# Bay Area Air Quality Management District

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# Permit Evaluation
# and
# Statement of Basis
# For Renewal of the
# MAJOR FACILITY REVIEW PERMIT

**for**

## Graphic Packaging International, Inc.
## Facility #A0732

**Facility Address:**
2600 De La Cruz Blvd
Santa Clara, CA 95050-2663

**Mailing Address:**
2600 De La Cruz Blvd
Santa Clara, CA 95050-2663

Application Engineer: Carol Lee
Site Engineer: Carol Lee

Application Number: 28132

November 2016

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# Title V Statement of Basis

## A. Background

The Santa Clara mill (Facility) of Graphic Packaging International Inc. (GPI) is a "major facility" and 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 Regulation 2, Rule 6, Major Facility Review, of the Bay Area Air Quality Management District (BAAQMD or District). It is a major facility, pursuant to BAAQMD Regulation 2-6-212, because the actual emissions of regulated air pollutants from GPI exceed 100 tons per year (tpy). Currently, emissions of carbon monoxide, a regulated air pollutant, remain greater than 100 tpy. The facility also emits hazardous air pollutants, but below Title V threshold levels.

Major Facility Operating Permits (Title V permits) must meet the specifications of 40 CFR Part 70, as contained in BAAQMD Regulation 2, Rule 6. Such 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.

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 within the District's jurisdiction 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 A0732.

This facility received its initial Title V permit on February 16, 1999. This application is for a permit renewal. Although the current permit will expire on September 29, 2016, it continues in force until the District takes final action on the permit renewal because GPI submitted a complete Title V renewal application at least six months prior to expiration. The proposed permit shows all changes to the permit in strikeout/underline format.

GPI is located at 2600 De La Cruz Boulevard in Santa Clara. It had a sister facility, also called GPI, which was located at 2500 De La Cruz Boulevard in Santa Clara. This plant printed the paperboard. Its facility identifier was A0159. Because the two plants met the definition of "facility" in BAAQMD Regulation 2, Rule 6, and the definition of "major source" in 40 CFR 70.2, the second, smaller facility was also subject to Major Facility Review. However, GPI shut down the plant on September 15, 2010, so a Major Facility Review permit for that facility is no longer required.

As required for Title V permit renewals, the District has reviewed the entire permit, and where appropriate, made corrections and other changes to the current Title V permit.

## B. Facility Description

The Graphic Packaging International Inc. Santa Clara Mill consists of a recycled paperboard mill and combined cycle cogeneration plant, located at 2600 De La Cruz Boulevard in Santa Clara, California. GPI manufactures rolls of recycled paperboard used in the manufacture of packaging of products such as detergent, beer, and cereal boxes. The cogeneration plant provides steam for the paperboard recycling process and generates electricity for use onsite and for sale.

The equipment operated at the Facility includes a gas turbine and duct burner system, a standby boiler, recycle paperboard mill equipment, cold cleaners, an emergency diesel fire pump, exempt storage and process tanks, small exempt combustion equipment, and exempt maintenance activities. The recycling operation utilizes acids and organic compounds to treat and coat the manufactured recycled paperboard product. The combustion sources burn natural gas as the primary fuel. Distillate oil is used as a back-up fuel for the standby boiler and to power the diesel fire pump. The emissions from the Facility include combustion emissions from the cogeneration plant and organic emissions, including organic hazardous air pollutants, from the recycle paperboard mill operation. Additional details about the operation are found in Section C.IV of this statement of basis.

The Facility received its initial Title V permit on February 16, 1999. Although the current permit will expire on September 29, 2016, it continues in force until the District takes final action on the permit renewal because GPI submitted the Title V renewal application # 28132 on March 28, 2016. Following are the details of the Title V permitting history:

| | |
|---|---|
| Initial Issuance | February 14, 1999 |
| Administrative Amendment:<br>Changes in monitoring report dates | September 28, 2000 |
| Administrative Amendments:<br>Change to the responsible official and title of contact<br>Deletion of Permit Condition 14522, Parts 2 and 3 because the duct burner no longer burns fuel oil.<br>Merger of Permit Condition 14522, Parts 1 and 7 for the common use of natural gas.<br>Addition of standard condition I.11 to conform with Manual of Procedures, Volume 2, Part 3, as amended on May 2, 2001.<br>Changes to standard conditions H.2 and H.3 to with Manual of Procedures, Volume 2, Part 3, as amended on May 2, 2001. | July 6, 2001 |

Changes to dates of rule and SIP amendments
Changes to the permit shield language in Section X.B
to conform to Regulation 2, Rule 6, as amended
on May 2, 2001
Deletion of out-dated SIP rules

| | |
|---|---|
| Renewal (Application 8095) Issued | September 30, 2011 |
| Renewal (Application 28132) Submitted | March 28, 2016 |

Please note that Table II-A and Section VI of the renewed permit contain the sources and permit conditions referenced in this statement of basis.

The following District permitting actions will be incorporated into the permit in this action. The permit evaluations for each District action are incorporated into the appendices.

On December 30, 2015, the District issued a Change of Conditions (Application No. 27636) for S-9 Boiler to change the existing operating hours limit to a heat input limit. The resulting change will not result in any increased use or operations of the boiler and will not result in any emissions increase. As a result, the proposed change is not considered a modification of S-9, but an alteration of its operating conditions.

The standard sections of the permit have been upgraded to include new standard language used in all Title V permits. The proposed permit shows all changes to the permit in strikeout/underline format.

There has been no significant change in emissions since the issuance of the renewal Title V permit in 2011.

## C. Permit Content

The legal and factual basis for the permit follows. The permit sections are described in the order that they are presented in the permit. Changes to the standard permit text will be made since the initial Title V Permit for this site was issued. These changes are reflected in the new proposed permit in strikeout/underline format.

The District will make the following changes in the proposed cover page of the Title V permit renewal:

- Updated the address of the Bay Area Air Quality Management District.
- Change the name of the responsible official from Richard Johnston to Jeff Mih.
- Change the title of BAAQMD Permit Division Contact to BAAQMD Engineering Division Contact.
- Change the name of the BAAQMD Engineering Division Contact to Carol Lee.

## 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, this section of the permit will contain a standard condition pertaining to these programs. However, as noted in the Permit Shield, the Facility is not subject to 40 CFR § 68 as the Facility does not store large quantities of materials subject to 40 CFR § 68. 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.

The District will make the following changes to the permit:

- Update the dates of adoption and approval of District rules in Standard Condition 1.A.
- Update the dates of Standard Condition I.B.1 to reflect renewal.
- Amended six-month reporting period specified in Standard Condition I.F. by one month to coincide with the calendar year. The facility requested that the reporting period end on December 31 and June 30 as this would make Title V reporting consistent with District reporting and state reporting.
- Updated the address of the Bay Area Air Quality Management District in Standard Condition 1.F.
- Updated the new mailing address of the Environmental Protection Agency in Standard Condition 1.G.

