

Bay Area Air Quality Management District

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**Permit Evaluation
and
Statement of Basis
for**

**RENEWAL
of
MAJOR FACILITY REVIEW PERMIT
for**

**Western Fiberglass, Inc.
Facility No. A7974**

Facility Address:
1555 Copperhill Parkway
Santa Rosa, CA 95403

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1555 Copperhill Parkway
Santa Rosa, CA 95403

December 2013

Application No. 25573

Application Engineer: Madhav Patil
Site Engineer: Madhav Patil

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Title V 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 Volume 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, more than 10 tons per year of styrene, which is a hazardous air pollutant.

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 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.

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. The identifier for this facility is A7974.

This facility received its initial Title V permit on July 1, 1997 and was renewed on December 19, 2002 and January 5, 2009. A reopening and minor revision was issued on July 15, 2004. Section IX of the permit, Revision History, has a list of these revisions in chronological order.

This application is for the third renewal of the Title V permit. The standard sections of the permit have been upgraded to include new standard language used in all Title V permits. Also, various other corrections have been made to the permit. The proposed permit shows all changes to the permit in ~~strikeout~~/underline format.

The facility has not submitted any applications since the renewal was issued on January 5, 2009.

B. Facility Description

Western Fiberglass, Inc. manufactures corrosive resistant tanks and other containment devices for secondary containment of hazardous materials. The tanks are made from reinforced plastic composites. Emissions of the facility are primarily volatile organic compounds (VOC). Styrene, which is both a volatile organic compound and a hazardous air pollutant, is the main pollutant.

Reinforced plastic composites consist of a mixture of fibrous reinforcement that provides strength and a plastic matrix that binds and protects the reinforcement. Composites are formed (laid up) in molds as laminates (layers of matrix and reinforcement) or cast in molds as homogeneous mixtures. Fiberglass is used as reinforcement material. Reinforcement may be incorporated into or within products in three forms: as randomly oriented chopped fibers, woven cloth, or fiber bundles (roving). Plastic matrix is formed from the curing (chemical reaction) of the liquid resin mixture, which contains a blend of resins (unconnected plastic subunits), monomers (connecting links between the subunits), and various agents that promote curing and affect the properties of the resin mix. Fillers may also be added to a resin mix to improve the fire rating or other physical characteristics. During the curing process, the resins polymerize (connect through monomer cross-linkage) to form a tough solid plastic.

The facility has three permitted sources for their reinforced plastic composite operation: filament winding, forming in closed molds, and chopper gun. The chopper gun is used to form composites (lay up) in molds as laminates. Composites are also formed in the closed molds. The filament winding operation wraps thermoset resin-impregnated glass reinforcement around a suitable mandrel (spindle or rod). The mandrel gives the shape of the final item. A filament-winding machine wraps the mandrel with resin-impregnated strands with the required amount and orientation to build the designed reinforced structure. Filament winding produces hollow items like tubes, pipes, elbows, and tanks.

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.

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 adoption dates of the rules in Standard Condition I.A have been updated.

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 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 also 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 considered to be 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 this table are the maximum allowable capacities for each source, pursuant to Standard Condition I.J and Regulation 2-1-403.

Changes to Permit:

No changes are proposed to the permitted sources and abatement devices tables.

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 a significant source pursuant to the definition in BAAQMD Rule 2-6-239.

Changes to Permit:

- The adoption dates of the rules have 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 of 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.

BAAQMD and SIP Regulation 8, Rule 50, Polyester Resin Operations and Definition of VOC

On November 6, 1996, the VOC definition in BAAQMD Regulation 8-50-249 was amended such that acetone, parachlorobenzotrifluoride, and cyclic, branched or linear, completely methylated siloxanes, were not considered to be VOC for the purposes of the limits in the rule. EPA has not yet approved these revisions into the SIP, so the definition of VOC is different in the BAAQMD and SIP rules. The definition affects all VOC limits in the rule, so none of the following VOC limits in the BAAQMD rule are federally enforceable: Sections 8-50-301.5, 8-50-301.6, 8-50-305.4, 8-50-307, and 8-50-501.2. Effective after October 1, 2010 the following VOC reduction methods are amended. The monomer content shall be no greater than the applicable limit specified in Table 1 of BAAQMD Regulation 8-50-301.6, and a resin containing vapor suppressant shall be no greater than 50 g/m² of exposed area during resin polymerization (Regulation 8-50-301.5). The BAAQMD Regulation 8-50-305.5 is added for compliance with the cold cleaner requirements. Corrections have been made to the citations of the rule in Sections IV, VII, and VIII of the permit. Citations of the federally enforceable SIP rule have been added. The definition of VOC has been added for clarity.

These changes have a material affect on the requirements for cleanup solvent because acetone is commonly used for cleanup, but unlikely to have an affect on the resin or monomer requirements because acetone, parachlorobenzotrifluoride, and cyclic, branched or linear, completely methylated siloxanes are not commonly added to the resins.

