S274: 20.8 lb/hr (throughput = 10.8 tons/hr) S275: 7.8 lb/hr (throughput = 2.5 tons/hr)	None
<b>CUSTOM PRODUCTS STATION: S276</b>	BAAQMD Regulation 6-301	Ringelmann 1.0	Visible Emissions Check
	BAAQMD Regulation 6-310	0.15 gr/dscf	None
	BAAQMD Regulation 6-311	4.2 lb/hr (throughput = 1.0 tons/hr)	None
<b>CARPENTER SHOP: S278</b>	BAAQMD Regulation 6-301	Ringelmann 1.0	Visible Emissions Check
	BAAQMD Regulation 6-310	0.15 gr/dscf	None
<b>TAILINGS MELT TANKS: S279</b>	BAAQMD Regulation 6-301	Ringelmann 1.0	None
	BAAQMD Regulation 6-310	0.15 gr/dscf	None
	BAAQMD Regulation 6-311	21.0 lb/hr (throughput = 11.0 tons/hr)	None
<b>DIATOMACEOUS EARTH SYSTEM: S280, S281, S282</b>	BAAQMD Regulation 6-301	Ringelmann 1.0	Visible Emissions Check

**PM Sources (continued)**

<b>S# &amp; Description</b>	<b>Emission Limit Citation</b>	<b>Federally Enforceable Emission Limit</b>	<b>Monitoring</b>
	BAAQMD Regulation 6-310	0.15 gr/dscf	None
	BAAQMD Regulation 6-311	S280: 1.4 lb/hr (throughput = 0.2 tons/hr) S281: 4.2 lb/hr (throughput = 1.0 tons/hr) S282: 4.2 lb/hr (throughput = 1.0 tons/hr)	None
<b>LIME UNLOADING STATION – REFINERY: S284</b>	BAAQMD Regulation 6-301	Ringelmann 1.0	Visible Emissions Check
	BAAQMD Regulation 6-310	0.15 gr/dscf	None
	BAAQMD Regulation 6-311	1.2 lb/hr (throughput = 0.15 tons/hr)	None
<b>MOTHERS DRYER: S285</b>	BAAQMD Regulation 6-301	Ringelmann 1.0	Pressure Drop Inspection
	BAAQMD Regulation 6-310	0.15 gr/dscf	Pressure Drop Inspection
	BAAQMD Regulation 6-311	25.9 lb/hr (throughput = 15.0 tons/hr)	Pressure Drop Inspection
	BAAQMD Condition #14649, part 4	0.011 gr/dscf	Pressure Drop Inspection
<b>CARBON REGENERATION FURNACE: S286</b>	BAAQMD Regulation 6-301	Ringelmann 1.0	Scrubber Operating Parameters
	BAAQMD Regulation 6-310.3	0.15 gr/dscf @6%O2	Scrubber Operating Parameters
	BAAQMD Regulation 6-311	3.1 lb/hr (throughput = 0.6 tons/hr)	Scrubber Operating Parameters

**PM Sources (continued)**

<b>S# &amp; Description</b>	<b>Emission Limit Citation</b>	<b>Federally Enforceable Emission Limit</b>	<b>Monitoring</b>
<b>SPENT CHAR HANDLING SYSTEM: S288</b>	BAAQMD Regulation 6-301	Ringelmann 1.0	None
	BAAQMD Regulation 6-310	0.15 gr/dscf	None
	BAAQMD Regulation 6-311	32.7 lb/hr (throughput = 21.3 tons/hr)	None
<b>REGENERATED CHAR HANDLING SYSTEM: S289</b>	BAAQMD Regulation 6-301	Ringelmann 1.0	Pressure Drop Inspection
	BAAQMD Regulation 6-310	0.15 gr/dscf	Pressure Drop Inspection
	BAAQMD Regulation 6-311	30.3 lb/hr (throughput = 19.0 tons/hr)	Pressure Drop Inspection
<b>LIME UNLOADING STATION – FILTER CAKE: S307</b>	BAAQMD Regulation 6-301	Ringelmann 1.0	Visible Emissions Check
	BAAQMD Regulation 6-310	0.15 gr/dscf	None
	BAAQMD Regulation 6-311	0.9 lb/hr (throughput = 0.1 tons/hr)	None
<b>ROTEX SCREENS: S330, S331, S332, S333, S334, S335, S336, S337, S338, S340, S341, S342, S343, S344, S354, S346</b>	BAAQMD Regulation 6-301	Ringelmann 1.0	Visible Emissions Check
	BAAQMD Regulation 6-310	0.15 gr/dscf	None
	BAAQMD Regulation 6-311	0.2 lb/hr (throughput = 25 tons/hr)	None

