

Bay Area Air Quality Management District

375 Beale Street, Suite 600
San Francisco, CA 94105
(415) 749-5000

**Permit Evaluation
and
Statement of Basis
for
RENEWAL of**

MAJOR FACILITY REVIEW PERMIT

for
**C & H Sugar Company, Inc.
Facility # B1911**

Facility Address:
830 Loring Avenue
Crockett, CA 94525

Mailing Address:
Same as above

Application Engineer: Hari Doss
Site Engineer: Hari Doss

October 2017

Application: 27275

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Permit Evaluation/Statement of Basis For Renewal of Major Facility Review Permit

A. Background

This facility is subject to the Operating Permit requirements of Title V of the federal Clean Air Act, Part 70 of Title 40 of the Code of Federal Regulations (CFR), and BAAQMD Regulation 2, Rule 6, Major Facility Review because it is a major facility as defined by BAAQMD Regulation 2-6-212. It is a major facility because it has the “potential to emit,” as defined by BAAQMD Regulation 2-6-218, of more than 100 tons per year of a regulated air pollutant.

Major Facility Operating permits (Title V permits) must meet specifications contained in 40 CFR Part 70 as contained in BAAQMD Regulation 2, Rule 6. The permits must contain all applicable requirements (as defined in BAAQMD Regulation 2-6-202), monitoring requirements, recordkeeping requirements, and reporting requirements. The permit holders must submit reports of all monitoring at least every six months and compliance certifications at least every year.

Pursuant to Regulation 2, Rule 6, section 416, the District has reviewed the terms and conditions of this Major Facility Review permit and determined that they are still valid and correct. This review included an analysis of applicability determinations for all sources, including those that have been modified or permitted since the issuance of the initial Major Facility Review Permit. The review also included an assessment of all monitoring in the permit for sufficiency to determine compliance.

In the Bay Area, state and District requirements are also applicable requirements and are included in the permit. These requirements can be federally enforceable or non-federally enforceable. All applicable requirements are contained in Sections I through VI of the permit.

Each facility in the Bay Area is assigned a facility identifier that consists of a letter and a 4-digit number. This identifier is also considered to be the identifier for the permit. The identifier for this facility is B1911. On September 13, 2005, the American Sugar Refining Company became C&H Sugar’s parent company.

C & H Sugar received its initial Title V permit on June 12, 2001. Although the current permit expired on December 31, 2015, the current permit continues to be valid until the District takes final action on the permit renewal because C&H Sugar submitted a complete Title V renewal application on 6/19/2015, at least 6 months prior to the expiration date of the current permit. This application is for a permit renewal. The proposed permit shows all changes to the permit in ~~strikeout~~ /underline format.

The District proposes to renew the permit. The permit will include modifications requested by the permittee, as well as other modifications by the District, and it will incorporate earlier permit revisions and modifications. The standard sections of the permit have been updated to include new standard language used in all Title V permits and new requirements applicable to all Title V facilities. Also, various other corrections have been made to the permit. The proposed permit shows all changes to the permit in strikeout/underline format.

B. Facility Description

C & H Sugar is a cane sugar manufacturer. They refine, package, and market all of the output from Hawaii's sugar factories. The C&H brand is one of the leading sugar brands in the company's markets (where it is not the de facto leader), largely due to advertisements stressing their exclusive use of cane sugar, believed by some to be superior to sugar from the sugar beet. C & H Sugar receives raw cane sugar by ship at the Crockett refinery. After unloading and storage, the sugar is refined into white or brown sugar. The raw sugar first enters the affination process, where a thin film of syrup is removed from the sugar crystals. After the sugar is dissolved, the clarification process is used to remove insoluble material. Char and carbon are used to remove color, other organics and mineral salts. The liquor is then filtered before it is boiled and recrystallized. White sugar is then dried in granulators, screened to segregate grain sizes, and distributed to various packing lines and to storage for bulk equipment. Brown sugar follows a process similar to the white sugar, but instead of being dried or screened after it is crystallized, it is cured in a special cooling process before being conveyed to packing lines. All sugar types are conveyed to a warehouse for palletizing, storage and shipment.

The major pollutants emitted at the facility are particulate matter and visible emissions from the unloading, storage and sugar refining processes. Emissions of PM₁₀, POC, NO_x, CO, SO₂ emissions are from the natural gas fired Carbon Regeneration Furnace, Char Furnace and two emergency gasoline fired engines.

There have been no significant changes in process or regulation since the issuance of the last renewal Title V permit. Thus there has been no significant change in emissions.

Table A shows the 2009 and 2016 plant inventory emissions. Table B shows the change in plant emissions between 2009 and 2016.

Table A

Year	PM (TPY)	ORGANICS (TPY)	NO_x (TPY)	SO₂ (TPY)	CO (TPY)
2009	40.6	12.7	6.7	0	58.5
2016	27.7	7.8	4.4	0	32.6

Table B

Change in Plant Emissions (TPY)	-12.9	-4.9	-2.3	0	-25.9
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C. Permit Content

The legal and factual basis for the permit follows. The permit sections are described in the order presented in the permit.

I. Standard Conditions

This section contains administrative requirements and conditions that apply to all facilities. If the Title IV (Acid Rain) requirements for certain fossil-fuel fired electrical generating facilities or the accidental release (40 CFR § 68) programs apply, the section will contain a standard condition pertaining to these programs. Many of these conditions derive from 40 CFR § 70.6, Permit Content, which dictates certain standard conditions that must be placed in the permit. The language that the District has developed for many of these requirements has been adopted into the BAAQMD Manual of Procedures, Volume II, Part 3, Section 4, and therefore must appear in the permit.

The standard conditions also contain references to BAAQMD Regulation 1 and Regulation 2. These are the District's General Provisions and Permitting rules.

Changes to Permit

- The dates of adoption and approval of rules in Standard Condition 1.A have been updated.
- Condition I.F-District mailing address updated and email submittal added
- Condition I.G-Language deleted and EPA mailing address updated and email submittal added

II. Equipment

This section of the permit lists all permitted or significant sources. Each source is identified by an S and a number (e.g., S24).

Permitted sources are those sources that require a BAAQMD operating permit pursuant to BAAQMD Rule 2-1-302.

Significant sources are those sources that have a potential to emit of more than 2 tons of a "regulated air pollutant," as defined in BAAQMD Rule 2-6-222, per year or 400 pounds of a "hazardous air pollutant," as defined in BAAQMD Rule 2-6-210, per year.

All abatement (control) devices that control permitted or significant sources are listed. Each abatement device whose primary function is to reduce emissions is identified by an A and a number (e.g., A-24). If a source is also an abatement device, such as when an engine controls VOC emissions, it will be listed in the abatement device table but will have an "S" number. An abatement device may also be a source (such as a thermal oxidizer that burns fuel) of secondary emissions. If the primary function of a device is to control emissions, it is considered an abatement (or "A") device. If the primary function of a device is a non-control function, the device is considered to be a source (or "S").

The equipment section is part of the facility description. It contains information that is necessary for applicability determinations, such as fuel types, contents or sizes of tanks, etc. This information is part of the factual basis of the permit.

Each of the permitted sources has previously been issued a permit to operate pursuant to the requirements of BAAQMD Regulation 2, Permits. These permits are issued in accordance with state law and the District's regulations. The capacities in the permitted sources table are the maximum allowable capacities for each source, pursuant to Standard Condition I.J and Regulation 2-1-403.

Devices Removed:

Sources S255, S307 and abatement device A307.

Changes to permit:

- The facility has requested removal of sources S255, S307 and abatement device A307 since it is not in service any more. Further the facility has requested exemption for source S352 and re-association of abatement devices for S243, S244, and S245 to A312 and A313. There is no citable exemption for this particulate emission source S352. Thus the requested exemption is denied.
- The link to Condition number 17690 associated with source S256 has been removed since the source has been removed by facility's request in this application.

III. Generally Applicable Requirements

This section of the permit lists requirements that generally apply to all sources at a facility including insignificant sources and portable equipment that may not require a District permit. If a generally applicable requirement applies specifically to a source that is permitted or significant, the standard will also appear in Section IV and the monitoring for that requirement will appear in Sections IV and VII of the permit. Parts of this section apply to all facilities (e.g., particulate, architectural coating, odorous substance, and sandblasting standards). In addition, standards that apply to insignificant or unpermitted sources at a facility (e.g., refrigeration units that use more than 50 pounds of an ozone-depleting compound) are placed in this section.

Unpermitted sources are exempt from normal District permits pursuant to an exemption in BAAQMD Regulation 2, Rule 1. They may, however, be specifically described in a Title V permit if they are considered *significant sources* pursuant to the definition in BAAQMD Rule 2-6-239.

Changes to permit:

- SIP Regulation 2, Rule 1, General Requirements has been deleted since the current version of Regulation 2, Rule 1, has been SIP-approved
- SIP Regulation 8, Rule 3 was added to Table III because it had been inadvertently omitted in previous permits
- The dates of adoption or approval of the rules and their “federal enforceability” status in Table III have also been updated.

