

Bay Area Air Quality Management District

939 Ellis Street
San Francisco, CA 94109
(415) 771-6000

Permit Evaluation

MAJOR FACILITY REVIEW PERMIT MINOR REVISION

for
Gaylord Container Corporation
Facility #A2180

Facility Address:
2301 Wilbur Avenue
Antioch, CA 94509

Mailing Address:
P.O. Box 10
Antioch, CA 94509

July 2005

Site Engineer: Arthur Valla
Application Engineer: Robert Hull

Application #: 11036

Title V – Minor Revision

A. Background

This facility is subject to the Operating Permit requirements of Title V of the federal Clean Air Act, Part 70 of Volume 40 of the Code of Federal Regulations (CFR), and BAAQMD Regulation 2, Rule 6, Major Facility Review because it has the potential to emit 100 tons per year or more each of nitrogen oxides (NOx) and carbon monoxide (CO).

Major Facility Operating permits (Title V permits) must meet specifications contained in 40 CFR Part 70. The permits must contain all applicable requirements (as defined in 40 CFR § 70.2), 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.

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 number that consists of a letter and a 4-digit number. This facility number is also considered to be the identifier for the permit.

This facility received its initial Title V permit on October 30, 2003 with an expiration date of September 30, 2008. Gaylord has requested that the permit be revised to correct errors in the permit concerning the Diesel Internal Combustion (IC) Engines at the facility and to update the applicable requirements for the Gas Turbine/Duct Burner to reflect recent changes to the New Source Performance Standards (NSPS) for Stationary Gas Turbines (40 CFR 60, Subpart GG).

B. Requested Changes to the Permit

Diesel IC Engines

Gaylord initially had permits to operate (4) Diesel IC Engines: S-51, S-52, S-53, and S-54. However, prior to the issuance of the initial Title V permit, Gaylord notified the District that one of the engines (S-51) had been removed. Therefore, only S-52, S-53, and S-54 were included in the Title V permit. These sources were each described as Diesel IC Engines for Emergency Power Generation. This is not the correct source listing for the IC Engines at Gaylord. S-52 was the engine removed from service, not S-51; and S-53 is used for starting up the Gas Turbine, not to power an Emergency Generator. In their application, Gaylord stated that the correct listing should be as follows*:

- S-51: Diesel IC Engine – Emergency Fire Pump; Cummins Model NH-220-IF, 220 BHP
- S-53: Diesel IC Engine – Turbine Startup; Detroit Diesel Model 7123-7300, 725 BHP
- S-54: Diesel IC Engine – Emergency Fire Pump; Detroit Diesel Model PTAISD50, 188 BHP

*Note:

Gaylord informed the District on 6/28/05 that the Emergency Fire Pump Engines S-51 and S-54 have been permanently removed from service. Therefore, the permit now only includes the Turbine Startup Engine S-53.

Gas Turbine/Duct Burner

Under the terms of the existing Title V permit, Gaylord is required to monitor the sulfur content of the natural gas combusted in the Gas Turbine/Duct Burner in accordance with a custom fuel-monitoring schedule. However, on July 8, 2004 the EPA issued a Final Rule modifying 40 CFR 60, Subpart GG "Standards of Performance for Stationary Gas Turbines". The revised standards allow facilities greater flexibility in sulfur content monitoring for natural gas, including the option of vendor certification. In lieu of monitoring, the owner/operator of the affected source may now demonstrate SO₂ compliance by providing a valid purchase contract, tariff sheet or transportation contract for the gaseous fuel that specifies that the maximum total sulfur content of the fuel is 20.0 grains/100 scf or less (Ref. 40 CFR 60.334(h)(3)(i)). However, the facility may also choose to continue to operate under the existing custom monitoring schedule (Ref. 40 CFR 60.334(h)(4)).

Gaylord has requested revisions to the Title V permit that will allow them to either use vendor fuel certification or the existing custom monitoring schedule to demonstrate compliance.