## II. Equipment

This section of the permit lists all permitted or significant sources. Each source is identified by an S prefix and a number (e.g., S24). Permitted sources, listed in Table II-A, are those sources that require a BAAQMD operating permit pursuant to BAAQMD Rule 2-1-302. Significant sources are those exempt 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 and would be listed in Table II-C.

All abatement (control) devices that control permitted or significant sources are listed in Table II-B, if necessary. Each abatement device whose primary function is to reduce emissions is identified by an A prefix and a number (e.g., A-24). The facility has no separate abatement devices operated to control permitted sources at this facility (although EPA does consider the steam injection at S6, Turbine, to be a control device). Both the gas turbine and standby boiler are equipped with abatement technology to minimize emissions, but this equipment is considered integral to the sources rather than separate abatement devices. Accordingly, this permit does not include a Table II-B.

Section II, Equipment, is part of the facility description. The Section 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. Significant sources are also included in this section, even if they are not required to hold a District permit to operate.

Following are explanations of the changes to the equipment list from the original Major Facility Review Permit, based on the application for renewal and District actions after 2003:

**Devices Removed from Service or Archived since Issuance of the Renewal Major Facility Review Permit or submittal of the Renewal Application:**

S-12 Cold Cleaner

**Devices with Changed Permit Status:**

The following District applications were submitted and evaluated after the issuance of the renewed Title V permit in September 2011:

The Statement of Basis for the 2011 Title V permit detailed the creation of sources S-16 Felt Cleaning (Top Felt), S-17, Felt Cleaning (Bottom Felt), and S-18 Felt Cleaning (1st Main Press), and S-19 Felt Cleaning (2nd Main Press), which was previously grouped as part of grandfathered source S10, Papermaking.

Comments from the facility during the 30-day comment period for the September 2011 Title V renewal were that sources S-16, S-17, and S-18 should be broken up into more sources. The District's response to these comments was to add S20 and S25 and relabel S16 through S25 after the 30-day public comment period:

S-16, Felt Wash Operation, was split into four sources:
- S16, Felt Cleaning (Top Felt),
- S17, Felt Cleaning (Bottom Felt),
- S-18, Felt Cleaning (1st Main Press)
- S-19, Felt Cleaning (2nd Main Press)

S-18, Paperboard Sealing, was split into three sources:
- S-20, Paperboard Sealing (Dry Stack Solution Box)
- S-21, Paperboard Sealing (Wet Stack Top Solution Box)
- S-22, Paperboard Sealing (Wet Stack Bottom Solution Box)

S-17, Paperboard Coating was split into three sources:
- S-23, Paperboard Coating (#1 Coater)
- S-24, Paperboard Coating (#2 Coater)
- S-25, Paperboard Coating (#3 Coater)

As part of the prior renewal, S20 to S25 were added in Table II-C, IV-G and VII-G of the final Title V permit issued September 30, 2011. Subsequently, S20 to S25 became permitted sources and will be moved from Table II-C to Table II-A, per applicant's request.

## 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:
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 note regarding SIP information from the Rule Development Section has been deleted since the SIP standards are now found on EPA's website.

Table III has been updated by adding the following rules and standards to conform to current practice.

- Added SIP Regulation 8, Rule 3 (Architectural Coatings).
- Added Regulation 8, Rule 4 (General Solvent and Surface Coating Operations).
- Added Regulation 8, Rule 15 (Emulsified and Liquid Asphalts).
- Changed Description of Subpart F, 40 CFR 82.156, 82.161, and 82.166.

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 of all 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. The District's policy is to not include citations of exemptions as applicable requirements. Therefore, where no regulation applies to a specific operation due to one or more exemptions under the potentially applicable regulations, the source will not be included in Sections IV and VII of the permit unless specific permit conditions apply. All monitoring and recordkeeping requirements are also cited in Section IV. Section VII is a cross-reference between the limits and monitoring requirements. A discussion of monitoring is included in Section VII of this permit evaluation/statement of basis.

**Changes to permit**

Deletion of Table IV – Facility

40 CFR Part 98 does not meet the definition of "Applicable Requirement" in 40 CFR 70.2. Therefore, Table IV-Facility will be removed from the Title V permit per District policy. In addition, state GHG reporting requirements will also be removed from the Title V permit for the same reason.

Table IV-B: S9, Standby Boiler

The standby boiler was permitted as a standby unit with annual operating hours not to exceed 1000 hours on natural gas (which is equal to 10% of its annual heat capacity) and 100 hours on fuel oil in the event of natural gas curtailment, per Condition 12231, so that S9 would be eligible for the low fuel usage limited exemption in Regulation 9-7-112.2 and exempt from the requirements of Regulation 9-7-301, 307, 311, and 312.

Subsequently, the facility submitted an application (Application No. 27636) to amend Condition 12231 to change the annual 1000 hours limit on natural gas to the annual heat capacity limit of 10% of S9's annual maximum heat capacity. The resulting change would allow the facility more flexibility operating S9 while still complying 9-7-112.2 and would not result in any increased use or operations of the boiler nor will not result in any emissions increase. As a result, the proposed change was not considered a modification of S-9, but an alteration of its operating conditions. The evaluation report for this application has been included in Appendix B of this Statement of Basis.

Review of the amended Condition 12231 for incorporation into the Title V permit has revealed two oversights: 1) not allowing fuel oil use for testing and 2) not adding monitoring to verify compliance with sulfur content requirement and Regulation 9-7-112.2 NOx and CO exhaust concentration limits. As a result, the following Parts 1, 3, and 11 f and g will be amended as part of this Title V renewal to include reference to testing. Part 12 will be added to amended Condition No. 12231 to require annual monitoring with a portable analyzer to ensure that the facility meets the limits specified in 9-7-112.2:

12. The owner/operator shall determine compliance with the following NOx and CO limits by using a portable analyzer and U.S. EPA Method CTM-030 on an annual basis. The owner/operator shall use the method during natural gas firing. Use of the method during fuel oil firing is not required. Source testing that is performed by the District's Source Test group, if available, may be used to fulfill this requirement. The owner/operator shall submit the NOx and CO compliance data to the Director of Enforcement and Compliance within 60 days of using the protocol.
    a. NOx and CO limits in part 7 of this condition
    b. NOx and CO limits in BAAQMD Regulation 9-7-112.
    [BACT, Regulation 9-7-112.2, BAAQMD Regulation 2-6-503]

In addition, Condition 12231, part 11g, will be added to require certification of fuel sulfur for the fuel oil burned at S9 and reference to PG&E will be changed to natural gas supplier.

Table IV-E: S14

40 CFR 63 Subpart ZZZZ was added as an applicable requirement because it now is applicable to S14. Because there are no applicable limits for compliance verification thre is no addition to Section VII for S14. In addition, because the requirements is already explicit in Table IV-E, no additional permit conditions are necessary.