IV. Source-Specific Applicable Requirements

This section of the permit lists the applicable requirements that apply to permitted or significant sources. These applicable requirements are contained in tables that pertain to one or more sources that have the same requirements. The order of the requirements is:

- District Rules
- SIP Rules (if any) are listed following the corresponding District rules. SIP rules are District rules that have been approved by EPA for inclusion in the California State Implementation Plan. SIP rules are “federally enforceable” and a “Y” (yes) indication will appear in the “Federally Enforceable” column. If the SIP rule is the current District rule, separate citation of the SIP rule is not necessary and the “Federally Enforceable” column will have a “Y” for “yes”. If the SIP rule is not the current District rule, the SIP rule or the necessary portion of the SIP rule is cited separately after the District rule. The SIP portion will be federally enforceable; the non-SIP version will not be federally enforceable, unless EPA has approved it through another program.
- Other District requirements, such as the Manual of Procedures, as appropriate.
- Federal requirements (other than SIP provisions)
- BAAQMD permit conditions. The text of BAAQMD permit conditions is found in Section VI of the permit.
- Federal permit conditions. The text of Federal permit conditions, if any, is found in Section VI of the permit.

Section IV of the permit contains citations to all the applicable requirements. The text of the requirements is found in the regulations, which are readily available on the District’s or EPA’s websites, or in the permit conditions, which are found in Section VI of the permit. All monitoring requirements are cited in Section IV. Section VII is a cross-reference between the limits and monitoring requirements. A discussion of monitoring is included in Section C.VII of this permit evaluation/statement of basis.

Complex Applicability Determinations:

The facility is not subject to 112(j) of the Clean Air Act because it is not a major source of hazardous air pollutants.

S350 and S351 Emergency Generators are subject to 40 CFR 63 Subpart ZZZZ, RICE NESHAP. They fall under the category of existing emergency spark-ignition IC engines less than 500 bhp located at an area source of HAPs.

Compliance Assurance Monitoring: CAM

S-250 Hereschoff Char Furnace abated by A-259 Char Furnace Wet Scrubber:

Applicability of 40 CFR 64, Compliance Assurance Monitoring (CAM)

Per 40 CFR 64.2(a), emission units (as defined in 40 CFR parts 64.1 and 70) may be subject to 40 CFR 64, Compliance Assurance Monitoring, if the units are subject to a federally enforceable requirement for a pollutant, the pollutant is controlled by an abatement device, and the emissions of the pollutant before abatement are more than 100% of the major source thresholds.

Compliance Assurance Monitoring: The applicability of compliance assurance monitoring (CAM) must be considered at a facility if the facility uses an emission control device to achieve compliance with a federally enforceable emission limit. Because the facility has determined that the pre-abatement emissions for PM10 will be >100 TPY, the facility has opted to achieve compliance with the emission limit by CAM for a wet scrubber, identified as source A-259. The wet scrubber controls particulate matter from the S-250, Herreshoff Char Furnace that is subject to the requirements of Regulation 6, Rule 310 & 311 (0.15 gr/dscf).

To comply with 40 CFR 64.3, the following CAM approach will be followed:

Table 1 – Monitoring Approach

	Indicator No. 1	Indicator No. 2
I. Indicator	Scrubber water flow rate.	Scrubber pressure drop.
Measurement Approach	Water flow into the scrubber is measured with two gauges.	Differential pressure across scrubber is measured using a magnehelic gauge
II. Indicator Range	Total water flow to the scrubber 200 gpm or greater.	Pressure drop across the scrubber of at least 0.5 in. H ₂ O.
III. Performance Criteria		
A. Data Representativeness	The flow meters are located between the pumps and the inlet to the scrubber. Estimated accuracy: ±10%.	The connections for the differential pressure gauge are located upstream and downstream of the scrubber in the air ducting. Estimated accuracy: ±10%.
B. Verification of Operational Status	NA – existing equipment	NA – existing equipment
C. QA/QC Practices and Criteria	Meter inspected annually according to preventive maintenance program.	Gauge inspected annually according to preventive maintenance program.
D. Monitoring Frequency	Water flow is monitored continuously.	Differential pressure is monitored continuously.
Data Collection Procedures	Flow will be recorded at least once per 24-hr period when the source is operating.	Differential pressure will be recorded at least once per 24-hr period when the source is operating.

The monitoring plan in Table 1 has been incorporated into Permit Condition# 17430.

Appendix C contains the CAM applicability criteria for S250. The plan is currently in place and includes the following items:

- a. The approved monitoring approach, including the indicators - or the means to measure the indicators - to be monitored;

- b. A definition of excursions;
- c. The duty to conduct monitoring;
- d. Minimum data availability

Appendix D contains a list of all the permitted sources, throughput (actual, and potential), the associated abatement equipment, abatement efficiency, abated pollutant, emissions (actual and PTE) and the CAM assessment.

The following is a list of sources with potential pre-control PM10 emissions greater than 100 TPY. These sources are not subject to CAM because their abatement devices are inherent process equipment as defined in 40CFR 64.1 and are necessary for the proper or safe functioning of the process and/or used for sugar recovery. These devices are installed and operated primarily for purposes other than compliance with air pollution regulations.

S# & Description	Function	Abatement Equipment
S209 - S214: Powdered/Fondant Sugar Pulverizers	Equipment used to grind granulated sugar into powdered sugar	Baghouses: A205, A206, A207, A208, A209, A210
S215: Starch Unloading	Unloading system designed to transfer starch material from a railcar to our silo	Baghouses: A211
S216: Starch Conveying	Conveying system to transfer starch material from the silo to the starch bin	Baghouses: A212
S228: Divert Production	Sugar processing equipment	Baghouses: A227, A268, A269, A270
S240: Screened Sugar Distribution	Conveying equipment and storage bins which are used to hold processed sugar which has been separated based on sugar crystal size	Rotoclones: A312, A313

S# & Description	Function	Abatement Equipment
S242: Small Packed Sugar Distribution	Conveying equipment and storage bin used to hold processed sugar which is distributed to packaging machines which are used to package items	Rotoclones: A313
S265, S266: Airveyor	Equipment used to transport processed sugar from the refinery to the powder mill area	Baghouses: A272, A273
S268, S269: 6/10 Hesser Packing Stations	Packaging equipment used to package processed sugar into 10-pound consumer packages	Cyclone: A228, Rotoclones: A274

Changes to permit:

- The dates of adoption or approval of the rules and their “federal enforceability” status have been updated.
- 40 CFR 63 Subpart ZZZZ requirements are added for sources S350 and S351.
- Source-specific Applicable Requirements Table IV-UU Future Effective Date of 1/1/2012 is removed.

V. Schedule of Compliance

A schedule of compliance is required in all Title V permits pursuant to BAAQMD Regulation 2-6-409.10 which provides that a major facility review permit shall contain the following information and provisions:

“409.10 A schedule of compliance containing the following elements:

- 10.1 A statement that the facility shall continue to comply with all applicable requirements with which it is currently in compliance;
- 10.2 A statement that the facility shall meet all applicable requirements on a timely basis as requirements become effective during the permit term; and
- 10.3 If the facility is out of compliance with an applicable requirement at the time of issuance, revision, or reopening, the schedule of compliance shall contain a plan by which the facility will achieve compliance. The plan shall contain deadlines for each item in the plan. The schedule of compliance shall also contain a requirement for submission of progress

reports by the facility at least every six months. The progress reports shall contain the dates by which each item in the plan was achieved and an explanation of why any dates in the schedule of compliance were not or will not be met, and any preventive or corrective measures adopted.”

Since the District has not determined that the facility is out of compliance with an applicable requirement, the schedule of compliance for this permit contains only sections 2-6-409.10.1 and 2-6-409.10.2.

The responsible official for Title V submitted a signed Certification Statement form dated 11/17/16. On this form, the responsible official certified that the following statements are true:

Based on information and belief formed after reasonable inquiry, the source(s) identified in the Applicable Requirements and Compliance Summary form that is(are) in compliance will continue to comply with the applicable requirement(s);

Based on information and belief formed after reasonable inquiry, the source(s) identified in the Applicable Requirements and Compliance Summary form will comply with future-effective applicable requirement(s), on a timely basis;

Based on information and belief formed after reasonable inquiry, information on application forms, all accompanying reports, and other required certifications is true, accurate, and complete;

All fees required by Regulation 3, including Schedule P have been paid.

Changes to permit:

None

VI. Permit Conditions

During the Title V permit development, the District has reviewed the existing permit conditions, deleted the obsolete conditions, and, as appropriate, revised the conditions for clarity and enforceability. Each permit condition is identified with a unique numerical identifier, up to five digits.

When necessary to meet Title V requirements, additional monitoring, recordkeeping, or reporting has been added to the permit.

All changes to existing permit conditions are clearly shown in “strike-out/underline” format in the proposed permit. When the permit is issued, all ‘strike-out’ language will be deleted and all “underline” language will be retained, subject to consideration of comments received.

The existing permit conditions are derived from previously issued District Authorities to Construct (A/C) or Permits to Operate (P/O). Permit conditions may also be imposed or revised as part of the annual review of the facility by the District pursuant to California

Health and Safety Code (H&SC) § 42301(e), through a variance pursuant to H&SC § 42350 et seq., an order of abatement pursuant to H&SC § 42450 et seq., or as an administrative revision initiated by District staff. After issuance of the Title V permit, permit conditions will be revised using the procedures in Regulation 2, Rule 6, Major Facility Review. Permit conditions may also be derived from periodic monitoring requirements pursuant to BAAQMD Regulation 2-5-503, Monitoring.

Each permit condition is identified with a unique numerical identifier, up to five digits. Each part of the condition is also identified by a part number and each subpart is identified by a letter (for example, Condition 789, part 1a).

Conditions that are obsolete or that have no regulatory basis have been deleted from the permit.