Summary

There is no increase of emissions associated with this permit revision. The revision is "Minor" because the modifications to the permit do not meet any of the criteria under the definition of "Significant Permit Revision" under Regulation 2-6-226. The changes to fuel sulfur monitoring in 40 CFR 60, Subpart GG do not qualify as a significant change or relaxation in monitoring, because the same demonstration of compliance with the SO₂ standards is made using either the previous or current monitoring requirements.

C. Summary of Proposed Changes to the Permit

In addition to the changes requested by Gaylord, the District has made a number of "Administrative" and "Minor" revisions to the permit to update requirements and standardize the permit. The following is a summary of the proposed revisions to the permit:

Section I: Standard Conditions

- The dates of adoption and approval of rules in Standard Condition I. A. have been updated.
- The following language was added to Standard Condition I.B.1: "If the permit renewal has not been issued by September 30, 2008, but a complete application for renewal has been submitted in accordance with the above deadlines, the existing permit will continue in force until the District takes final action on the renewal application." This is the "application shield," set forth in BAAQMD Regulation 2-6-407.
- Standard Condition 1.B.12 was added to emphasize that the permit holder is responsible for compliance, and certification of compliance, with all conditions of the permit, regardless whether it acts through employees, agents, contractors, or subcontractors.

Section II: Equipment

- As discussed above, S-53 was renamed “Diesel IC Engine – Gas Turbine Startup” and the model number and horsepower was corrected.
- S-52 and S-54, which were listed as Emergency Generators, were removed from the permit.

Section III: Generally Applicable Requirements

- Language has been added to Section III to clarify that this section contains requirements that may apply to temporary sources. This provision allows contractors that have "portable" equipment permits that require them to comply with all applicable requirements to work at the facility on a temporary basis, even if the permit does not specifically list the temporary source. Examples are temporary sand-blasting or soil-vapor extraction equipment.
- Section III has been modified to say that SIP standards are now found on EPA's website and are not included as part of the permit. The updated website address has been added.
- Table III has been updated to add rules and requirements as necessary to conform to the current District standard.
- The dates of adoption or approval of the rules and their "federal enforceability" status in Table III have also been updated.

Section IV: Source-Specific Applicable Requirements

- Section IV has been modified to say that SIP standards are now found on EPA's website and are not included as part of the permit. The updated website address has been added.
- The Applicable Requirements Tables IV-A and IV-B for the Gas Turbines and Duct Burners respectively, were combined into a single applicable requirements table (Table IV-A) because the requirements are redundant. Table IV-B was deleted.
- The requirements of 40 CFR 60 Subpart GG in Table IV-A were updated to reflect recent changes (effective July 8, 2004). Of particular note is the removal of the requirement to periodically monitor the sulfur and nitrogen content of the fuel fired in the Gas Turbines (formerly 60.334(b)). In the revised version of Subpart GG, Part 60.334 (h)(3) allows the owner/operator to elect not to monitor fuel sulfur content if “natural gas” is combusted in the turbine. Furthermore, fuel nitrogen monitoring is not required unless the owner/operator claims an allowance for fuel bound nitrogen (ref. 60.334 (h)(2)). Since the Gas Turbine S-35 is required by a federally enforceable permit condition to fire only “California Public Utilities Commission (PUC) quality natural gas” and there is no allowance taken for fuel bound nitrogen for NOx compliance, fuel sulfur and nitrogen content monitoring will no longer be required.
- The requirements for Permit Condition #249 listed in Table IV-A were updated to reflect the proposed changes to the permit conditions.
- The SIP 1-523.5 maintenance and calibration requirement no longer exists and was removed from Table IV-A.