## PM Discussion:

### **BAAQMD Regulation 6 “Particulate Matter And Visible Emissions”**

#### Visible Emissions

BAAQMD Regulation 6-301 limits visible emissions to no darker than 1.0 on the Ringelmann Chart (except for a period or aggregate periods less than 3 minutes in any hour). Since all PM sources at this facility have a downstream particulate abatement device, Ringelmann 1.0 should not be exceeded if the abatement device is working properly. In order to demonstrate proper abatement device function, additional permit conditions have been proposed, requiring the facility to periodically assess the performance of the abatement devices either through direct inspection or by monitoring abatement device operating parameters.

#### Particulate Weight Limitation

BAAQMD Regulation 6-310 limits particulate emissions from any source to 0.15 grains per dry standard cubic foot (gr/dscf) of exhaust volume. Section 310.3 limits filterable PM emissions from “heat transfer operations” to 0.15 gr/dscf @ 6% O<sub>2</sub>. The attached spreadsheet, “Regulation 6-310: Particulate Weight Limitation”, estimates the grain loading at each PM emission point at the facility. The spreadsheet model calculates the PM emission rate in gr/dscf for each source or emission train using the maximum throughput capacity, the accepted unabated emission factor, the accepted PM abatement factor, and the typical exhaust gas flow rate converted to dry standard cubic feet (i.e. 0% water vapor, 70 degrees F). The exhaust gas flow rates for the heat transfer operations S-250 and S-286 have been corrected to 6% (vol.) oxygen.

Based on the parameters used in the model, each source was found to be in compliance with the Regulation 6-310 grain loading limit. Therefore, periodic assessments of proper abatement device function (in accordance with the proposed permit conditions) can be used to demonstrate compliance with Regulation 6-310.

#### Allowable Rate of Emissions Based on Process Weight Rate

BAAQMD Regulation 6-311 limits particulate emissions from general operations based on the process weight throughput. These limits are found in Table I of the regulation. The attached spreadsheet, “Regulation 6-311: “Allowable Rate of Emissions Based on Process Weight”, interpolates Table I for each PM source that has a process throughput rate and compares the result with the calculated emissions for that source. The maximum throughput for each source was assumed, along with accepted emission factors and abatement factors.

Based on the parameters used in the model, each source was found to be in compliance with the corresponding Regulation 6-311 limit. Since compliance with the 6-311 emission limit for each source is generally tied to the efficiency of the attached abatement device, inspections required by the proposed permit conditions can be used to demonstrate compliance.

## Other PM Emission Limits

### BAAQMD Permit Condition #15205

Part 2 of Condition #15205 sets a BACT PM emission limit of 0.01 gr/dscf for the Powdered C/P Packer S-204. Based on the spreadsheet calculations used to determine compliance with Regulation 6-310, the expected emission rate from S-204 (abated by Baghouse A-204) is 0.0007 gr/dscf, well below the BACT limit. Assuming proper abatement device function is an indication that the BACT limit is being met, the proposed baghouse monitoring conditions can be used as a means of periodically demonstrating compliance.

### BAAQMD Permit Condition #14649

Part 4 of Condition #14649 sets a PM emission limit of 0.011 gr/dscf for the Mothers Dryer S-285. Based on the spreadsheet calculations used to determine compliance with Regulation 6-310, the expected emission rate from S-285 (abated by Baghouse A-288) is 0.0006 gr/dscf, well below the BACT limit. Assuming proper abatement device function is an indication that the BACT limit is being met, the proposed baghouse monitoring conditions can be used as a means of periodically demonstrating compliance.