Conditions have also been deleted due to the following:

- Redundancy in recordkeeping requirements.
- Redundancy in other conditions, regulations and rules.
- The condition has been superseded by other regulations and rules.
- The equipment has been taken out of service or is exempt.
- The event has already occurred (i.e. initial or start-up source tests).

The regulatory basis is listed following each condition. The regulatory basis may be a rule or regulation. The District is also using the following terms for regulatory basis:

- BACT: This term is used for a condition imposed by the Air Pollution Control Officer (APCO) to ensure compliance with the Best Available Control Technology in Regulation 2-2-301.
- Cumulative Increase: This term is used for a condition imposed by the APCO which limits a source's operation to the operation described in the permit application pursuant to BAAQMD Regulation 2-1-403.
- Offsets: This term is used for a condition imposed by the APCO to ensure compliance with the use of offsets for the permitting of a source or with the banking of emissions from a source pursuant to Regulation 2, Rules 2 and 4.
- PSD: This term is used for a condition imposed by the APCO to ensure compliance with a Prevention of Significant Deterioration permit issued pursuant to Regulation 2, Rule 2.
- TRMP: This term was used for a condition imposed by the APCO to ensure compliance with limits that arise from the District's Toxic Risk Management Policy, but has been replaced by BAAQMD Regulation 2, Rule 5, New Source Review for Toxic Air Contaminants.

Changes to permit:

Condition #14650 and #178433 for S-307 are archived because S-307 and A-307 have been removed from service.

VII. Applicable Limits and Compliance Monitoring Requirements

This section of the permit is a summary of numerical limits and related monitoring requirements for each source. The summary includes a citation for each monitoring requirement, frequency of monitoring, and type of monitoring. The applicable requirements for monitoring are completely contained in Sections IV, Source-Specific Applicable Requirements, and VI, Permit Conditions, of the permit.

The District has reviewed all monitoring and has determined the existing monitoring is adequate with the following exceptions.

The tables below contain only the limits for which there is no monitoring or inadequate monitoring in the applicable requirements. The District has examined the monitoring for other limits and has determined that monitoring is adequate to provide a reasonable assurance of compliance. Calculations for potential to emit will be provided in the discussion when no monitoring is proposed due to the size of a source.

Monitoring decisions are typically the result of a balancing of several different factors including: 1) the likelihood of a violation given the characteristics of normal operation, 2) degree of variability in the operation and in the control device, if there is one, 3) the potential severity of impact of an undetected violation, 4) the technical feasibility and probative value of indicator monitoring, 5) the economic feasibility of indicator monitoring, and 6) whether there is some other factor, such as a different regulatory restriction applicable to the same operation, that also provides some assurance of compliance with the limit in question.

These factors are the same as those historically applied by the District in developing monitoring for applicable requirements. It follows that, although Title V calls for a re-examination of all monitoring, there is a presumption that these factors have been appropriately balanced and incorporated in the District's prior rule development and/or permit issuance. It is possible that, where a rule or permit requirement has historically had no monitoring associated with it, no monitoring may still be appropriate in the Title V permit if, for instance, there is little likelihood of a violation. Compliance behavior and associated costs of compliance are determined in part by the frequency and nature of associated monitoring requirements. As a result, the District will generally revise the nature or frequency of monitoring requirements only when it can support a conclusion that existing monitoring is inadequate.

PM Sources

S# & Description	Emission Limit Citation	Federally Enforceable Emission Limit	Monitoring
S221 Melt Tank, S271: Warehouse/PSS Melt System	BAAQMD Regulation 6-301	Ringelmann 1.0	None – emits inside a building; negligible emissions observed
S222: Confectioners Dryer, S288: Spent Char Handling System	BAAQMD Regulation 6-301	Ringelmann 1.0	None- abated by Rotoclone
S279: Tailings Melt Tanks	BAAQMD Regulation 6-301	Ringelmann 1.0	Visible emissions monitoring
S280, S281, S282: Diatomaceous Earth System	BAAQMD Regulation 6-301	Ringelmann 1.0	None- abated by dust collectors
S-215, S216 Starch Unloading, S217 Paper Baler,	BAAQMD Regulation 6-1-310	0.15 gr/dscf	None- abated by baghouse
S229 Scrap Paper Recovery, S278: Carpenter Shop	BAAQMD Regulation 6-1-310	0.15 gr/dscf	None- abated by Cyclone
S284: Lime Unloading Station – Refinery	BAAQMD Regulation 6-310	0.15 gr/dscf	None – abated by Bin Vent Filter
S284: Lime Unloading Station – Refinery	BAAQMD Regulation 6-310	0.15 gr/dscf	None – abated by Bin Vent Filter

PM Sources

S# & Description	Emission Limit Citation	Federally Enforceable Emission Limit	Monitoring
S224: Bulk Sugar Loading, S225: Steel Silos Conveying to Bulk Loadout, S226, S227: Concrete Silos, Conveying, Bulk Loadout, S230,S231, S230, S231, S232, S233, S234, S235, S236: Granulators, S240, S241, S242: 5 th Floor Distribution, S252, S253, S254: Bulk Bins, S257, S258, S259, S260: Bulk Granulated Silos, S261: Vibro Conveying/Storage, S268, S269: 6/10 Hesser Packaging Stations, S273, S274, S275: Bulk Granulated Elevators, S276: Custom Products Station, S288: Spent Char Handling System,	BAAQMD Regulation 6-1-310	0.15 gr/dscf	None- abated by Rotoclone
S221: Melt Tank, S222: Confectioners Dryer, S279: Tailings Melt Tanks	BAAQMD Regulation 6-310	0.15 gr/dscf	None – uses Steam

PM Sources

S# & Description	Emission Limit Citation	Federally Enforceable Emission Limit	Monitoring
S-215, S216: Starch Unloading, S217: Paper Baler, S221: Melt Tank, S222: Confectioners Dryer, S225: Steel Silos Conveying to Bulk Loadout, S226, S227: Concrete Silos, Conveying, Bulk Loadout, S230, S231, S230, S231, S232, S233, S234, S235, S236: Granulators, S240, S241, S242: 5 th Floor Distribution, S252, S253, S254: Bulk Bins, S257, S258, S259, S260: Bulk Granulated Silos	BAAQMD Regulation 6-311	S215: 32.5 lb/hr (throughput = 21.0 tons/hr) S216: 14.1 lb/hr (throughput = 6.0 tons/hr) S221: 22.4 lb/hr (throughput = 12.0 tons/hr) S222: 12.9 lb/hr (throughput = 5.3 tons/hr) S225: 40.0 lb/hr (throughput = 90.0 tons/hr) S226: 40.0 lb/hr (throughput = 120.0 tons/hr) S227: 40.0 lb/hr (throughput = 120.0 tons/hr) S230: 27.9 lb/hr (throughput = 16.7 tons/hr) S231: 27.9 lb/hr (throughput = 16.7 tons/hr) S232: 27.9 lb/hr (throughput = 16.7 tons/hr) S233: 27.9 lb/hr (throughput = 16.7 tons/hr) S234: 40.0 lb/hr (throughput = 37.5 tons/hr) S235: 27.9 lb/hr (throughput = 16.7 tons/hr) S236: 40.0 lb/hr (throughput = 31.3 tons/hr) S240: 40.0 lb/hr (throughput = 170.0 tons/hr) S241: 19.8 lb/hr (throughput = 10.0 tons/hr) S242: 40.0 lb/hr (throughput = 85.0 tons/hr) S252: 31.5 lb/hr (throughput = 20.0 tons/hr) S253: 31.5 lb/hr (throughput = 20.0 tons/hr) S254: 36.6 lb/hr (throughput = 25.0 tons/hr) S288: 32.9 lb/hr (throughput = 21.3 tons/hr)	Records

PM Sources

S# & Description	Emission Limit Citation	Federally Enforceable Emission Limit	Monitoring
S257, S258, S259, S260: Bulk Granulated Silos, S261: Vibro Conveying/Storage, S268, S269: 6/10 Hesser Packaging Stations, S271: Warehouse/PSS Melt System, S273, S274, S275: Bulk Granulated Elevators, S276: Custom Products Station, S279: Tailings Melt Tanks, S280, S281, S282: Diatomaceous Earth System, S284: Lime Unloading Station – Refinery, S288: Spent Char Handling System,	BAAQMD Regulation 6-311	S257: 40.0 lb/hr (throughput = 62.5 tons/hr) S258: 40.0 lb/hr (throughput = 40.0 tons/hr) S259: 40.0 lb/hr (throughput = 62.5 tons/hr) S260: 40.0 lb/hr (throughput = 62.5 tons/hr) S261: 7.2lb/hr (throughput = 2.2 tons/hr) S268: 24.2 lb/hr (throughput = 13.5 tons/hr) S269: 24.2 lb/hr (throughput = 13.5 tons/hr) S271: 9.6 lb/hr (throughput = 3.4 tons/hr) 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) S276: 4.2 lb/hr (throughput = 1.0 tons/hr) S279: 32.5 lb/hr (throughput = 21.0 tons/hr) S280: 24.8 lb/hr (throughput = 14.0 tons/hr) S281: 8.8 lb/hr (throughput = 3.0 tons/hr) S282: 8.8 lb/hr (throughput = 3.0 tons/hr) S284: 26.0 lb/hr (throughput = 15.0 tons/hr) :26.0 lb/hr (throughput = 15.0 tons/hr)	Recordkeeping

PM Discussion:

BAAQMD Regulation 6 “Particulate Matter and Visible Emissions”

Visible Emissions

When a source is equipped with an abatement device, the abatement equipment must be properly operated and always maintained when the source is in operation, to insure on-going compliance with the visible emissions standard of Regulation 6.