Table IV-G: Sources S20 through S25

Removed Condition 13344 from Table IV-G because it was put there in error. Conditions 13344 was instituted when the S-10 paper machine was permitted and was not specifically meant for the sealers and coaters.

## 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."

The responsible official for Graphic Packaging International, Inc. has submitted a signed Certification Statement form dated March 28, 2016. On this form, the responsible official certified that the following four 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.

Changes in this action
None.

## VI. Permit Conditions

Each permit condition is identified with a unique numerical identifier, up to five digits. The Title V permit contains all permit conditions for the permitted sources listed in

Section II. During the Title V permit development, the District reviewed the existing permit conditions, deleted the obsolete conditions, and, as appropriate, revised the conditions for consistency, clarity, and enforceability.

When necessary to meet Title V requirements, additional monitoring, recordkeeping, or reporting has been added to the permit. All changes to existing permit conditions due to the Title V review are clearly shown in "strike-out/underline" format in the proposed permit. When the permit is issued, all "strike-out" language will be deleted; 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.

The District has reviewed and, where appropriate, revised or added new limits on sources to help ensure compliance with District rules addressing preconstruction review. In particular, throughput limits for S6, Gas Turbine and S7, Duct Burner, have been imposed in 2011 based on their original application for construction.

The applicability of preconstruction review depends on whether there is a "modified source" as defined in District Regulation 2-1-234. Whether there is a modified source depends in part on whether there has been an "increase" in "emission level." Regulation 2-1-234 defines what will be considered an emissions level increase.

Sources that were modified or constructed since the District began issuing new source review permits will have permits that contain throughput limits, and these limits are reflected in the Title V permit. These limits have previously undergone District review, and are considered to be the legally binding "emission level" for purposes of Sections 2-1-234.1 and 2-1-234.2. By contrast, for older sources that have never been through preconstruction review (commonly referred to as "grandfathered" sources), an "increase" in "emission level" is addressed in Section 2-1-234.3. A grandfathered source is not subject to preconstruction review unless its emission level increases above the highest of either: 1) the design capacity of the source, 2) the capacity listed in a permit to operate, or 3) highest capacity demonstrated prior to March 2000. However, if the throughput capacity of a grandfathered source is limited by upstream or downstream equipment (i.e., is "bottlenecked"), then the relaxing of that limitation ("debottlenecking") is considered a modification.

S10, Papermaking, is the only source that was built before the District began issuing new source review permits,

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 is used for a condition imposed by the APCO to ensure compliance with limits that arise from the District's Toxic Risk Management Policy.

Changes to permit conditions in this action

Condition 12231 has been amended as a result of a Change of Condition application (Application No. 27636). The resulting change will not result in any increased use or operations of the boiler and will not result in any emissions increase. As a result, the proposed change was not considered a modification of S-9, but an alteration of its operating conditions. The evaluation report for this application has been included in Appendix B of this Statement of Basis.

Review of the amended Condition 12231 for incorporation into the Title V permit has revealed two oversights: 1) not allowing fuel oil use for testing and 2) not adding monitoring to verify compliance with sulfur content requirement and Regulation 9-7-112.2 NOx and CO exhaust concentration limits. As a result, the following Parts 1, 3, and 11 f and g will be amended as part of this Title V renewal to include reference to testing. Part 12 will be added to amended Condition No. 12231 to require annual monitoring with a portable analyzer to ensure that the facility meets the limits specified in 9-7-112.2:

12. The owner/operator shall determine compliance with the following NOx and CO limits by using a portable analyzer and U.S. EPA Method CTM-030 on an annual basis. The owner/operator shall use the method during natural gas firing. Use of the method during fuel oil firing is not required. Source testing that is performed by the District's Source Test group, if available, may be used to fulfill this requirement. The owner/operator shall submit the NOx and CO compliance data to the Director of Enforcement and Compliance within 60 days of using the protocol.
    a. NOx and CO limits in part 7 of this condition
    b. NOx and CO limits in BAAQMD Regulation 9-7-112.
    [BACT, Regulation 9-7-112.2, BAAQMD Regulation 2-6-503]

In addition, Condition 12231, part 11g, will be added to require certification of fuel sulfur for the fuel oil burned at S9 and reference to PG&E will be changed to natural gas supplier.

Condition 16714 for S11-S13, Cold Cleaners, was amended to remove reference to S-12 Cold Cleaner since it has been shut down and removed from the Title V permit.

## VII. Applicable Limits and Compliance Monitoring Requirements

Section VII of the permit is a summary of only the numerical limits and monitoring requirements for each source. Therefore, this section of the permit will not contain *all* of the requirements that are listed in Section IV of the permit, which is a complete list of applicable requirements, including emission limits and monitoring. The summary in Section VII includes a citation of the numerical limits and corresponding monitoring, frequency of monitoring, and type of monitoring.

The District has reviewed all monitoring and has determined the existing monitoring is adequate to provide a reasonable assurance of compliance with the exceptions and explanations noted in the tables below.

Monitoring decisions are typically the result of balancing 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 only when it can support a conclusion that existing monitoring is inadequate.

Following is a review of monitoring for various limits. It is grouped by the pollutant that is being controlled.

### NOx Sources

| S# & Description | Emission Limit Citation | Federally Enforceable Emission Limit | Monitoring |
|---|---|---|---|
| S6, Turbine, S7, Duct Burner | BAAQMD 9-9-301.1.2 and SIP 9-9-301.2 | 17.2 ppmv @ 15% $O_2$, dry | CEM |
| | BAAQMD 9-9-301.2 | 15 ppm @ 15% $O_2$, dry or 0.7 lb/MW-hr | CEM |
| | NSPS, 40 CFR 60.332 (a)(2) | 122 ppmv @ 15% $O_2$ dry | CEM |

NOx Sources

| S# & Description | Emission Limit Citation | Federally Enforceable Emission Limit | Monitoring |
|---|---|---|---|
| S9, Standby Boiler | BAAQMD Permit Condition 12231, part 7 | 25 ppmv @ 3%O2, dry when firing natural gas | Portable Analyzer/Every Year |
| | BAAQMD Permit Condition 12231, part 8 | 60 ppmv @ 3%O2, dry when firing distillate oil | None |
| | BAAQMD 9-7-112.2 | 30 ppmv @ 3%O2, dry when firing gaseous fuel | Portable Analyzer/Every Year |

**NOx Discussion:**

S6, Turbine, and S7, Duct Burner

The NOx emissions from the turbine and the duct burner are monitored with a CEM, which the District considers adequate monitoring.