## Proposed New Permit Conditions

### General Conditions for the Following Sources Abated by Baghouses:

S-201, S-202, S-203, S-204, S-205, S-206, S-207, S-208, S-209, S-210, S-211, S-212, S-213, S-214, S-218, S-219, S-220, S-223, S-228, S-243, S-244, S-245, S-255, S-262, S-263, S-264, S-265, S-266, S-267, S-285, S-289

1. Each baghouse shall be properly maintained and properly operated at all times that its associated PM emissions source(s) is/are in operation. (basis: Regulation 2-1-403)
2. Within 3 months of the issuance of the Title V permit, each baghouse shall be equipped with a magnahelic gauge or other approved device to measure the pressure drop across the filter bags. The pressure drop across the baghouse shall be maintained within the range recommended by the manufacturer or normal operating range established by the facility. The established pressure drop range for each baghouse shall be recorded and kept on file. (basis: Regulation 2-1-403)
3. In order to ensure the proper operation of each affected baghouse, the following items shall be inspected on at least a monthly basis. (basis: Regulation 2-1-403)

- a. the measured pressure drop across the baghouse is within the established pressure drop range
  - b. evidence of visible particulate emissions from the exhaust of the baghouse
  - c. evidence of holes, tearing, or significant wear of filter bags by visual inspection
4. In order to demonstrate compliance with part 3, the permit holder shall keep monthly inspection records for each affected baghouse in a District approved log. These records shall include the following information for each baghouse:
- a. the time and date of each inspection
  - b. the name of the person conducting the inspection
  - c. the measured pressure drop versus the established pressure drop range
  - d. the results of each visible particulate emissions check
  - e. the observed condition of the filter bags
  - f. any corrective action taken as a result of the inspection

All records shall be kept on-site and made available for District inspection for a period of five years from the date on which a record is made. (basis: Regulation 2-6-501)

For S-215, S-216: Starch Unloading/Conveying

- 1. Particulate matter emissions during loading operations at the Starch Unloading Facility S-215, shall be controlled by the Baghouse A-211. (basis: Regulation 2-1-403)
- 2. Particulate generated by the Starch Conveying System S-216 shall be controlled by the Baghouse A-212. (basis: Regulation 2-1-403)
- 3. The Baghouses A-211 and A-212, shall be checked for visible emissions on an annual basis. The visible emissions check shall take place while the equipment is operating and during daylight hours. If any visible emissions are detected, the operator shall take corrective action, and check for visible emissions during the next period of operation. If no visible emissions are detected, the operator shall continue to check for visible emissions every year. (basis: Regulation 2-1-403)
- 4. The operator shall keep records of all visible emissions checks, the person performing the check, and all maintenance performed on the baghouses. These

records shall be retained for five (5) years and shall be made available to District personnel upon request. (basis: Regulation 2-6-501)

General Conditions for the Following Sources Abated by Cyclones:

S-217, S-229, S-268, S-269, S-270, S-278

1. Each cyclone shall be properly maintained and properly operated at all times that its associated PM emissions source(s) is/are in operation. (basis: Regulation 2-1-403)
2. Each cyclone, shall be checked for visible emissions on an annual basis. The visible emissions check shall take place while the equipment is operating and during daylight hours. If any visible emissions are detected, the operator shall take corrective action, and check for visible emissions during the next period of operation. If no visible emissions are detected, the operator shall continue to check for visible emissions every year. (basis: Regulation 2-1-403)
3. The operator shall keep records of all visible emissions checks, the person performing the check, and all maintenance performed. These records shall be retained for five (5) years and shall be made available to District personnel upon request. (basis: Regulation 2-6-501)

General Conditions for the Following Sources Abated by Rotoclones:

S-222, S-224, S-225, S-226, S-227, S-230, S-231, S-232, S-233, S-234, S-235, S-236, S-252, S-253, S-254, S-257, S-258, S-259, S-260, S-261, S-262, S-268, S-269, S-273, S-274, S-275, S-276

1. Each rotoclone shall be properly maintained and properly operated at all times that its associated PM emissions source(s) is/are in operation. (basis: Regulation 2-1-403)

