

Bay Area Air Quality Management District

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

MAJOR FACILITY REVIEW PERMIT

**for
STRONGWELL
Facility #A2918**

Facility Address:
615 North King Road
San Jose, CA 95133

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Application Engineer: Dharam Singh
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Application: 11267

April 2006

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Title V Statement of Basis

A. Background

This facility is subject to the Operating Permit requirements of Title V of the federal Clean Air Act, Part 70 of Title 40 of the Code of Federal Regulations (CFR), and BAAQMD Regulation 2, Rule 6, Major Facility Review because it is a major facility as defined by BAAQMD Regulation 2-6-212. It is a major facility because it has the “potential to emit,” as defined by BAAQMD Regulation 2-6-218, of more than 10 tons per year of a hazardous air pollutant, styrene.

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

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

Each facility in the Bay Area is assigned a facility identifier that consists of a letter and a 4-digit number. This identifier is also considered to be the identifier for the permit. The identifier for this facility is A2918.

This facility received its initial Title V permit on June 1, 2000. This application is for a permit renewal. Although the current permit expired on May 31, 2005, it continues in force until the District takes final action on the permit renewal. The standard sections of the permit have been upgraded to include new standard language used in all Title V permits.

The facility except for polymer casting operation is subject to the requirements of 40 CFR Part 63, Subpart WWWW – NESHAPs: Reinforced Plastic Composites Production. The rule became effective April 21, 2003. The applicable requirements of this rule will be incorporated into the permit.

The proposed permit shows all changes to the permit in strikeout/underline format.

The following permit application has been approved since the last Title V permit modification.

Application 2072: Title V minor revision to reflect increases in throughput at the mixing and casting operation and aggregate silos. The revised Title V permit was issued on January 28, 2002. There was no separate NSR application for these revisions.

Application 10806: Change of permit conditions (increased throughput) for mixing and casting operations and aggregate silos. The change of permit conditions was issued on December 2, 2004.

B. Facility Description

Strongwell is a reinforced plastic composites production facility comprised of polyester resin solution storage tanks, aggregate storage silos, and mixing and casting operation. The polyester resin solution tanks are exempt from the District permits. The products are underground utility boxes of various shapes and sizes including service boxes, electrical equipment pads, telephone cabinet pads, CATV enclosures, water meter boxes, box pads, and traffic signal bases.

The process consists of numerous mixing/casting stations where the aggregate materials are delivered to open bins, and polyester resin is delivered through a continuous closed loop system. The caster at a typical station mixes resin, catalyst, and aggregates in a bucket, then casts the mixture into a mold usually in the shape of a box. Prior to the mold being filled special fiberglass woven fabrics are placed in the mold to add strength and durability. After curing the product is de-molded and prepared for shipment.

Emissions from the facility are primarily hazardous air pollutants, styrene from storage tanks and mixing/casting operation, and PM10 from aggregate silos.

There has been a significant increase in styrene emissions since the original Title V permit was issued. The permit condition for mixing/casting operation was revised twice to reflect increases in the resin solution throughput from the original level of 330,000 gallons/year to the current level of 750,000 gallons/year thereby resulting in a styrene emission increase of 9.1833 ton/year. The revisions were evaluated via applications 2072 and 10806. The engineering evaluations are attached as appendices D and E. There has been no significant change in PM10 emissions from the aggregate silos.

C. Permit Content

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

I. Standard Conditions

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

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

Changes to permit:

No changes will be made to this part of the permit.

II. Equipment

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

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

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

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

The equipment section is 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 the permitted sources table are the maximum allowable capacities for each source, pursuant to Standard Condition I.J and Regulation 2-1-403.

Following are explanations of the differences in the equipment list between the time that the facility originally applied for a Title V permit and the permit proposal date:

Abatement device A4 was permitted after the original Title V permit was issued. It was added to the list when permit was revised on January 28, 2002.

Changes to permit:

No changes will be made to this part of the permit.

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:

No changes will be made to this part of the permit.

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.

Complex Applicability Determinations

CAM

The Mixing and casting operation (S5) is not subject to Compliance Assurance Monitoring (CAM, 40 CFR 64) because there is no abatement device for this source.

The aggregate silos (S13, S14, S15) are not subject to Compliance Assurance Monitoring (CAM, 40 CFR 64) because they are not major sources of particulate emissions. The silos are limited to a combined aggregate throughput of 875 tons per consecutive 12-month period. It is unlikely that uncontrolled particulate emissions from each silo will be 100 tons per year or more.

Applicability of BAAQMD Regulation 6

The source (S5) is not considered particulate emission source. According to the Draft Guide to the Estimation and Permitting of Particulate Emissions from the Manufacture of Reinforced Plastic Composites prepared for the Composite Fabricators Association by Environmental Compliance & Risk Management (dated August 2001), only opening molding via atomized spray application of resin or gel-coat is considered likely to emit significant particulate matter (PM). The District's Permit Handbook for Polyester Resin Operations also indicates that PM is not a criteria pollutant that is emitted from this type of operation. In addition, it was determined that source S5 is not subject to Regulation 6.