S9, Standby Boiler

The District will not impose continuous monitoring for NOx for the standby boiler because the boiler operation is limited to 10% of its annual maximum heat capacity (140,875 MMBTU/yr), per Regulation 9-7-112.2. and 100 hours/year on distillate oil. Therefore, the potential to emit for NOx is very low as long as the boiler complies with its BACT limits. The calculations using the factors in the original Application 27636 are shown below:

Boiler capacity = 140,875 MMBTU/yr
Natural Gas NOx factor = 25 ppm @ 3% O2 = 0.03 lb/MMbtu
NOx emissions during natural gas combustion = 2.1 tons/yr
Distillate Oil NOx factor = 47 lb/Mgal
Hours of operation burning distillate oil = 100/yr
Mgal oil burned/hr = 2.55
NOx emissions during distillate oil combustion = 6 tons/yr

The District now requires a monitoring using a portable analyzer using EPA Method CTM-030 every year to ensure that the boiler meets the NOx limits when burning natural gas. More frequent monitoring is unnecessary because the boiler operates infrequently.

Because S-9 Boiler will only be fired on distillate oil during natural gas curtailment, monitoring of NOx emissions is not required due to infrequent operation.

## CO Sources

| S# & Description | Emission Limit Citation | Federally Enforceable Emission Limit | Monitoring |
|---|---|---|---|
| S9, Standby Boiler | BAAQMD Permit Condition 12231 part 7 | 50 ppmv @ 3%O2, dry | Portable Analyzer/Every Year |
| | BAAQMD 9-7-112.2 | 400 ppmv @ 3%O2, dry when firing gaseous fuel | Portable Analyzer/Every Year |

**CO Discussion:**

S9, Standby Boiler

The District will not impose continuous monitoring for NOx for the standby boiler because the boiler operation is limited to 10% of its annual maximum heat capacity (140,875 MMBTU/yr), per Regulation 9-7-112.2. and 100 hours/year on distillate oil. Therefore, the potential to emit for CO is very low as long as the boiler complies with its BACT limits. The calculations using the factors in the original Application 14529 are shown below:

Boiler limit = 140,875 MMBTU/yr
Natural Gas CO factor = 50 ppm @ 3% O2 = 0.04 lb/MMbtu
CO emissions during natural gas combustion = 2.6 tons/yr
Distillate Oil CO factor = 5 lb/Mgal oil
Mgal oil burned/hr = 2.55
Hours of operation burning distillate oil = 100/yr
CO emissions during distillate oil combustion = 0.6 tons/yr

The District will require a monitoring using a portable analyzer using EPA Method CTM-030 every year to ensure that the boiler meets the CO limits when burning natural gas. More frequent monitoring is unnecessary because the boiler operates infrequently.

Graphic Packaging International Inc.
2600 De La Cruz Blvd
Santa Clara, CA 95050-2663

## SO2 Sources

| S# & Description | Emission Limit Citation | Federally Enforceable Emission Limit | Monitoring |
|---|---|---|---|
| S6, Turbine; S7, Duct Burner | BAAQMD 9-1-301 | Federal std.: GLC[1] of 140 ppb, 24-hr average, once/yr and 30 ppb, annual average State std.: GLC[1] of 40 ppb, 24-hr average, and 250 ppb, 1 hr average | none |
| | BAAQMD 9-1-302 | 300 ppm (dry) | none |
| | NSPS Subpart GG 40 CFR 60.333(b) | Fuel sulfur content of 0.8 percent by weight | None |
| S9, Standby Boiler | BAAQMD 9-1-301 | Federal std.: GLC[1] of 140 ppb, 24-hr average, once/yr and 30 ppb, annual average State std.: GLC[1] of 40 ppb, 24-hr average, and 250 ppb, 1 hr average | none |
| | BAAQMD 9-1-302 | 300 ppm (dry) | none |
| | BAAQMD 9-1-304 | Sulfur content of distillate <0.5% by weight | Fuel certification |
| | BAAQMD Cond #12231 Part 10 | Sulfur content of distillate <0.05% by weight | Fuel certification |
| | 40 CFR 60.42b(d) | S < 0.5 wt%, 24 hour average when burning oil; limit applies at all times | Records of fuel receipts |
| S10, Papermaking | BAAQMD 9-1-301 | Federal std.: GLC[1] of 140 ppb, 24-hr average, once/yr and 30 ppb, annual average State std.: GLC[1] of 40 ppb, 24-hr average, and 250 ppb, 1 hr average | none |
| | BAAQMD 9-1-302 | 300 ppm (dry) | none |
| S14, Fire Pump Engine | BAAQMD 9-1-301 | Federal std.: GLC[1] of 140 ppb, 24-hr average, once/yr and 30 ppb, annual average State std.: GLC[1] of 40 ppb, 24-hr average, and 250 ppb, 1 hr average | none |
| | BAAQMD 9-1-304 | Sulfur content of distillate <0.5% by weight | none |

[1] Ground Level Concentration

**SO2 Discussion:**
The APCO has the discretion to require area monitoring to demonstrate compliance with the ground level SO2 concentration requirements of Regulation 9-1-301 (per BAAQMD Regulation 9-1-501). The Facility does not have equipment that emits large amounts of SO2. Consequently, the APCO will not impose ground level monitoring. Following are calculations of the potential to emit SO2 at the Facility. The SO2 emission factor for natural gas combustion is the District standard factor. The distillate oil factor for S9 is based on AP-42 Table 1.3-1 and the limit of 0.05% sulfur by weight in BAAQMD 12231, part 10. The maximum potential hours of operation for S14, Fire Pump Engine, is based on EPA's guidance in its memo of 9/6/95 entitled "Calculating Potential to Emit (PTE) for Emergency Generators."

S6, Turbine
Ratio SO2 to S is 2:1
Turbine capacity = 219 MMbtu/hr
Natural Gas SO2 factor = 0.000568 lb/MMbtu
Hours of operation burning natural gas = 8760 hr/yr
SO2 emissions = 0.54 tons/yr

S7, Duct Burner
Ratio SO2 to S is 2:1
Duct burner capacity = 70 MMbtu/hr
Natural Gas SO2 factor = 0.000568 lb/MMbtu
Hours of operation burning natural gas = 8760 hr/yr
SO2 emissions during natural gas combustion = 0.17 tons/yr

S9, Standby Boiler
Ratio SO2 to S is 2:1
Boiler limit = 140,875 MMBTU/yr
Natural Gas SO2 factor = 0.000588 lb/MMbtu
SO2 emissions during natural gas combustion = 0.04 tons/yr
Distillate Oil SO2 factor = 7.85 lb/Mgal
MGal oil burned/hr = 2.55
Hours of operation burning distillate oil = 100 hr/yr
SO2 emissions during distillate oil combustion = 1.06 tons/yr

S14, Fire-pump Engine
Ratio SO2 to S is 2:1
Engine capacity = 16 gal/hr = 0.016 Mgal/hr
Maximum weight %S per BAAQMD Regulation 9-1-304 = 0.5%S
Hours of operation burning diesel (estimated maximum) = 500 hr/yr
Density of diesel fuel = 6.1 lb/gal
SO2 emissions during diesel combustion = 0.04 tons/yr

Total potential to emit for SO2 = 1.85 tons/yr

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, "Periodic Monitoring Recommendations for Generally Applicable Requirements in SIP", EPA 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, S6, Turbine; S7, Duct Burner; and S10, Papermaking, which burn only natural gas, will not have monitoring requirements. The District will not require monitoring for natural gas combustion at S9, Standby Boiler.