2. Each rotoclone, shall be checked for visible emissions on an annual basis. The visible emissions check shall take place while the equipment is operating and during daylight hours. If any visible emissions are detected, the operator shall take corrective action, and check for visible emissions during the next period of operation. If no visible emissions are detected, the operator shall continue to check for visible emissions every year. (basis: Regulation 2-1-403)
3. The operator shall keep records of all visible emissions checks, the person performing the check, and all maintenance performed. These records shall be retained for five (5) years and shall be made available to District personnel upon request. (basis: Regulation 2-6-501)

General Conditions for the Following Sources Abated by Wet Scrubbers:

S-246, S-247, S-248, S-249, S-250, S-286

1. Each wet scrubber shall be properly maintained and properly operated at all times that its associated PM emissions source(s) is/are in operation. (basis: Regulation 2-1-403)
2. Each wet scrubber shall be operated within the range of normal operating parameters for the equipment as established by the facility. The acceptable ranges for scrubber liquid flow rate and gas stream pressure drop across the unit shall be recorded for each affected wet scrubber and kept on file. (basis: Regulation 2-1-403)
3. In order to ensure the proper operation of each affected wet scrubber, the following items shall be inspected on at least a weekly basis. (basis: Regulation 2-1-403)
  - a. scrubber operating parameters including liquid flow rate and gas stream pressure drop
  - b. evidence of visible particulate emissions from the exhaust of the scrubber
4. In order to demonstrate compliance with part 3, the permit holder shall keep weekly inspection records for each affected wet scrubber in a District approved log. These records shall include the following information for each unit inspected:
  - a. the time and date of each inspection

- b. the name of the person conducting the inspection
- c. the liquid flow rate versus the established range
- d. the measured gas stream pressure drop versus the established pressure drop range
- e. the results of each visible particulate emissions check
- f. any corrective action taken as a result of the inspection

All records shall be kept on-site and made available for District inspection for a period of five years from the date on which a record is made. (basis: Regulation 2-6-501)

For S-280, S-281, S-282: Diatomaceous Earth System

1. Particulate matter emissions during loading operations at the Diatomaceous Earth Storage Silo S-280, shall be controlled by the Dust Collector A-284. (basis: Regulation 2-1-403)
2. Particulate matter emissions during loading operations at the West DE Metering Bin S-281, shall be controlled by the Dust Collector A-285. (basis: Regulation 2-1-403)
3. Particulate matter emissions during loading operations at the East DE Metering Bin S-282, shall be controlled by the Dust Collector A-286. (basis: Regulation 2-1-403)
4. The Dust Collectors A-284, A-285, and A-286, shall be checked for visible emissions on an annual basis. The visible emissions check shall take place while the equipment is operating and during daylight hours. If any visible emissions are detected, the operator shall take corrective action, and check for visible emissions during the next period of operation. If no visible emissions are detected, the operator shall continue to check for visible emissions every year. (basis: Regulation 2-1-403)
5. The operator shall keep records of all visible emissions checks, the person performing the check, and all maintenance performed on the baghouses. These records shall be retained for five (5) years and shall be made available to District personnel upon request. (basis: Regulation 2-6-501)

For S-284: Lime Storage Silo - Refinery

1. Particulate matter emissions during loading operations at the Lime Storage Silo S-284, shall be controlled by the Bin Vent Filter A-287. (basis: Regulation 2-1-403)
2. The Bin Vent Filter A-287, shall be checked for visible emissions on an annual basis. The visible emissions check shall take place while the equipment is operating and during daylight hours. If any visible emissions are detected, the operator shall take corrective action, and check for visible emissions during the next period of operation. If no visible emissions are detected, the operator shall continue to check for visible emissions every year. (basis: Regulation 2-1-403)
3. The operator shall keep records of all visible emissions checks, the person performing the check, and all maintenance performed on the baghouses. These records shall be retained for five (5) years and shall be made available to District personnel upon request. (basis: Regulation 2-6-501)