Particulate Weight Limitation

BAAQMD Regulation 6-310 limits filterable particulate (FP) emissions from any source to 0.15 grains per dry standard cubic foot (gr/dscf) of exhaust volume. Section 310.3 limits filterable particulate emissions from “heat transfer operations” to 0.15 gr/dscf @ 6% O₂. These are the “grain loading” standards.

Permit conditions requiring proper operating practices and proper maintenance of all abatement equipment have been imposed on all sources and abatement equipment to insure on-going compliance with the grain loading standard of Regulation 6.

Exceedances of the grain loading standards are normally not associated with combustion of gaseous fuels, such as natural gas. S221, S222 and S279 uses steam exclusively: No monitoring is required to assure compliance with this limit for these sources.

BAAQMD Regulation 6-311 limits the particulate matter mass emission rate from a subject source as a function of process weight. Record keeping is required to ensure that all the sources comply with this requirement based upon the maximum hourly processing rate of each unit. Therefore, no monitoring is required to assure compliance with this limitation.

SO₂ Sources

S# & Description	Emission Limit Citation	Federally Enforceable Emission Limit	Monitoring
S250: Char Furnace S286: Carbon Regeneration Furnace	BAAQMD 9-1-301	Ground level concentrations of SO ₂ shall not exceed: 0.5 ppm for 3 consecutive minutes AND 0.25 ppm averaged over 60 consecutive minutes AND 0.05 ppm averaged over 24 hours	None
S250: Char Furnace S286: Carbon Regeneration Furnace	BAAQMD 9-1-302	300 ppm (dry)	None

SO₂ Discussion:

BAAQMD Regulation 9-1-301

Area monitoring to demonstrate compliance with the ground level SO₂ concentration requirements of Regulation 9-1-301 is at the discretion of the APCO (per BAAQMD Regulation 9-1-501). This facility does not have equipment that emits large amounts of SO₂ and therefore is not required to have ground level monitoring by the APCO.

All facility combustion sources are subject to the SO₂ emission limitations in District Regulation 9, Rule 1 (ground-level concentration and emission point concentration). In EPA's June 24, 1999 agreement with CAPCOA and ARB entitled "Periodic Monitoring Recommendations for Generally Applicable Requirements in SIP" EPA has agreed that natural-gas-fired combustion sources do not need additional monitoring to verify compliance with Regulation 9, Rule 1, since violations of the regulation are unlikely. Therefore, no monitoring is necessary for this requirement for S-250 and S286 because they are fired exclusively on natural gas.

Sulfur Dioxide (SO₂) is generated when sulfur in fuel is burned. A small amount of sulfur dioxide is generated from the combustion of natural gas. All of the combustion sources burn natural gas, since no other gas is available at the site.

The general emission limit for SO₂ pursuant to Regulation 9-1-302 is 300 ppm, dry. The specification for utility-grade natural gas is 5 grains per standard cubic foot of natural gas, which is equivalent to about 170-ppm sulfur as hydrogen sulfide (H₂S) in the gas. One molecule of SO₂ is generated for each molecule of H₂S.

About 8.7 cubic feet of combustion gases are generated for each cubic foot of natural gas burned, but the amount of sulfur in the gas remains constant. Therefore, if the concentration of sulfur in the natural gas is 170-ppm, the concentration in the combustion gases will be 20 ppm or less. Since the concentration in the combustion gases will be less than 10% of the limit, there is no need to perform monitoring for SO₂ at this facility.

VOC Sources

S# & Description	Emission Limit Citation	Federally Enforceable Emission Limit	Monitoring
S250: Char Furnace, S286: Carbon Regeneration Furnace	BAAQMD Regulation 8-2-301	Not to exceed 300 ppm total carbon (dry) and 15 lb/day	None

VOC Discussion:

S250 is a natural gas fired and operated to process spent char. Char is also known as bone black animal charcoal. It is carbonaceous, granular, black material used as a filter by C&H Sugar in its sugar manufacturing during a wet adsorption process to remove sugar colorants, impurities, and naturally occurring minerals. At S250, during heat treatment, impurities in the Char are driven off of the material, regenerating it to a useful form.

Source tests were conducted on May 31, 2001 & April 21, 2009 on S250 measuring total organic carbon emissions. The following table shows the total organic carbon emissions (includes methane) for each source test in PPMV as C₁.

No monitoring is required since the margin of compliance is high, as shown by the results of the source tests listed below. To clarify, as long as the total carbon emission concentration does not exceed 300 ppmv, dry, the source is in compliance, even if the total carbon mass emissions exceed 15 lb/day. Therefore, S-250 is expected to comply with Regulation 8-2-301 since the total carbon concentration is significantly less than 300 ppmv, dry.

Source Test Date	Total Organic Carbon (includes CH₄) emissions PPMV as C₁	Federally-Enforceable Emission Limit
May 31, 2001	116	Not to exceed 300 ppm (dry) and 15 lb/day, total carbon
April 21, 2009	51	Not to exceed 300 ppm (dry) and 15 lb/day, total carbon

CO Sources

S# & Description	Emission Limit Citation	Federally Enforceable Emission Limit	Monitoring
S250: Char Furnace	BAAQMD Condition #20383, Part 3	2169.5 PPMV@3% O ₂	Annual Source Test

CO Discussion:

Natural gas usage is limited at the facility by permit conditions and/or maximum firing rate. The facility is required to keep records of the quantity of natural gas that is burned. CO mass emission rates are dependent on the amount of natural gas burned.

Source tests were conducted on March 25, 2005 & April 21, 2009 on S250 measuring CO emissions. The following table show the CO emissions rate for each source test in PPMV @3% O₂, correction. The regulated limit for CO for C&H Sugar is 2169.5 PPMV@ 3% O₂.

Source Test Date	Average Natural Gas usage (CFH)	CO emissions PPMV@ 3% O ₂	Federally Enforceable Emission Limit
March 25, 2005	14,500	2170	2169.5
April 21, 2009	21,000	759	2169.5
December 1, 2016	15,989	2169.1	2169.5

A permit condition (# 20383, Part 5) has been imposed requiring S250 to be source tested annually to verify compliance with the CO emission concentration limit.

NOx Sources

S# & Description	Emission Limit Citation	Federally Enforceable Emission Limit	Monitoring
S250: Char Furnace	BAAQMD Condition #20383, Part 2	77.5 PPMVY	Annual Source Test

NOx Discussion:

Natural gas usage is limited at the facility by permitting conditions and/or maximum firing rate. The facility is required to keep records of the quantity of natural gas that is burned. NOx emissions are dependent on the amount of natural gas burned.

Source tests were conducted on April 21, 2009 on S250 measuring NOx emissions. The following table show the NOx emissions rate for each source test in PPMV @3% O₂, correction. The regulated limit for NOx for C&H Sugar is 77.5 PPMV@ 3% O₂.

Source Test Date	Average Natural Gas usage (CFH)	NOx emissions PPMV@ 3% O ₂	Federally Enforceable Emission Limit
April 21, 2009	21,000	144.9	77.5
June 22, 2009*	21,000	64	77.5

*Retest to demonstrate compliance

A permit condition (# 20383, Part 5) has been imposed requiring S250 to be source tested annually to verify compliance with the NOx emission concentration limit.

Changes to permit:

Table VII-T has been modified to reflect the removal of source S-255

VIII. Test Methods

This section of the permit lists test methods that are associated with standards in District or other rules. It is included only for reference. In most cases, the test methods in the rules are source test methods that can be used to determine compliance but are not required on an ongoing basis. They are not applicable requirements.

If a rule or permit condition requires ongoing testing, the requirement will also appear in Section IV of the permit.

Changes to permit:

The test methods for Regulation 8, Rule 19 have been deleted from the test method table because S-255 Spray Booth has been removed from service.

BAAQMD ST-15 has been added as acceptable test method for determining compliance with Regulation 6-1-310.3 and 6-1-311.

IX. Permit Shield:

The District rules allow two types of permit shields. The permit shield types are defined as follows: (1) A provision in a major facility review permit explaining that specific federally enforceable regulations and standards do not apply to a source or group of sources, or (2) A provision in a major facility review permit explaining that specific federally enforceable applicable requirements for monitoring, recordkeeping and/or reporting are subsumed because other applicable requirements for monitoring, recordkeeping, and reporting in the permit will assure compliance with all emission limits.

The second type of permit shield is allowed by EPA's White Paper 2 for Improved Implementation of the Part 70 Operating Permits Program. The District uses the second type of permit shield for all streamlining of monitoring, recordkeeping, and reporting requirements in Title V permits. The District's program does not allow other types of streamlining in Major Facility Review permits.

This facility has no permit shields.

X. Glossary

The glossary was updated with the following terms:
Condensable spelling corrected

D. Alternate Operating Scenarios

The facility has not requested any alternate operating scenario. Therefore, BAAQMD Regulation 2-6-409.7(d) does not apply. *See* BAAQMD Regulation 2-6-409.7(d) (requiring the permit to state that “the facility must keep a record in a contemporaneous log when the facility changes any aspect of its operations from one permitted scenario to another”).