EPA streamlined monitoring the fuel sulfur standard in 40 CFR 60.333(b) on July 8, 2004. EPA does not require monitoring if the Facility owner/operator has a current, 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.

To monitor compliance with the fuel sulfur limit in the NSPS standard 40 CFR 60, Subpart Db, for S9, Standby Boiler, EPA requires maintenance of fuel receipts for any source that burns fuel oil with a sulfur content less than 0.5%.

The District requires monitoring for compliance with BAAQMD Regulation 9-1-304, Fuel Burning (Liquid and Solid Fuels) for S9, Standby Boiler. The District's standard monitoring for this requirement is a demonstration of fuel sulfur content for all liquid fuels. It will not be required for S14, Fire Pump Engine, because only CARB diesel, with a sulfur limit of 15 ppm is available for use in diesel engines.

PM Sources

| S# & Description | Emission Limit Citation | Federally Enforceable Emission Limit | Monitoring |
|---|---|---|---|
| S6, Turbine; S7, Duct Burner | BAAQMD 6-1-301 | Ringelmann No. 1 | Not Recommended |
| | BAAQMD 6-1-310 | 0.15 grain/dscf | Not Recommended |
| | BAAQMD 6-1-310.3 | 0.15 grain/dscf @ 6% O2 | |
| S9, Standby Boiler | BAAQMD 6-1-301 | Ringelmann No. 1 | Not Recommended |
| | BAAQMD 6-1-304 | Ringelmann No. 2 | Not Recommended |
| | BAAQMD 6-1-310.3 | 0.15 grain/dscf @ 6% O2 | Not Recommended |
| | 40 CFR 60.43b(f) | Opacity < 20%, 6-min average, except for one 6-min period/hr at < 27%; limit does not apply during startup, shutdown or malfunction | none |
| S10, Papermaking (IR dryers) | BAAQMD 6-1-301 | Ringelmann No. 1 | Not Recommended |
| | BAAQMD 6-1-310.3 | 0.15 grain/dscf @ 6% O2 | Not Recommended |

**PM Discussion:**

**Particulate monitoring for natural gas combustion**

BAAQMD Regulation 6-1-301 limits visible emissions to no darker than 1.0 on the Ringelmann Chart (except for periods or aggregate periods less than 3 minutes in any hour). Visible emissions are normally not associated with combustion of gaseous fuels, such as natural gas. Sources S6, Turbine; S7, Duct Burner; and S10, Papermaking, burn natural gas exclusively. Source S9 is required by a federally enforceable permit condition to fire only natural gas except during periods of PG&E curtailment. Therefore, in accordance with the EPA's June 24, 1999 agreement with CAPCOA and ARB titled "Summary of Periodic Monitoring Recommendations for Generally Applicable Requirements in SIP", no monitoring is required to assure compliance with this limit for these sources when burning natural gas.

BAAQMD Regulation 6-1-310 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% $O_2$. These are the "grain loading" standards.

Exceedances of the grain loading standards are not associated with combustion of gaseous fuels, such as natural gas. Sources S6, Turbine, and S7, Duct Burner, burn natural gas exclusively. Source S9 is required by a federally enforceable permit condition to fire only natural gas except during periods of PG&E curtailment. Therefore, in accordance with the EPA's July 2001 "CAPCOA/CARB/EPA Region IX Recommended Periodic Monitoring for Generally Applicable Grain Loading Standards in the SIP: Combustion Sources: Summary of Periodic Monitoring Recommendations for Generally Applicable Requirements in SIP", the District has not imposed no monitoring to assure compliance with this limit for these sources.

**Particulate monitoring for fuel oil combustion**

S9, Standby Boiler, is allowed to burn fuel oil for up to 100 hours/yr, when there are curtailments of natural gas. The source is restricted to burning only low-sulfur fuel, which lowers the amount of particulate emitted up to 20%. It is subject to 3 opacity limits: (1) Ringelmann 1.0 in BAAQMD Regulation 6-1-301 and (2) Ringelmann 2.0 in BAAQMD Regulation 6-1-304 during tube cleaning. It is also subject to the grain-loading limit of 0.15 grain/dscf @ 6% oxygen, dry, in BAAQMD Regulation 6-1-310.3.

S14, Fire-Pump Engine, which is allowed to burn fuel with a sulfur content of 0.5% by BAAQMD Regulation 9-1-304, but is required by the CARB ATCM to burn diesel with a sulfur content of 15 ppm. It only operates in cases of emergencies or for reliability testing. It is subject to the higher opacity standard of Ringelmann 2.0 in BAAQMD Regulation 6-1-303 because it is used as a standby source of motive power. It is subject to the grain-loading limit of 0.15 grain/dscf, dry.in BAAQMD Regulation 6-1-310.

The total potential to emit for particulate for sources S9 and S14 while burning fuel oil or diesel is shown below. The boiler emission factors are taken from AP-42 tables 1.3-1 and 1.3.2. The engine emission factor is taken from AP-42 table 3.3-1. The maximum potential hours of operation for S14, Fire Pump Engine, is based on EPA's guidance in its

memo of 9/6/95 entitled "Calculating Potential to Emit (PTE) for Emergency Generators."

S9, Standby Boiler
Boiler capacity = 161 MMbtu/hr
Distillate Oil PM factors = 2 lb filterable particulate/Mgal
= 1.2 lb condensable particulate/Mgal
= 3.2 lb total particulate/Mgal
Mgal oil burned/hr = 2.55
Hours of operation burning distillate oil = 100 hr/yr
PM emissions during distillate oil combustion = 0.41 tons/yr

S14, Fire-pump Engine
Engine capacity = 16 gal/hr, 223 hp
Hours of operation burning diesel (estimated maximum) = 500 hr/yr
AP-42 Table 3.3-1 Diesel Oil PM10 factors = 0.0022 lb filterable particulate/hp-hr
PM emissions during diesel combustion = 0.12 tons/yr

Total potential to emit for PM from fuel oil combustion = 0.53 tons/yr

The District has not proposed monitoring for the opacity limits at S9, Standby Boiler based on several factors. S9 uses only ultra-low sulfur fuel (0.05% S by weight) for limited hours and a low potential to emit for particulate when burning fuel oil. Moreover, the Facility has not ever had an opacity violation for S9, Standby Boiler.