For S-307: Lime Unloading Station

1. Particulate matter emissions during loading operations at the Lime Storage Silo of S-307, shall be controlled by the Bin Vent Filter A-307. (basis: Regulation 2-1-403)
2. The Bin Vent Filter A-307, shall be checked for visible emissions on an annual basis. The visible emissions check shall take place while the equipment is operating and during daylight hours. If any visible emissions are detected, the operator shall take corrective action, and check for visible emissions during the next period of operation. If no visible emissions are detected, the operator shall continue to check for visible emissions every year. (basis: Regulation 2-1-403)
3. The operator shall keep records of all visible emissions checks, the person performing the check, and all maintenance performed on the baghouses. These records shall be retained for five (5) years and shall be made available to District personnel upon request. (basis: Regulation 2-6-501)

**PM Sources Not Requiring Monitoring**

Sources with Negligible PM Emissions to the Atmosphere

The Melt Tank S-221, Cube Molding S-272, Warehouse/ PSS Melt System S-271, Tailings Melt Tanks S-279, and Spent Char Handling System S-288 do not exhaust any significant amounts of particulate matter to the atmosphere and do not require PM abatement. Therefore, the addition of periodic particulate monitoring for these sources is not recommended.

**POC Sources**

<b>S# &amp; Description</b>	<b>Emission Limit Citation</b>	<b>Federally Enforceable Emission Limit</b>	<b>Monitoring</b>
<b>CHAR FURNACE:</b> S250	BAAQMD Regulation 8-2-301	300 ppm total carbon (dry) (if emission is >15 lb/day)	None
<b>PAINT SPRAY OPERATION:</b> S-256	BAAQMD Regulation 8-19-302, 312	VOC Limits	Recordkeeping
<b>CARBON REGENERATION FURNACE:</b> S286	BAAQMD Regulation 8-2-301	300 ppm total carbon (dry) (if emission is >15 lb/day)	None
<b>WASTEWATER TREATMENT:</b> S301, S303, S304, S305	BAAQMD Regulation 8-2-301	300 ppm total carbon (dry) (if emission is >15 lb/day)	None

**POC Discussion:**

S-250: Char Furnace

BAAQMD Regulation 8-2-301 limits emissions of organic compounds from miscellaneous operations to 15 pounds per day and 300 ppm (total carbon on a dry basis). In other words, if the emission is greater than 15 lb/day, then the concentration limit is 300 ppm. The Char Furnace S-250 (Herreshoff Kiln) was most recently source tested by the District on 2/18/00 (Test #00124). In this test the total carbon emission rate was found to be 20 ppm at a mass emission rate of 0.32 lb/hr (7.7 lb/day). Since the test results show actual emissions to be well below the 8-2-301 15 lb/day mass emission trigger and the 300 ppm concentration limit, no additional monitoring for this standard is recommended.

S-256: Paint Spray Operation

Recordkeeping required by District regulations is sufficient monitoring for the Paint Spray Operation S-256.

S-286: Carbon Regeneration Furnace

S-286 is subject to the previously discussed 15 lb/day/300 ppm limit of Regulation 8-2-301. Since this source is required by permit condition (Condition #13308) to be abated by the Afterburner A-289 at all times, POC emissions are expected to be quite low. For example, given the following parameters:

Maximum Throughput Rate at S-286: 0.6 tons/hr (spent carbon)  
 Accepted POC Emission Factor: 20 lb/ton (expressed as total carbon, C<sub>1</sub>)  
 Accepted POC Abatement Factor: 95% (wt)  
 Exhaust Flow Rate: 5,776 dry standard cubic feet per minute  
 Molecular Weight of Carbon: 12 lb/lb-mole  
 Volume of Exhaust Gas at 70 degrees F: 386 dscf/lb-mole

$$\begin{aligned} \text{ppm } C_1 &= (1 - 0.95) \times (0.6 \text{ ton/hr}) \times (20 \text{ lb/ton}) \times (\text{hr}/60 \text{ min}) \times (\text{min}/5,776 \text{ dscf}) \times (\text{lb-mole } C/12 \text{ lb } C) \times (386 \text{ dscf/lb-mole gas}) \\ &= 5.57 \text{ E-05 lb-mole } C/\text{lb-mole exhaust} \\ &= 56 \text{ ppm} \end{aligned}$$

Based on these assumptions it is estimated that the highest day POC total carbon emissions will be 14.4 lb/day with a concentration of 56 ppm. No additional monitoring is recommended.