E. Compliance Status

The responsible official for Title V submitted a signed Certification Statement form dated 11/17/16. On this form, the responsible official certified that the following statements are true:

Based on information and belief formed after reasonable inquiry, the sources identified in the Applicable Requirements and Compliance Summary form that are in compliance will continue to comply with the applicable requirements;

Based on information and belief formed after reasonable inquiry, the sources identified in the Applicable Requirements and Compliance Summary form will comply with future-effective applicable requirements, on a timely basis;

Based on information and belief formed after reasonable inquiry, information on application forms, all accompanying reports, and other required certifications is true, accurate, and complete;

All fees required by Regulation 3, including Schedule P have been paid.

F. Differences between the Application and the Proposed Permit

There are no differences between the renewal Title V application submitted on 6/14/15 and the proposed permit.

Appendix A

Applicability Criteria & CAM Plan for S250

**COMPLIANCE ASSURANCE MONITORING (CAM) PLAN:
SCRUBBER**

I. Background

A. Emissions Unit

Identification: S250
Description: Char Furnace
Facility: C&H Sugar (Crockett, CA)

B. Applicable Regulation, Emission Limit, and Monitoring Requirements

Regulation: BAAQMD 6-310
BAAQMD 6-311
Emission limit: Particulate matter: 0.15 gr/dscf
Particulate matter: 32.9 lb/hr (based on maximum throughput rate of 21.3 ton/hr; mass rate limit [lb/hr] is calculated as follows: $0.02 \cdot P \cdot 0.67$, where P is the process weight rate in kg/hr)

C. Control Technology, Capture System, PTE

Identification: A259
Control Description: Wet scrubber
PTE before controls: 244 TPY
PTE after controls: 12 TPY (based on a removal efficiency of 95%)

II. Monitoring Approach

The key elements of the monitoring approach are presented in Table 1.

Table 1 – Monitoring Approach

	Indicator No. 1	Indicator No. 2
I. Indicator	Scrubber water flow rate.	Scrubber pressure drop.
Measurement Approach	Water flow into the scrubber is measured with two gauges.	Differential pressure across scrubber is measured using a magnehelic gauge
II. Indicator Range	Total water flow to the scrubber 200 gpm or greater.	Pressure drop across the scrubber of at least 0.5 in. H ₂ O.
III. Performance Criteria		
A. Data Representativeness	The flow meters are located between the pumps and the inlet to the scrubber. Estimated accuracy: ±10%.	The connections for the differential pressure gauge are located upstream and downstream of the scrubber in the air ducting. Estimated accuracy: ±10%.
B. Verification of Operational Status	NA – existing equipment	NA – existing equipment
C. QA/QC Practices and Criteria	Meter inspected annually according to preventive maintenance program.	Gauge inspected annually according to preventive maintenance program.
D. Monitoring Frequency	Water flow is monitored continuously.	Differential pressure is monitored continuously.
Data Collection Procedures	Flow will be recorded at least once per 24-hr period when the source is operating.	Differential pressure will be recorded at least once per 24-hr period when the source is operating.
Averaging period	NA	NA

III. Response to Excursion

- A. Excursion from the indicator ranges specified will trigger immediate notification to maintenance personnel. Maintenance personnel will inspect the scrubber as soon as possible after receiving notification and make needed repairs as soon as practicable. Any corrective action will be documented.
- B. Quality Improvement Plan (QIP) Threshold: None proposed.

COMPLIANCE ASSURANCE MONITORING (CAM) PLAN:
SCRUBBER

IV. Justification

A. Background

The char furnace regenerates wet char using heat from two natural gas-fired burners. Char granules are used in the refining process to adsorb impurities such as color from sugar liquor. Exhaust from the char furnace passes through a wet scrubber before it is discharged to atmosphere.

B. Rationale for Selection of Performance Indicators

The scrubber water flow rate and differential pressure were selected because they are indicative of scrubber performance.

C. Rationale for Selection of Indicator Ranges

The ranges for the water flow rate and pressure drop were selected based upon the data obtained during normal scrubber operation, performance tests, and facility experience.

The most recent performance test was conducted by BAAQMD on March 25, 2005. Three test runs were conducted, with measured PM emissions ranging from <0.039 to 0.028 gr/dscf (2.8 to 4.5 lb/hr), well below 0.15 gr/dscf and the throughput-dependent limit of 14.4 lb/hr (mass rate limit varies depending on process weight rate: particulate matter limit [kg/hr] = $0.02 * P^{0.67}$, where P is the process weight rate in kg/hr). The complete test results are documented in BAAQMD Report No. 05175.

Recent and historical operating data were reviewed, including scrubber water flow rate data, pressure drop data, and maintenance records.

Appendix B

CAM Assessment for all Sources

[B1911_emissioncalcs.xls](#)

Click for Emission Estimates excel file.

Permit Evaluation and Statement of Basis: Facility #B1911, C & H Sugar Company, Inc.
830 Loring Avenue, Crockett, CA 94525

C&H Sugar Company, Inc. (Facility # B1911)
Emissions Estimates

Source	Description	Abatement	Stack	Throughput		EF (lb/unit)	Abatement			Emissions			CAM Assessment			
				Actual (unit/yr)	Potential (units)		A1 (%)	A2 (%)	A3 (%)	Pollutant	Actual (t/yr)	Potential (t/yr)	Potential >2 tpy?	Uncontrolled Emissions t/yr	>100?	P?
S201	WAREHOUSE SUGAR RECOVERY	A201	P01	69	3,000 tons	0.50	99.97%	-	-	PM10	0.0	0.0	-	1	-	-
	WAREHOUSE SUGAR RECOVERY	A202	P67	69	3,000 tons	0.50	99.97%	-	-	PM10	0.0	0.0	-	1	-	-
S202	PSS VACUUM SYSTEM	A203	P02	515	500 tons	2,000	99.97%	-	-	PM10	0.2	0.1	-	500	Yes	Yes
S203	POWDERED CARTON PACKING	A204	P03	3,903	5,500 tons	5	99.97%	-	-	PM10	0.0	0.0	-	14	-	-
S204	POWDERED C/P PACKING	A204	P03	10,169	13,700 tons	5	99.90%	-	-	PM10	0.0	0.0	-	34	-	-
S205	POWDERED/FONDANT BULK PACKING	A204	P03	16,560	17,700 tons	1	99.97%	-	-	PM10	0.0	0.0	-	9	-	-
S207	FONDANT PACKING	A204	P03	3,352	2,720 tons	1	99.97%	-	-	PM10	0.0	0.0	-	1	-	-
S208	PULVERIZER CONVEYORS & BIN	A204	P03	35,187	40,000 tons	0.50	99.97%	-	-	PM10	0.0	0.0	-	10	-	-
S209	P-1 PULVERIZER	A205	P04	7,938	9,500 tons	2,000	99.99%	-	-	PM10	0.8	0.9	-	8,500	Yes	Yes
S210	P-2 PULVERIZER	A206	P05	7,938	9,500 tons	2,000	99.99%	-	-	PM10	0.8	0.9	-	8,500	Yes	Yes
S211	P-3 PULVERIZER	A207	P06	7,938	9,500 tons	2,000	99.99%	-	-	PM10	0.8	0.9	-	8,500	Yes	Yes
S212	P-4 PULVERIZER	A208	P07	7,938	9,500 tons	2,000	99.99%	-	-	PM10	0.8	0.9	-	8,500	Yes	Yes
S213	F-1 PULVERIZER	A209	P08	1,718	2,000 tons	2,000	99.99%	-	-	PM10	0.2	0.2	-	2,000	Yes	Yes
S214	F-2 PULVERIZER	A210	P09	1,718	2,000 tons	2,000	99.99%	-	-	PM10	0.2	0.2	-	2,000	Yes	Yes
S215	STARCH UNLOADING	A211	P10	1,069	1,200 tons	2,000	99.90%	-	-	PM10	1.1	1.2	-	1,200	Yes	Yes
S216	STARCH CONVEYING	A212	P12	1,056	1,200 tons	2,000	99.90%	-	-	PM10	1.1	1.2	-	1,200	Yes	Yes
S217	PAPER BALER, 12/5 STATION	A213	P13	202	325 tons	100	99.90%	-	-	PM10	0.0	0.0	-	16	-	-
S218	BOSCH 12/5 PACKER #1	A213	P13	45,976	71,000 tons	2.75	99.90%	-	-	PM10	0.1	0.1	-	98	-	-
	BOSCH 12/5 PACKER #1	A214	P14	45,976	71,000 tons	1	99.90%	-	-	PM10	0.0	0.0	-	36	-	-
S219	BOSCH 12/5 PACKER #2	A213	P13	46,338	71,000 tons	2.75	99.90%	-	-	PM10	0.1	0.1	-	98	-	-
	BOSCH 12/5 PACKER #2	A214	P14	46,338	71,000 tons	1	99.90%	-	-	PM10	0.0	0.0	-	36	-	-
S220	BOSCH 12/5 PACKER #3	A213	P13	45,976	71,000 tons	2.75	99.90%	-	-	PM10	0.1	0.1	-	98	-	-
	BOSCH 12/5 PACKER #3	A214	P14	45,976	71,000 tons	1	99.90%	-	-	PM10	0.0	0.0	-	36	-	-
S221	MELT TANK 12/5 STATION	-	P16	675	1,750 tons	0.50	0.00%	-	-	PM10	0.2	0.4	-	0	-	-
S222	CONFECTIONERS DRYER	A215,A293	P18	26,740	43,000 tons	0.80	85.00%	98.00%	-	PM10	0.0	0.1	-	17	-	-
S223	PACKING HOUSE #1 VACUUM SYSTEM	A216	P18	0	30 tons	2,000	99.00%	-	-	PM10	0.0	0.3	-	30	-	-
S224	BULK SUGAR LOADING	A217	P19	127,506	200,000 tons	1.80	98.00%	-	-	PM10	2.3	3.6	Yes	180	Yes	Yes
S225	STEEL SILOS CONVEYING TO LOAD	A218	P20	32,316	85,000 tons	0.80	98.00%	-	-	PM10	0.3	0.7	-	34	-	-
S226	CONCR. SILOS CONVEYING TO LOAD	A218	P20	78,125	80,000 tons	0.40	98.00%	-	-	PM10	0.3	0.3	-	16	-	-
	CONCR. SILOS CONVEYING TO LOAD	A219	P53	78,125	80,000 tons	0.40	98.00%	-	-	PM10	0.3	0.3	-	16	-	-
S227	CONCRETE BULK GRAN SILO SYSTEM	A220	P21	110,500	110,000 tons	0.20	98.00%	-	-	PM10	0.2	0.2	-	11	-	-
	CONCRETE BULK GRAN SILO SYSTEM	A221	P22	110,500	110,000 tons	0.20	98.00%	-	-	PM10	0.2	0.2	-	11	-	-
	CONCRETE BULK GRAN SILO SYSTEM	A222	P23	110,500	110,000 tons	0.20	98.00%	-	-	PM10	0.2	0.2	-	11	-	-
	CONCRETE BULK GRAN SILO SYSTEM	A223	P24	110,500	110,000 tons	0.20	98.00%	-	-	PM10	0.2	0.2	-	11	-	-
S228	DRIVERT PRODUCTION	A266, A268, A270	P58, P59, P60	4,143	6,000 tons	2,000	99.97%	-	-	PM10	1.2	1.8	-	6,000	Yes	Yes
	DRIVERT PRODUCTION	A227	P26	4,143	6,000 tons	6.20	99.97%	-	-	PM10	0.0	0.0	-	19	-	Yes
	TOTAL S228	-	-	4,143	6,000 tons	-	-	-	-	PM10	1.2	1.8	-	-	-	-
S229	SCRAP PAPER RECOVERY	A228	P29	93	400 tons	200	99.00%	-	-	PM10	0.1	0.4	-	40	-	-
S230	No. 1 GRANULATOR	A226,A302	P98	76,705	87,949 tons	1.50	50.00%	98.00%	-	PM10	0.6	0.7	-	66	-	-
	No. 1 GRANULATOR	A241,A294,A29	P101	76,705	87,949 tons	24	50.00%	80.00%	98.00%	PM10	1.8	2.1	Yes	1,055	Yes	Yes
	No. 1 GRANULATOR	A312, A313	P104	76,705	87,949 tons	0.002	80.00%	98.00%	-	PM10	0.0	0.0	-	0	-	-
	TOTAL S230	-	-	-	-	-	-	-	-	PM10	2.4	2.8	Yes	1,121	Yes	Yes
S231	No. 2 GRANULATOR	A231,A303	P99	76,705	87,949 tons	1.50	50.00%	98.00%	-	PM10	0.6	0.7	-	66	-	-
	No. 2 GRANULATOR	A243,A299,A29	P102	76,705	87,949 tons	24	50.00%	80.00%	98.00%	PM10	1.8	2.1	Yes	1,055	Yes	Yes
	No. 2 GRANULATOR	A312, A313	P104	1,534	1,759 tons	0.002	80.00%	95.00%	-	PM10	0.0	0.0	-	0	-	-
	TOTAL S231	-	-	-	-	-	-	-	-	PM10	2.4	2.8	Yes	1,121	Yes	Yes
S232	No. 3 GRANULATOR	A233,A303	P99	57,063	70,073 tons	1.51	50.00%	98.00%	-	PM10	0.4	0.5	-	53	-	-