The theoretical maximum operation for the fire-pump engine is 500 hours per EPA's recommendations on calculating potential to emit. The engine is likely to operate less than 100 hours/yr as backup equipment. The July 2001 "CAPCOA/CARB/EPA Region IX Recommended Periodic Monitoring for Generally Applicable Grain Loading Standards in the SIP: Combustion Sources: Summary of Periodic Monitoring Recommendations for Generally Applicable Requirements in SIP" recommends no opacity monitoring for this type of source based on the consideration that sources in California usually combust California diesel or other low-sulfur, low aromatic diesel fuels. Moreover, the limit in BAAQMD Regulation 6-1-303 is Ringelmann 2.0, a high limit that the engine is unlikely to exceed.

The District also recommends no testing for grain loading at these sources based on limited hours of operation on fuel oil.

S9 is exempt from the requirement in 40 CFR 60.48b(a) to monitor opacity with a COM because, in accordance with Section 60.48b(j)(2), it burns liquid oil with potential SO2 emissions rates of 0.060 lb/MMbtu or less and does not use a post-combustion technology to reduce SO2 or PM emissions.

The unit is required to burn distillate oil that contains less than 0.05% sulfur by weight. The Btu content of distillate oil is 140,000 btu/gal. A typical weight for distillate oil is

7.2 lb/gal. At 0.05% sulfur, 1 MMbtu fuel oil contains 0.0036 lb sulfur, which converts to 0.0072 lb SO2/MMbtu.

The facility will comply with the requirement in 60.48b(j)(2) to maintain fuel records of the sulfur content of the fuels burned.

## VOC Sources

| S# & Description | Emission Limit Citation | Federally Enforceable Emission Limit | Monitoring |
|---|---|---|---|
| S10, Papermaking including pulping, separation processes, web production, drying, and coating | BAAQMD 8-2-301 | 15 pounds/day or 300 ppm, dry basis (applies to pulping, web separation and drying) | None |
| | BAAQMD 8-4-302 | 5 ton/calendar year | Records |
| | BAAQMD 8-12-301 | 2.2 lb VOC/gal (applies to coating) | Records |

**VOC Discussion:**
VOC is emitted by S10, Papermaking, in three different parts of the operation or line. VOC, which may include methanol are generated by the breakdown of paper fibers and are emitted during the web production and drying. VOC is also emitted during the solvent cleaning of felt and during the coating process at the end of the line. Each of these operations is subject to a different rule in Regulation 8, Organic Compounds.

The monitoring for Regulation 8, Rules 4 and 12 is recordkeeping, which is the standard monitoring requirement for solvent and coating use.

The District recommends no monitoring for Regulation 8, Rule 2, Miscellaneous Operations, because monitoring is not feasible due to the lack of stacks at the facility. However, the District has determined that the concentration of fugitive emissions at the facility is low (see detailed explanation in Section IV), so it is assumed that the facility has a large margin of compliance with this standard.

Other changes to the permit in this action
The distillate oil sulfur content certification requirement in BAAQMD Condition 12231, part 11g, was updated in Table VII-B for S9 to reflect the correct part number (11g).

Recordkeeping has been amended from the hours of operation limit to annual heat input limit in BAAQMD Condition 12231, part 2, in the table VII-B for S9.

Tables IV-D and VII-D for the Cold Cleaners, S11 and S13, has been amended to remove reference to S-12 Cold Cleaner which has been removed from operation.

## VIII. Test Methods

This section of the permit lists test methods that are associated with standards in District or other rules. Section VII is included for reference purposes only. 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 the permit in this action
A test method was added for the general operations limit of Regulation 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 Title V permits.

Following is the detail of the permit shields that were requested by the Facility.

### NON-APPLICABLE REQUIREMENTS

1. The District has approved the following permit shields.

   S7, Duct Burner-BAAQMD Regulation 9-7
   Not a boiler, steam generator, or process heater that directly transfers heat for combustion gas to water or process steam

   S7, Duct Burner-NSPS 40 CFR 60
   The Duct Burner is not subject to Subparts D, Da, and Db due to its size (70 MMbtu/hr). It is not subject to Subpart Dc because it was built before 1989 and has not been modified.

   S10, Papermaking, etc.-NSPS 40 CFR 60
   The facility is not considered a Kraft pulp mill in accordance with 40 CFR 60.281. There is no applicable subpart for recycle paperboard plants.

Facility-Unpermitted Organic Chemical Storage Tanks-Regulation 8, Rule 5, Storage of Organic Liquids
Organic chemicals have a vapor pressure below 25.8 mmHg.

Facility-BAAQMD Regulation 6-1-302
The APCO has not required the owner/operator to install opacity monitors.

Facility- BAAQMD Regulation 6-1-502
The APCO has not required the owner/operator to install opacity monitors.

Facility-Coating MACT standard
Facility is not a major source of hazardous air pollutants.

Facility-40 CFR 68, Accidental Release
Facility does not store large quantities of materials subject to this standard.

40 CFR 82.166(k)
For refrigerant units containing 50 lbs or less refrigerant at the facility are not applicable.

Federal Clean Power Plan, 40 CFR 60, Subpart UUUU, Section 60.5850(d)
Gas turbine and cogeneration plant, which have never sold 219,000 MWh electricity per year, determined by the state are not affected units under the state Clean Power Plan.

The above Permit Shields are recommended for approval. The District is in agreement with the basis for each request.

2. The following requested permit shield is disallowed:

None.

Other changes to permit
None.

## D. Alternate Operating Scenarios

None.

## E. Compliance Status

The responsible official for Graphics Packaging International, Inc. submitted a signed Certification Statement form dated March 28, 2016. On this form, the responsible official certified that the following four 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

The application does not incorporate the applicant's request to modify Condition No. 13344 for S-10 Papermaking and Stream Process to increase operational throughput to 174,000 tons per year (from 146,000 tons per year) as an administrative change of condition under this Title V renewal application. Such a request requires District review and will likely trigger Best Available Control Technology review and offsets. The applicant subsequently has withdrawn their request. No additional changes are pending to the proposed permit.

# APPENDIX A

# GLOSSARY

**ACT**
Federal Clean Air Act

**APCO**
Air Pollution Control Officer

**API**
American Petroleum Institute

**ARB**
Air Resources Board

**BAAQMD**
Bay Area Air Quality Management District

**BACT**
Best Available Control Technology

**BARCT**
Best Available Retrofit Control Technology

**Basis**
The underlying authority that allows the District to impose requirements.

**$C_5$**
An Organic chemical compound with five carbon atoms

**$C_6$**
An Organic chemical compound with six carbon atoms

**CAA**
The federal Clean Air Act

**CAAQS**
California Ambient Air Quality Standards

**CAPCOA**
California Air Pollution Control Officers Association

**CEC**
California Energy Commission

**CEM**
Continuous Emission Monitor

**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

**$CO_2$**
Carbon Dioxide

**COM**
Continuous Opacity Monitor

**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). Used to determine whether threshold-based requirements are triggered.