S-301, S-303, S-304, S-305: Wastewater Treatment Operations

Due to the low concentrations of volatile organic compounds in the wastewater stream at this facility, it is assumed that the Regulation 8-2-301 standard will never be exceeded. No monitoring is recommended.

**SO<sub>2</sub> Sources**

<b>S# &amp; Description</b>	<b>Emission Limit Citation</b>	<b>Federally Enforceable Emission Limit</b>	<b>Monitoring</b>
<b>CHAR FURNACE:</b> S250	BAAQMD Regulation 9-1-301	Ground Level Concentrations: 0.5 ppm for 3 consecutive minutes, 0.25 ppm averaged over 60 consecutive minutes, 0.05 ppm averaged over 24 hours	None
	BAAQMD Regulation 9-1-302	300 ppm (dry) general emission limitation	None

S# & Description	Emission Limit Citation	Federally Enforceable Emission Limit	Monitoring
CARBON REGENERATION FURNACE: S286	BAAQMD Regulation 9-1-301	Ground Level Concentrations: 0.5 ppm for 3 consecutive minutes, 0.25 ppm averaged over 60 consecutive minutes, 0.05 ppm averaged over 24 hours	None
	BAAQMD Regulation 9-1-302	300 ppm (dry) general emission limitation	None

**SO2 Discussion:**

S-250: Char Furnace

BAAQMD Regulation 9-1-302 limits SO2 emissions to 300 ppm (dry). The most recent District source test for SO2 at S-250 was conducted on 1/21/99 (Test #99135). In this test SO2 emissions averaged 36 ppm (dry) at an emission rate of 3.0 lb/hr. Since the test results were well below the 300 ppm (dry) limit, no additional monitoring for this standard is recommended.

Area monitoring to demonstrate compliance with the ground level SO2 concentration requirements of Regulation 9-1-301 is at the discretion of the APCO.

S-286: Carbon Regeneration Furnace

The only SO2 emissions associated with S-286 are generated from small concentrations of sulfur compounds in the combustion fuel. Since there is a federally enforceable permit condition requiring the use of natural gas at the Carbon Regeneration Furnace S-286 and Afterburner A-289, monitoring for Regulation 9-1 limits is not necessary.

**GENERAL THROUGHPUT REQUIREMENTS:**

For sources without existing throughput limits, emissions have been calculated based on the capacity of the equipment. In order to ensure that emissions will not increase as a result of a replacement or modification that increases the capacity of a permitted source without a proper permit review, the following conditions have been added to expressly link the throughput of each source to the stated capacity in Table II A of the Title V Permit:

General Requirements Pertaining to Maximum Throughput at Each Source:

1. Unless otherwise indicated in a specific permit condition, the maximum throughput for each source will be that which is listed as the capacity of the source in Table II A "Permitted Sources" of the Title V permit. (basis: Cumulative Increase)

2. Unless otherwise indicated in a specific permit condition, the operator shall, upon request from the APCO, make available any records relating to the hourly or daily throughput for each permitted source. (basis: Cumulative Increase)

**PERMIT SHIELD:**

No permit shields were requested by the applicant.

**ALTERNATE OPERATING SCENARIO:**

No alternate operating scenario has been requested for this facility.

**COMPLIANCE STATUS:**

In their Title V application, C&H Sugar certified that they were in full compliance with all applicable local, state, and federal air quality requirements. This certification was dated 12/14/99. The District believes the certification to be accurate.

**ALIGNMENT OF INFORMATION IN APPLICATION AND PROPOSED PERMIT:**

Since the Title V permit application was originally submitted on July 24, 1996, it has been revised twice. On December 20, 1999, C&H submitted an updated version of the application to the District. This version became the basis for constructing the Title V permit. Further revisions were made to the application in November of 2000 as a result of changes at the facility that were made pursuant to Permit Application #1622. The December 20, 1999 submittal has been updated to reflect these changes.