- The existing applicable requirement table for the IC Engines (for Emergency Power Generation) was deleted and a new table (Table IV-B) was created for the Gas Turbine Startup Engine (S-53).
- The applicable requirements for the new Air Toxics Control Measure (ATCM) for Stationary Compression Ignition Engines (CCR Title 17, Section 93115) were added to Table IV-B. S-53 is exempt from the emissions standards of (e)(2)(D)1 per Section (c)12 because it is a low-use prime engine. To qualify for the exemption, a 20-hour per year operating limit was imposed.
- The permit condition requirements for S-53 listed in Table IV-B were updated to reflect the provisions of the new ATCM.

Section V: Schedule of Compliance

There are no changes to this section.

Section VI: Permit Conditions

- Permit Condition #249, part 8 was modified in accordance with the new natural gas sulfur monitoring requirements of 40 CFR 60, Subpart GG. The modification allows them to either use vendor fuel certification or the existing custom monitoring schedule to demonstrate compliance. A minor change was made to the existing custom monitoring schedule for clarity. The turbine is not currently operating, but may operate in the future, so the condition was modified to require monitoring only during periods of active turbine operation.
- Permit Condition #19254 was deleted. There are no longer any emergency generators at Gaylord.
- Permit Condition #22199 was added specifically for the Gas Turbine Startup Diesel Engine S-53. The 20 hours per year operation limit in part 1 is to maintain an exemption from the ATCM emissions requirements for prime engines.

Section VII: Applicable Limits and Compliance Monitoring Requirements

- The standard text was updated for clarity and to state that Sections I-VI take precedence if there is a conflict with the VII Tables.
- Tables VII-A “Gas Turbine” and VII-B “Duct Burner” were combined (into Table VII-A) because the requirements are redundant.
- Changes to Table VII-A were made as necessary to identify changes to 40 CFR 60 Subpart GG and Permit Condition #249.
- The existing requirements table for the IC Engines (for Emergency Power Generation) was deleted and a new table (Table IV-B) was created for the Gas Turbine Startup Engine (S-53).
- All Tables were updated to reflect changes made elsewhere in the permit.

Section VIII: Test Methods

- Table VIII was updated to account for changes made to the standard template, (e.g. USEPA Method 5 was added as a test method for BAAQMD Regulation 6-310).
- Test methods were updated to reflect changes to 40 CFR 60, Subpart GG.

Section IX: Permit Shield

- The subsumed monitoring requirements for “Fuel-to-water monitoring” and “Periods of excess emissions, NOx” were removed because the original intent was to subsume the requirement to monitor fuel-to-water ratio (and to report excess NOx emissions based on that monitoring) with the more stringent BAAQMD requirement for continuous emission monitoring. In the modified version of Subpart GG, section 60.334(b) specifically allows CEM use for monitoring NOx emissions as an alternative to continuously monitoring fuel consumption and fuel-to-water ratio; and section 60.334(j)(1)(iii) covers excess emissions reports for turbines using CEMS. Therefore, since the original intent of the permit shields for “Fuel-to-water monitoring” and “Periods of excess emissions, NOx” are no longer valid and were removed.
- The subsumed monitoring requirement for “Fuel Nitrogen Content” was removed from Table IX-A because Gaylord does not claim an allowance for fuel bound nitrogen in determining NOx emissions from the gas turbine and is not required to monitor fuel nitrogen content.
- The subsumed requirements for “Fuel Sulfur monitoring (liquid fuels)” and “Periods of excess emissions, SO₂, fuel oil” were re-lettered to account for changes made to Subpart GG.

Section X: Revision History

This section will be updated prior to issuance, upon completion of review.

Section XI: Glossary

The Glossary was updated to match the current standard format.

Section XI: State Implementation Plan

This section has been deleted. The address for EPA's website is now found in Sections III and IV.

D. Recommendation

Issue a minor permit revision to the Title V permit for Gaylord Container Corporation as shown in the Proposed Major Facility Review Permit and described in this evaluation.

By: _____

Ted Hull
Air Quality Engineer II

J:\PUB_DATA\TITLE V Permit Appls\1 ALL T5 Application Files here\A2180\11036MINOR\A2180SOB2005