Title V Permit Renewal
November 2005

Page 1

Permit Evaluation and Statement of Basis: Facility #B1911, C & H Sugar Company, Inc.
830 Loring Avenue, Crockett, CA 94525

C&H Sugar Company, Inc. (Facility # B1911)
Emissions Estimates

Source	Description	Abatement	Stack	Throughput		EF (lb/unit)	Abatement			Pollutant	Emissions			CAM Assessment			
				Actual (unit/yr)	Potential (unit/yr)		units	A1 (%)	A2 (%)		A3 (%)	Actual (tpy)	Potential (tpy)	Potential >2 tpy?	Uncontrolled (tpy)	>100?	I?
	No. 3 GRANULATOR	A245,A286,A29	P102	57,063	70,073 tons	23.97	50.00%	80.00%	98.00%	PM10	1.4	1.7	-	840	Yes	Yes	-
	No. 3 GRANULATOR	A312, A313	P104	57,063	70,073 tons	0.002	80.00%	98.00%	-	PM10	0.0	0.0	-	0	-	-	-
	TOTAL S232	-	-	-	-	-	-	-	-	-	1.8	2.2	Yes	893	Yes	Yes	-
S233	No. 4 GRANULATOR	A235,A304	P100	50,075	61,493 tons	1.50	50.00%	98.00%	-	PM10	0.4	0.5	-	46	-	-	-
	No. 4 GRANULATOR	A247,A298,A29	P103	50,075	61,493 tons	24.07	50.00%	80.00%	98.00%	PM10	1.2	1.5	-	740	Yes	Yes	-
	No. 4 GRANULATOR	A312, A313	P104	50,075	61,493 tons	0.002	80.00%	98.00%	-	PM10	0.0	0.0	-	0	-	-	-
	TOTAL S234	-	-	-	-	-	-	-	-	-	1.6	1.9	-	786	Yes	Yes	-
S234	No. 5 GRANULATOR	A237	P34	161,290	198,064 tons	0.75	98.00%	-	-	PM10	1.2	1.6	-	74	-	-	-
	No. 5 GRANULATOR	A249,A250	P41	161,290	198,064 tons	11.99	80.00%	98.00%	-	PM10	3.9	4.7	Yes	1,167	Yes	Yes	-
	TOTAL S234	-	-	-	-	-	-	-	-	-	5.1	6.2	Yes	1,262	Yes	Yes	-
S235	No. 6 GRANULATOR	A238,A304	P100	36,101	44,332 tons	1.50	50.00%	98.00%	-	PM10	0.3	0.3	-	33	-	-	-
	No. 6 GRANULATOR	A251,A289,A29	P103	36,101	44,332 tons	23.91	50.00%	80.00%	98.00%	PM10	0.9	1.1	-	530	Yes	Yes	-
	No. 6 GRANULATOR	A312, A313	P104	36,101	44,332 tons	0.002	80.00%	98.00%	-	PM10	0.0	0.0	-	0	-	-	-
	TOTAL S235	-	-	-	-	-	-	-	-	-	1.1	1.4	-	563	Yes	Yes	-
S236	No. 7 GRANULATOR	A240	P36	134,505	165,173 tons	0.75	98.00%	-	-	PM10	1.0	1.2	-	62	-	-	-
	No. 7 GRANULATOR	A253,A254	P43	134,505	165,173 tons	11.99	80.00%	98.00%	-	PM10	3.2	4.0	Yes	990	Yes	Yes	-
	No. 7 GRANULATOR	A312, A313	P104	134,505	165,173 tons	0.002	80.00%	98.00%	-	PM10	0.0	0.0	-	0	-	-	-
	TOTAL S236	-	-	-	-	-	-	-	-	-	4.2	5.2	Yes	1,052	Yes	Yes	-
S240	SCREENED SUGAR DISTRIBUTION	A312, A313	P104	599,678	725,000 tons	0.80	80.00%	98.00%	-	PM10	1.0	1.2	-	290	Yes	Yes	-
S241	CONFECTIONERS SUGAR DISTRIB.	A312, A313	P104	26,088	31,000 tons	0.80	80.00%	98.00%	-	PM10	0.0	0.0	-	12	-	-	-
S242	SMALL PACK SUGAR DISTRIBUTION	A313	P104	215,082	315,000 tons	0.80	80.00%	98.00%	-	PM10	0.3	0.5	-	126	Yes	Yes	-
S243	No. 1 BEMIS PACKER	A312, A313	P104	57,688	60,000 tons	0.50	80.00%	98.00%	-	PM10	0.1	0.1	-	15	-	-	-
	No. 1 BEMIS PACKER	A263	P51	57,688	60,000 tons	0.50	99.90%	-	-	PM10	0.0	0.0	-	15	-	-	-
S244	No. 2 BEMIS PACKER	A312, A313	P104	83,933	101,000 tons	0.50	80.00%	98.00%	-	PM10	0.1	0.1	-	25	-	-	-
	No. 2 BEMIS PACKER	A263	P51	83,933	101,000 tons	0.50	99.90%	-	-	PM10	0.0	0.0	-	25	-	-	-
S245	No. 3 BEMIS PACKER	A263	P51	39,218	43,500 tons	1.00	99.90%	-	-	PM10	0.0	0.0	-	22	-	-	-
S246	SUPERSACK STORAGE BIN	A315	P155	10,010	48,000 tons	0.20	85.00%	60.00%	-	PM10	0.1	0.3	-	5	-	-	-
S247	DRY UNSCREENED SUGAR SURGE	A314	P46	593,918	700,781 tons	0.25	99.90%	-	-	PM10	0.1	0.1	-	88	-	-	-
S248	FINES COLLECTION	A315	P155	10,010	24,500 tons	0.20	99.90%	-	-	PM10	0.0	0.0	-	2	-	-	-
S249	COARSE COLLECTION	A315	P155	10,010	15,000 tons	0.20	99.90%	-	-	PM10	0.0	0.0	-	2	-	-	-
	COARSE COLLECTION	A274	P69	10,010	15,000 tons	0.20	98.00%	-	-	PM10	0.0	0.0	-	2	-	-	-
S250	CHAR REGENERATION	A259	P47	50,350	115,000 tons	4.24	95.00%	-	-	PM10	5.3	12.2	Yes	244	Yes	-	Yes
	CHAR REGENERATION	A259	P47	1,234,956	1,872,000 therm	0.00942	0.00%	-	-	NOx	5.8	8.8	Yes	9	-	-	-
	CHAR REGENERATION	A259	P47	1,234,956	1,872,000 therm	0.158	0.00%	-	-	CO	97.6	147.9	Yes	148	Yes	Yes	-
	CHAR REGENERATION	A259	P47	50,350	115,000 tons	0.35	0.00%	-	-	POC	8.8	20.1	Yes	20	-	-	-
	CHAR REGENERATION	A259	P47	1,234,956	1,872,000 therm	0.00006	0.00%	-	-	SOx	0.0	0.1	-	0	-	-	-
S252	BULK BINS 11-15	A260	P48	5,290	18,500 tons	0.80	98.00%	-	-	PM10	0.0	0.1	-	7	-	-	-
S253	BULK BINS 6-10	A261	P49	3,645	18,500 tons	0.80	98.00%	-	-	PM10	0.0	0.1	-	7	-	-	-
S254	BULK BINS 1-5	A262	P50	10,216	18,500 tons	0.80	98.00%	-	-	PM10	0.1	0.1	-	7	-	-	-
S255	PAPER SHREDDER	A263	P51	0	5,700 tons	0.20	99.90%	-	-	PM10	0.0	0.0	-	1	-	-	-
S256	PAINT SPRAY BOOTH	P52	12	20 gal	3.35	90.00%	-	-	-	PM10	0.0	0.0	-	0	-	-	-
	PAINT SPRAY BOOTH	P52	12	20 gal	3.35	0.00%	-	-	-	POC	0.0	0.0	-	0	-	-	-
S257	BULK GRAN SILO A	A264	P54	8,240	27,500 tons	0.80	98.00%	-	-	PM10	0.1	0.2	-	11	-	-	-
S258	BULK GRAN SILO B	A265	P55	8,240	27,500 tons	0.80	98.00%	-	-	PM10	0.1	0.2	-	11	-	-	-
S259	BULK GRAN SILO C	A266	P56	8,240	27,500 tons	0.80	98.00%	-	-	PM10	0.1	0.2	-	11	-	-	-
S260	BULK GRAN SILO D	A267	P57	8,240	27,500 tons	0.80	98.00%	-	-	PM10	0.1	0.2	-	11	-	-	-
S261	VIBRO SUGAR CONVEYING/STORAGE	A276	P71	2,749	5,800 tons	0.50	98.00%	-	-	PM10	0.0	0.0	-	1	-	-	-
	VIBRO SUGAR CONVEYING/STORAGE	A311	P90	2,749	5,800 tons	0.50	99.90%	-	-	PM10	0.0	0.0	-	1	-	-	-
S262	12/5 SUGAR CONVEYING/STORAGE	A311	P90	136,291	255,000 tons	0.70	95.00%	-	-	PM10	1.0	1.8	-	89	-	-	-