**District**
The Bay Area Air Quality Management District

**dscf**
Dry Standard Cubic Feet

**dscm**
Dry Standard Cubic Meter

**E 6, E 9, E 12**
Very large or very small number values are commonly expressed in a form called scientific notation, which consists of a decimal part multiplied by 10 raised to some power. For example, 4.53 E 6 equals (4.53) x ($10^6$) = (4.53) x (10 x 10 x 10 x 10 x 10 x 10) = 4,530,000. Scientific notation is used to express large or small numbers without writing out long strings of zeros.

**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 (HAP), and Part 72 (Permits Regulation, Acid Rain), and also 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.

**FR**
Federal Register

**grain**
1/7000 of a pound

**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 both 40 CFR Part 63, and District Regulation 2, Rule 5.

**Major Facility**
A facility with potential emissions of: (1) at least 100 tons per year of any regulated air pollutant, (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 Act and implemented by District Regulation 2, Rule 6.

**MOP**
The District's Manual of Procedures.

**NAAQS**
National Ambient Air Quality Standards

**NESHAP**
National Emission Standard for Hazardous Air Pollutants as codifed in 40 CFR Parts 61 and 63.

**NMHC**
Non-methane Hydrocarbons

**NMOC**
Non-methane Organic Compounds (Same as NMHC)

**NOx**
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 Act, and implemented by both 40 CFR Part 60 and District Regulation 10.

**NSR**
New Source Review. A federal program for preconstruction review and permitting of new and modified sources of air pollutants for which the District is classified "non-attainment". Mandated by Title I of the Clean Air Act and implemented by 40 CFR Parts 51 and 52 as well as District Regulation 2, Rule 2. (Note: There are additional NSR requirements mandated by the California Clean Air Act.)

**O2**
The chemical name for naturally-occurring oxygen gas.

**Offset Requirement**
A New Source Review requirement to provide federally enforceable emission offsets at a specified ratio for the emissions from a new or modified source and any pre-existing cumulative increase minus any onsite contemporaneous emission reduction credits. Applies to emissions of POC, NOx, PM10, and SO2.

**POC**
Precursor Organic Compounds

**PM**
Total 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 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

**$SO_3$**
Sulfur trioxide

**THC**
Total Hydrocarbons (NMHC + Methane)

**therm**
100,000 British Thermal Units

**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)

**TSP**
Total Suspended Particulate

**TVP**
True Vapor Pressure

**VMS**
Branched, cyclic, or linear completely methylated siloxane

**VOC**
Volatile Organic Compounds

**Units of Measure:**

| | | |
|---|---|---|
| bhp | = | brake-horsepower |
| Btu | = | British Thermal Unit |
| C = | degrees Celcius | |
| F = | degrees Fahrenheit | |
| $f^3$ = | cubic feet | |
| g | = | gram |
| gal | = | gallon |
| GLC | = | ground level concentration |
| gpm | = | gallons per minute |
| gr | = | grain |
| Hr | = | hour |
| hp | = | horsepower |
| lb | = | pound |
| in | = | inches |
| $m^2$ | = | square meter |
| max | = | maximum |
| min | = | minute |
| M | = | thousand |
| Mg | = | mega-gram, one thousand grams |
| µg | = | micro-gram, one millionth of a gram |
| MM | = | million |
| mm | = | millimeter |
| MMbtu | = | million btu |
| mm Hg | = | millimeters of Mercury (pressure) |
| MW | = | megawatts |
| O2 | = | diatomaceous oxygen |
| ppb | = | parts per billion |
| ppm | = | parts per million |
| ppmv | = | parts per million, by volume |
| ppmw | = | parts per million, by weight |
| psia | = | pounds per square inch, absolute |
| psig | = | pounds per square inch, gauge |
| S | = | sulfur |
| scfm | = | standard cubic feet per minute |
| std | = | standard |
| vol | = | volume |
| wt | = | weight |
| yr | = | year |

**Symbols:**

| | | |
|---|---|---|
| < | = | less than |
| > | = | greater than |
| ≤ | = | less than or equal to |
| ≥ | = | greater than or equal to |

# APPENDIX B

## ENGINEERING EVALUATIONS

**ENGINEERING EVALUATION**
**Graphic Packaging International**
**Application: 27636**
**Plant: 19441**

## BACKGROUND

Graphic Packaging International has applied for a change of conditions to their existing condition for S-9 Boiler to change the existing operating hours limit to a heat input limit. The resulting change is will not result in any increased use or operations of the boiler and will not result in any emissions increase. As a result, the proposed change is not considered a modification of S-9, but an alteration of its operating conditions.

## a. EMISSIONS

S-9 Boiler is a standby boiler for Graphic Packaging International. So that it is not subject to the requirements of Regulation 9-7-301, 307, 311 and 312, it is currently limited in operation to using less than 10% of its annual maximum heat capacity, per Regulation 9-7-112.2.

The existing permit conditions for S-9 Boiler (Condition # 12231, Part 2) limits the operation of the boiler to 875 hours per year. The annual heat input of S-9 Boiler is essentially limited to 140,875 MMBTU/year by multiplying 875 hours per year by the maximum hourly heat input of 161 MMBTU/hr (Condition # 12231, Part 4):

Annual Heat Input Limit = 875 hours/yr x 161 MMBTU/hr = 140,875 MMBTU/yr

Part 5 of Condition # 12231 requires that Graphic Packaging International monitor the fuel usage of S-9 Boiler. As a result of such monitoring, the facility determined that they were not actually operating S-9 Boiler most times at the maximum heat input. As a result, they have requested a change of conditions to limit their operations to an annual heat input limit so that they can maintain their operations to less than 10% of S-9 Boiler's annual maximum heat capacity while operating more hours but at less than their hourly maximum heat input. Their daily emissions should not change as a result of this condition change which changes from limiting annual operating hours to 10% usage to annual heat input to 10% usage to verify eligibility to the limited exemption of Regulation 9-7-112.2.

Because the change of conditions will not affect their existing maximum daily and annual heat input, there is no daily or annual increase of any criteria pollutant emissions as a result of this permit condition change. Hence, S-9 will not be a modified source per Regulation 2-1-234.

## TOXIC RISK SCREENING ANALYSIS

Because the change of conditions will not affect their existing maximum hourly, daily and annual heat input, there is no increase of any toxic emissions as a result of this permit condition change. Hence, a toxic risk screening is not triggered.

## BACT

Because S-9 is not a modified source, BACT is not triggered.

## OFFSETS

Because S-9 is not a modified source, offsets are not triggered.

**STATEMENT OF COMPLIANCE**

Source S-9 is subject to the limited exemption of Regulation 9-7-112.2 and is operating under 10% of its annual maximum heat capacity. As a result, it is not subject Regulation 9-7-301, 307, 311, and 312, but maintains monitoring and records as required by Regulation 9-7-504 of its heat input level. The proposed change of conditions will not result in a modification of the source (S-9) because annual heat input and resulting emissions will not increase.