Applicability of 40 CFR Part 63, WWWW - NESHAPS

The facility is subject to the requirements of 40 CFR Part 63, WWWW – NESHAPs: Reinforced Plastic Composites Production. This rule became effective on April 23, 2003. This rule regulates production and ancillary processes used to manufacture products with thermoset resins and gel coats. Reinforced plastic composites production facilities emit hazardous air pollutants, such as styrene, etc., which has adverse health effects. The NESHAP will also implement section 112(d) of the Clean Air Act (CAA) by requiring all major sources in this category to meet HAP emission standards.

Organic HAP emission limits for existing Open Molding Sources has been updated as shown in Table 3 of Subpart WWWW of Part 63.

Source S-2 uses an injection molding process. Injection molding means a closed molding process for fabricating composites in which composite materials are injected under pressure into a heated mold cavity that represents the exact shape of the product. The composite materials are cured in the heated mold cavity. In a closed mold, HAP-containing materials are not exposed to the atmosphere except during the material loading stage. Section 63.5790 of the NESHAPS exempts closed molding operations, except for compression/injection molding. Because injection molding is used at S-2, the source is subject to the NESHAPS.

Applicability of 40 CFR Part 64, Compliance Assurance Monitoring

The facility is not subject to the Compliance Assurance Monitoring requirements of 40 CFR Part 64 for particulate as particulate emissions from S3, Chopper Guns, are expected to be insignificant and well below the major source threshold of 100 tons per year. The facility is not subject to 40 CFR 64 for styrene because there is no abatement device for styrene.

PM₁₀ emissions from S3 have not been quantified, as EPA AP-42 Chapter 4.4, Polyester Resin Plastic Products Fabrication, does not contain PM₁₀ emission factor for this source category.

Changes to Permit:

Tables IV-A, IV-B, and IV-C

- The adoption dates of the rules have been updated
- The Process Material Requirements effective Oct 1, 2010 for 8-50-301 have been updated.

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 Western Fiberglass submitted a signed Certification Statement form dated November 25, 2013. 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

VI. Permit Conditions

Each permit condition is identified with a unique numerical identifier, up to five digits.

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; 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). It is also possible for permit conditions to 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 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 that 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 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:

- A minor correction was made in part 2 of Condition 9303.

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 to provide a reasonable assurance of compliance.

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 only when it can support a conclusion that existing monitoring is inadequate.

PM Discussion:

This facility is a small source of particulate emissions. Hence, no PM monitoring is required.

<u>PM Sources</u>			
# & Description	Emission Limit Citation	Federally Enforceable Emission Limit	Monitoring
S-1, S-2 & S-3	BAAQMD Regulation 6-1-310	0.15 grain/dscf	None
S-1, S-2 & S-3	SIP Regulation 6-310	0.15 grain/dscf	None
S-1, S-2 & S-3	BAAQMD Regulation 6-1-301	Ringelmann 1.0 for more than 3 min/hr	None
S-1, S-2 & S-3	SIP Regulation 6-301	Ringelmann 1.0 for more than 3 min/hr	None
S-1, S-2 & S-3	BAAQMD Regulation 6-1-311	4.10 P ^{0.67} lb/hr	None
S-1, S-2 & S-3	SIP Regulation 6-1-311	4.10 P ^{0.67} lb/hr	None

Visible Emissions

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 styrene compound. Source S-1, S-2 and S-3 are using styrene therefore, no monitoring is required to assure compliance with this limit for this source.

Particulate Weight Limitation Discussion:

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% O₂. These are the “grain loading” standards.

Exceedances of the grain loading standards are normally not associated with styrene compound therefore, no monitoring is required to assure compliance with this limit for this source.

POC Discussions:

The NESHAPS and Regulation 8, Rule 50 monitoring is adequate. Also, POC limits for all three sources are contained in permit conditions, which also contain adequate monitoring- daily records, and summations.

Changes to Permit:

The Regulation 8, Rule 50, limits have been updated.

The descriptions of the NESHAPS limits have been improved.

A clarification has been added for the POC and NPOC limits in Condition 9303. These only apply if materials other than polyester resins and acetone are used.

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 VI of the permit.

Changes to Permit:

Applicable requirement has been updated to meet BAAQMD Regulation 8-50-301.5 (Vapor Suppressant) and 8-50-301.6 (Monomer Content).

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 that identifies and justifies specific federally enforceable regulations and standards which the APCO has confirmed are not applicable to a source or group of sources, or (2) A provision in a major facility review permit that identifies and justifies specific federally enforceable applicable requirements for monitoring, recordkeeping and/or reporting which 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.

This facility has no permit shields.

Changes to Permit:

There is no change in this section for this Title V renewal.

X. Revision History:

The revision history will be updated when the revision is issued.

XI. Glossary:

Changes to Permit:

There is no change in this section for this Title V renewal.

D. Alternate Operating Scenarios:

No alternate operating scenario has been requested for this facility.

There is no change in this section for this Title V renewal.

E. Compliance Status:

The responsible official for Western Fiberglass submitted a signed Certification Statement form dated November 25, 2013. 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:

None