Title V Permit Renewal
November 2005

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Permit Evaluation and Statement of Basis: Facility #B1911, C & H Sugar Company, Inc.
830 Loring Avenue, Crockett, CA 94525

C&H Sugar Company, Inc. (Facility # B1911)
Emissions Estimates

Source	Description	Abatement	Stack	Throughput			EF (lb/unit)	Abatement			Pollutant	Emissions			CAM Assessment		
				Actual (unit/yr)	Potential (unit/yr)	(units)		A1 (%)	A2 (%)	A3 (%)		Actual (tpy)	Potential (tpy)	Potential >2 tpy?	Uncontrolled (tpy)	>100?	??
S263	DRIVERT PACKER	A270	P60	4,164	5,900 tons		2.00	99.99%	-	-	PM10	0.0	0.0	-	6	-	-
S264	AIRVEYOR BIN	A271	P63	35,187	40,000 tons		2.00	99.99%	-	-	PM10	0.0	0.0	-	40	-	-
S265	No. 2 AIRVEYOR	A272	P65	17,594	20,000 tons		2,000	99.99%	-	-	PM10	1.8	2.0	-	20,000	Yes	Yes
S266	No. 1 AIRVEYOR	A273	P66	17,594	20,000 tons		2,000	99.99%	-	-	PM10	1.8	2.0	-	20,000	Yes	Yes
S267	PSS SUGAR RECOVERY	A202	P67	343	425 tons		2	99.00%	-	-	PM10	0.0	0.0	-	0	-	-
S268	#1 6/10 HESSER PACKER	A228	P29	31,709	40,000 tons		6	99.90%	-	-	PM10	0.1	0.1	-	120	Yes	Yes
	#1 6/10 HESSER PACKER	A274	P69	31,709	40,000 tons		1	98.00%	-	-	PM10	0.3	0.4	-	20	-	-
S269	#2 6/10 HESSER PACKER	A228	P29	31,709	40,000 tons		6	99.90%	-	-	PM10	0.1	0.1	-	120	Yes	Yes
	#2 6/10 HESSER PACKER	A274	P69	31,709	40,000 tons		1	98.00%	-	-	PM10	0.3	0.4	-	20	-	-
S271	WAREHOUSE/PSS MELT SYSTEM	-	P72	927	4,900 tons		0.10	0.00%	-	-	PM10	0.0	0.2	-	0	-	-
S273	BULK GRAN ELEVATOR 1A	A278	P75	26,055	50,000 tons		0.80	98.00%	-	-	PM10	0.2	0.4	-	20	-	-
S274	BULK GRAN ELEVATOR 1	A279	P76	26,055	92,000 tons		0.80	98.00%	-	-	PM10	0.2	0.7	-	37	-	-
S275	BULK GRAN ELEVATOR 2	A280	P77	18,150	55,000 tons		0.80	98.00%	-	-	PM10	0.2	0.4	-	22	-	-
S276	CUSTOM PRODUCTS HANDLING	A281	P79	934	2,200 tons		0.80	98.00%	-	-	PM10	0.0	0.0	-	1	-	-
S278	CARPENTER SHOP SAWDUST	A282	P81	1	20 tons		2,000	98.00%	-	-	PM10	0.0	0.4	-	20	-	-
S279	TAILINGS MELT TANKS	A283	P83	43,837	57,500 tons		0.02	98.00%	-	-	PM10	0.0	0.0	-	0	-	-
S280	DIATOMACEOUS EARTH STORAGE	A284	P84	329	1,250 tons		30	99.80%	-	-	PM10	0.0	0.0	-	19	-	-
S281	WEST DE METERING	A285	P85	148	750 tons		30	99.80%	-	-	PM10	0.0	0.0	-	11	-	-
S282	EAST DE METERING	A286	P86	181	500 tons		30	99.80%	-	-	PM10	0.0	0.0	-	8	-	-
S284	LIME STORAGE	A287	P96	2,782	1,500 tons		30	99.50%	-	-	PM10	0.2	0.1	-	23	-	-
S285	MOTHERS DRYER	A288	P97	0	11,400 tons		2	99.90%	-	-	PM10	0.0	0.0	-	11	-	-
S286	CARBON REGENERATION FURNACE	A288, A290	P47	926	3,900 tons		40	50.00%	99.00%	-	PM10	0.1	0.4	-	78	-	-
	CARBON REGENERATION FURNACE	A288, A290	P47	926	3,900 tons		20	99.00%	-	-	POC	0.1	0.4	-	39	-	-
	CARBON REGENERATION FURNACE	A288, A290	P47	136,267	282,000 therm		0.0070	0.00%	-	-	NOx	0.5	1.0	-	1	-	-
	CARBON REGENERATION FURNACE	A288, A290	P47	136,267	282,000 therm		0.0040	90.00%	-	-	CO	0.0	0.1	-	1	-	-
	CARBON REGENERATION FURNACE	A288, A290	P47	136,267	282,000 therm		0.04	90.00%	-	-	SOx	0.3	0.6	-	6	-	-
S288	SPENT CHAR HANDLING	A291	P93	50,350	115,000 tons		0.54	98.00%	-	-	PM10	0.3	0.6	-	31	-	-
S289	REGENERATED CHAR HANDLING	A292	P92	50,350	115,000 tons		1.15	98.00%	-	-	PM10	0.3	0.7	-	66	-	-
S301	SWTP INFLUENT SURGE BASIN	A301	P73	327,590	355 kgal		0.00	0.00%	-	-	POC	0.0	0.0	-	0	-	-
S303	SWTP REACTORS	-	-	327,590	390 kgal		0.00	0.00%	-	-	POC	0.0	0.0	-	0	-	-
S304	SWTP CLARIFIERS	-	-	327,590	390 kgal		0.00	0.00%	-	-	POC	0.0	0.0	-	0	-	-
S305	SWTP CHLORINE CONTACT CHAMBER	-	-	327,590	355 kgal		0.00	0.00%	-	-	POC	0.0	0.0	-	0	-	-
S307	SWTP LIME SILO	A307	P88	0	300 tons		30	99.50%	-	-	PM10	0.0	0.0	-	5	-	-
S350	EMERGENCY STANDBY ENGINE	-	-	20	7,184 gal		0.199	0.00%	-	-	NOx	0.0	0.7	-	1	-	-
	EMERGENCY STANDBY ENGINE	-	-	20	7,184 gal		7.637	0.00%	-	-	CO	0.1	27.4	Yes	27	-	-
	EMERGENCY STANDBY ENGINE	-	-	20	7,184 gal		0.369	0.00%	-	-	POC	0.0	1.3	-	1	-	-
	EMERGENCY STANDBY ENGINE	-	-	20	7,184 gal		0.010	0.00%	-	-	SOx	0.0	0.0	-	0	-	-
	EMERGENCY STANDBY ENGINE	-	-	20	7,184 gal		0.012	0.00%	-	-	PM10	0.0	0.0	-	0	-	-
S351	EMERGENCY STANDBY ENGINE	-	-	5	7,184 gal		0.199	0.00%	-	-	NOx	0.0	0.7	-	1	-	-
	EMERGENCY STANDBY ENGINE	-	-	5	7,184 gal		7.637	0.00%	-	-	CO	0.0	27.4	Yes	27	-	-
	EMERGENCY STANDBY ENGINE	-	-	5	7,184 gal		0.369	0.00%	-	-	POC	0.0	1.3	-	1	-	-
	EMERGENCY STANDBY ENGINE	-	-	5	7,184 gal		0.010	0.00%	-	-	SOx	0.0	0.0	-	0	-	-
	EMERGENCY STANDBY ENGINE	-	-	5	7,184 gal		0.012	0.00%	-	-	PM10	0.0	0.0	-	0	-	-