This application is considered to be ministerial under the District's Regulation 2-1-311 and therefore is not subject to CEQA review. The engineering review for this project requires only the application of standard permit conditions and standard emission factors in accordance with Permit Handbook Chapter 2.1.

NSPS, NESHAPS, and PSD are not triggered.

This facility is not located within 1,000 feet of any school. As a result, public notice is not triggered.

**b. PERMIT CONDITIONS**

S-9 Boiler is currently subject to Condition # 12231:

```
COND#  12231

Jefferson Smurfit
Plant 732

1.  S-9 Boiler shall burn only natural gas or fuel oil.
    Fuel oil shall be fired only in the event of a natural
    gas curtailment or shutdown. [basis: Cumulative
    Increase]

2.  This boiler shall not exceed 875 hours of firing on
    natural gas in any consecutive 12 month period. [basis:
    Cumulative Increase]

3.  This boiler shall not exceed 100 hours of firing on fuel
    oil in any consecutive 12 month period.  [basis:
    Cumulative Increase]

4.  Heat input to this boiler shall not exceed 161 MMBtu/hr.
    [basis: Cumulative Increase]

5.  A natural gas meter dedicated solely to monitor the flow
    of natural gas into this boiler shall be installed and
    maintained. [basis: Cumulative Increase]

6.  The boiler shall not be operated unless the flue gas
    recirculation fan is in operation. [basis: BACT]

7.  NOx emissions during natural gas firing shall not exceed
    25 ppmv @3% O2 (dry basis). [basis: BACT]

8.  NOx emissions during fuel oil firing shall not exceed 60
    ppmv @3% O2 (dry basis). [basis: BACT]

9.  CO emissions during natural gas firing shall not exceed
    50 ppmv @3% O2 (dry basis). [basis: BACT]

10.Sulfur content in the fuel oil shall not exceed 0.05%.
    [basis: Cumulative Increase]

11.Visible particulate emissions shall not exceed
    Ringelmann No. 0.5. [basis: BACT]
```

```
12.Source test data  from a  District approved source test
    shall be submitted to the District as follows: [basis:
    Recordkeeping]

     *The source test section shall be contacted prior to
     the test for correct source test procedures and the
     correct location for     installation of source testing
     ports;

     *The source test section shall be notified in writing
     at least three business days in advance of the source
     test;

     *The source test data shall reflect boiler operation at
     maximum capacity;

     *The source test shall include all criteria pollutants;

     *The source test shall include all criteria pollutants;

     *Within 45 days of start-up, source test data shall be
     submitted to the    source test section;

     *Within 45 days of start-up, a source test results
     summary shall be submitted to Permit Services Division.

13.A District approved logbook shall be maintained of the
    hours of operation of this boiler, type of fuel fired
    and for what periods, and if fuel oil is fired PG&E
    verification of natural gas curtailment.  Records shall
    be maintained for a period  of a  least two  years from
    the date of entry and made readily available to District
    staff upon request.[basis: Cumulative Increase]

14.Any future modification to this boiler to increase hours
    of operation, type of fuel, or for any other reason
    which results in increased emissions, will subject this
    boiler to review as though it were a new source.  This
    includes, but is not limited to, a new BACT review.  In
    addition, should a future modification require
    installation of additional abatement equipment, District
    staff will not support any request for a Hearing Board
    variance. [basis: Cumulative Increase]

15.All natural gas burned at S-9 shall be PUC quality gas.
    [basis: BAAQMD Regulation 2, Rule 1, Section 403]
```

The facility has requested that Part 2 be changed from an annual hourly limit (875 hrs/yr) to an annual heat input limit (140,875 MMBTU/yr). I agree with the facility annual heat input limit with recordkeeping to verify that annual heat input. In addition, I recommend that the conditions be amended using the District's recommended condition template for boilers, per the District permit handbook. Parts 7 and 9 were combined into one part (new Part 7). The startup source testing conditions (Part 12) were removed since the source has already started up. In addition, Parts 14 was removed because the condition is redundant to existing regulation Regulations 2-1 and 2-2 which specifies what is considered a permit modification and what triggers BACT review. Part 15 was removed because natural gas from PG&E is considered PUC quality gas. Five (5) years of recordkeeping (revised from 2) was added since the Graphic Packaging International is a Title V facility.

In summary, I recommend the following revised permit conditions for S-9 Boiler (Condition # 12231):

1. **The owner/operator of S-9 shall operate this source on natural gas fuel exclusively, except that fuel oil may be used in the event of a natural gas curtailment. (basis: Cumulative Increase)**

2. **The owner/operator of S-9 shall not exceed 140,875 MMBTU in any consecutive twelve-month period while firing on natural gas. (basis: Cumulative Increase)**

3. **The owner/operator of S-9 shall not operate more than 100 hours while firing on fuel oil in any consecutive twelve-month period and only during times of natural gas curtailment. (basis: Cumulative Increase)**

4. **The owner/operator of S-9 shall not exceed a heat input of 161 MMBTU in any hour while operating S-9. (basis: Cumulative Increase)**

5. **The owner/operator of S-9 shall maintain a natural gas meter to monitor the flow of natural gas. (basis: Cumulative Increase)**

6. **The owner/operator of S-9 shall maintain and operation of the fuel gas recirculation fan whenever S-9 is in operation. (basis: BACT)**

7. **The owner/operator of S-9 shall not exceed the following limits when using natural gas as a fuel:**
   **NOx = 25 ppm @ 3% $O_2$**
   **CO = 50 ppm @ 3% $O_2$**
   **(basis: BACT)**

8. **The owner/operator of S-9 shall not exceed the following limit when using fuel oil as a fuel:**
   **NOx = 60 ppm @ 3% $O_2$**
   **(basis: BACT)**

9. **The owner/operator of S-9 shall not use any fuel oil with sulfur content exceeding 0.05wt%. (basis: Cumulative Increase)**

10. **The owner/operator of S-9 shall not exceed visible particulate emissions of Ringelmann No. 0.5.**
    **(basis: BACT)**

11. **To determine compliance with the above parts, the owner/operator of S-9 shall maintain the following monthly records in a District approved log:**
    a. **Natural gas usage in cubic feet.**
    b. **Fuel oil hourly usage and consumption in hours and gallons.**
    c. **Natural gas heat content information from natural gas supplier (PG&E) in therms/cubic feet.**
    d. **Monthly calculated natural gas heat input in MMBTU (Part 11a multiplied by Part 11c divided by 10).**
    e. **Consecutive 12-month total of calculated natural gas heat input in MMBTU.**
    f. **If fuel oil is fired, PG&E verification of natural gas curtailment.**

    **These records and PG&E provided data shall be kept for at least 5 years from the date of entry and shall be made available to the District upon request. (basis: Cumulative Increase; Regulation 9-7-504)**

**RECOMMENDATION**

I recommend that the change of conditions indicated in the prior section be approved.

**Prepared by:** _____ **Date:** _____
C. **Carol Lee, Senior Air Quality Engineer**