Notes:
Actual throughput based on 12-month period ending 9/30/2005.
EF = Pollutant Emission Factor (pounds of pollutant per unit of throughput)
A1 = Abatement Device 1, A2 = Abatement Device 2, A3 = Abatement Device 3

Permit Evaluation and Statement of Basis: Facility #B1911, C & H Sugar Company, Inc.
830 Loring Avenue, Crockett, CA 94525

C&H Sugar Company, Inc. (Facility # B1911)
Emissions Estimates

Source	Description	Abatement	Stack	Throughput			EF (lb/unit)	Abatement			Pollutant	Emissions			CAM Assessment		
				Actual (unit/yr)	Potential (unit/yr)	(units)		A1 (%)	A2 (%)	A3 (%)		Actual (tpy)	Potential (tpy)	Potential ≥2 tpy?	Uncontrolled Emissions tpy	≥100?	??

Emissions (tpy) = (Throughput [unit/yr]) * (EF [lb/unit]) * (1 - A1) * (1 - A2) * (1 - A3) / (2,000 [lb/ton])

tpy = tons per year, hp = horsepower-hour

CO = carbon monoxide, PM10 = particulate matter with an aerodynamic diameter less than 10 microns, POC = precursor organic compound, SOx = sulfur oxides, NOx = nitrogen oxides

- = "no" or "not applicable"

CAM Assessment = 40 CFR 64 Compliance Assurance Monitoring Assessment.

>100? = "Uncontrolled emissions greater than 100 tpy?"

?" = "Control device is inherent equipment, as defined in 40 CFR 64.1?"

CAM? = "Subject to CAM provisions of 40 CFR 64?"

1 therm = 100,000 Btu

1 kgal = 1,000 gallons

Emission factors and abatement efficiencies based on initial Title V permit application and subsequent BAAQMD permit applications.

Permit Evaluation and Statement of Basis: Plant No. B1911, C & H Sugar Company Inc.
830 Loring Avenue, Crockett, CA 94525

~~Permit Evaluation and Statement of Basis: Site # B-1911, C & H Sugar Company Inc., 830 Loring Avenue, Crockett, CA 94525~~

Appendix C

Glossary

ACT

Federal Clean Air Act

APCO

Air Pollution Control Officer

AP-42

EPA's Compilation of Air Pollutant Emission Factors

ARB

Air Resources Board

BAAQMD

Bay Area Air Quality Management District

BACT

Best Available Control Technology

Basis

The underlying authority which allows the District to impose requirements.

CAA

The federal Clean Air Act

CAAQS

California Ambient Air Quality Standards

CAM

Compliance Assurance Monitoring

CAPCOA

California Air Pollution Control Officers Association

CEQA

California Environmental Quality Act

CFR

The Code of Federal Regulations. 40 CFR contains the implementing regulations for federal environmental statutes such as the Clean Air Act. Parts 50-99 of 40 CFR contain the requirements for air pollution programs.

CO

Carbon Monoxide

Cumulative Increase

The sum of permitted emissions from each new or modified source since a specified date pursuant to BAAQMD Rule 2-1-403, Permit Conditions (as amended by the District Board on 7/17/91) and SIP Rule 2-1-403, Permit Conditions (as approved by EPA on 6/23/95). Cumulative increase is used to determine whether threshold-based requirements are triggered.

District

The Bay Area Air Quality Management District

dscf

Dry Standard Cubic Feet

EPA

The federal Environmental Protection Agency.

Excluded

Not subject to any District regulations.

Federally Enforceable, FE

All limitations and conditions which are enforceable by the Administrator of the EPA including those requirements developed pursuant to 40 CFR Part 51, subpart I (NSR), Part 52.21 (PSD), Part 60 (NSPS), Part 61 (NESHAPs), Part 63 (MACT), and Part 72 (Permits Regulation, Acid Rain), including limitations and conditions contained in operating permits issued under an EPA-approved program that has been incorporated into the SIP.

FP

Filterable Particulate as measured by BAAQMD Method ST-15, Particulate.

HAP

Hazardous Air Pollutant. Any pollutant listed pursuant to Section 112(b) of the Act. Also refers to the program mandated by Title I, Section 112, of the Act and implemented by 40 CFR Part 63.

Major Facility

A facility with potential emissions of: (1) at least 100 tons per year of regulated air pollutants, (2) at least 10 tons per year of any single hazardous air pollutant, and/or (3) at least 25 tons per year of any combination of hazardous air pollutants, or such lesser quantity of hazardous air pollutants as determined by the EPA administrator.

MFR

Major Facility Review. The District's term for the federal operating permit program mandated by Title V of the Federal Clean Air Act and implemented by District Regulation 2, Rule 6.

MOP

The District's Manual of Procedures.

NAAQS

National Ambient Air Quality Standards

NESHAPS

National Emission Standards for Hazardous Air Pollutants. See in 40 CFR Parts 61 and 63.

NMHC

Non-methane Hydrocarbons (Same as NMOC)

NMOC

Non-methane Organic Compounds (Same as NMHC)

NO_x

Oxides of nitrogen.

NSPS

Standards of Performance for New Stationary Sources. Federal standards for emissions from new stationary sources. Mandated by Title I, Section 111 of the Federal Clean Air Act, and implemented by 40 CFR Part 60 and District Regulation 10.

NSR

New Source Review. A federal program for pre-construction review and permitting of new and modified sources of pollutants for which criteria have been established in accordance with Section 108 of the Federal Clean Air Act. Mandated by Title I of the Federal Clean Air Act and implemented by 40 CFR Parts 51 and 52 and District Regulation 2, Rule 2. (Note: There are additional NSR requirements mandated by the California Clean Air Act.)

Offset Requirement

A New Source Review requirement to provide federally enforceable emission offsets for the emissions from a new or modified source. Applies to emissions of POC, NO_x, PM₁₀, and SO₂.

Phase II Acid Rain Facility

A facility that generates electricity for sale through fossil-fuel combustion and is not exempted by 40 CFR 72 from Titles IV and V of the Clean Air Act.

POC

Precursor Organic Compounds

PM

Particulate Matter

PM₁₀

Particulate matter with aerodynamic equivalent diameter of less than or equal to 10 microns

PSD

Prevention of Significant Deterioration. A federal program for permitting new and modified sources of those air pollutants for which the District is classified "attainment" of the National Air Ambient Quality Standards. Mandated by Title I of the Act and implemented by both 40 CFR Part 52 and District Regulation 2, Rule 2.

SIP

State Implementation Plan. State and District programs and regulations approved by EPA and developed in order to attain the National Air Ambient Quality Standards. Mandated by Title I of the Act.

SO₂

Sulfur dioxide

THC

Total Hydrocarbons (NMHC + Methane)

Title V

Title V of the federal Clean Air Act. Requires a federally enforceable operating permit program for major and certain other facilities.

TOC

Total Organic Compounds (NMOC + Methane, Same as THC)

TPH

Total Petroleum Hydrocarbons

TRMP

Toxic Risk Management Plan

TSP

Total Suspended Particulate

VOC

Volatile Organic Compounds

Units of Measure:

bhp	=	brake-horsepower
btu	=	British Thermal Unit
cfm	=	cubic feet per minute
g	=	grams
gal	=	gallon
gpm	=	gallons per minute
hp	=	horsepower
hr	=	hour
lb	=	pound
in	=	inches
max	=	maximum
m ²	=	square meter
min	=	minute
mm	=	million
MMbtu	=	million btu
MMcf	=	million cubic feet
ppmv	=	parts per million, by volume
ppmw	=	parts per million, by weight
psia	=	pounds per square inch, absolute
psig	=	pounds per square inch, gauge
scfm	=	standard cubic feet per minute
yr	=	year