The aggregate silos (S13, S14, S15) are sources of particulate emissions and are subject to Regulation 6.

Applicability of 40CFR Part 63, Subpart WWWW - NESHAPS

The facility except polymer casting operation is subject to the requirements of 40 CFR Part 63, Subpart WWWW – NESHAPS: Reinforced Plastic Composites Production. This rule became effective on April 21, 2003. This rule regulates production and ancillary processes used to manufacture products with thermo-set resins and gel coats. Reinforced plastic composites production facilities emit hazardous air pollutants, such as styrene, etc., which has adverse health effects. Polymer casting is specifically excluded from any requirements of this subpart as per amended Section 63.5790(c).

The NESHAP will implement Section 112(d) of the Clean Air Act (CAA) by requiring all major sources in this category to meet HAP emission standards, if applicable. Application of BACT will also implement Section 112(d) of the Clean Air Act (CAA). BACT, as determined, is compliance with the District Regulation 8 Rule 50, and use of aqueous emulsion cleaner for clean-up.

Changes to permit:

Section IV will be modified to say that SIP standards are now found on EPA's website and are not included as part of the permit.

Applicable requirements of District's Regulation 8 Rule 50 will be updated.

The requirements of 40 CFR Part 63, Subpart A will be added.

The applicable requirements of 40CFR Part 63, Subpart WWWW will be added.

A new table for the facility will be added.

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 BAAQMD Compliance and Enforcement Division has conducted a review of compliance over the past year and has no records of compliance problems at this facility during the past year. The compliance report is contained in Appendix A of this permit evaluation and statement of basis.

Changes to permit:

No changes will be made to this part of the permit.

VI. Permit Conditions

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

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

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

The existing permit conditions are derived from previously issued District Authorities to Construct (A/C) or Permits to Operate (P/O). Permit conditions may also be imposed or revised as part of the annual review of the facility by the District pursuant to California Health and Safety Code (H&SC) § 42301(e), through a variance pursuant to H&SC § 42350 *et seq.*, an order of abatement pursuant to H&SC § 42450 *et seq.*, or as an administrative revision initiated by District staff. After issuance of the Title V permit, permit conditions will be revised using the procedures in Regulation 2, Rule 6, Major Facility Review.

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

Conditions have also been deleted due to the following:

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

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

- BACT: This term is used for a condition imposed by the Air Pollution Control Officer (APCO) to ensure compliance with the Best Available Control Technology in Regulation 2-2-301.
- Cumulative Increase: This term is used for a condition imposed by the APCO, which limits a source’s operation to the operation described in the permit application pursuant to BAAQMD Regulation 2-1-403.
- Offsets: This term is used for a condition imposed by the APCO to ensure compliance with the use of offsets for the permitting of a source or with the banking of emissions from a source pursuant to Regulation 2, Rules 2 and 4.
- PSD: This term is used for a condition imposed by the APCO to ensure compliance with a Prevention of Significant Deterioration permit issued pursuant to Regulation 2, Rule 2.
- TRMP: This term 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:

Material throughputs will be changed for the sources, S5 (Permit condition ID# 17170), and S13, S14, and S15 (Permit condition ID# 16674). These changes were originally made under NSR application 10806. The engineering evaluation is attached to this SOB as appendix C.

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 for the requirements of BAAQMD Regulation 8, Rule 50, Regulation 6, and BAAQMD Conditions # 16674 and 17170.

Since the last issuance of the Title V permit for this facility, 40CFR Part 63, Subpart WWWW has been finalized and promulgated effective April 21, 2003, and amended effective October 24, 2005. The Subpart will be incorporated in the Title V permit. It is presumed that the monitoring requirements imposed by the Subpart are sufficient.

Changes to permit:

The standard language at the beginning of the section has been updated. A note has been added at the beginning of the section to clarify that this section is a summary of the limits and monitoring, and that in the case of a conflict between Sections I-VI and Section VII, the preceding sections take precedence.

VIII. Test Methods

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

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

Changes to Permit

The test method to determine vapor suppressant effectiveness will be added.

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.

This facility has no permit shields.

X. Glossary

Changes to permit:

No changes will be made to this part

XI. Appendix A - State Implementation Plan

Changes to permit:

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

D. Alternate Operating Scenarios

No alternate operating scenario has been requested for this facility.

E. Compliance Status

A office memorandum from the Director of Compliance and Enforcement to the Director of Engineering dated March 6, 2006 presents a review of the compliance record of Strongwell (Site #A2918). The Compliance and Enforcement Division staff has reviewed the records for Strongwell for the period of 3/01/05 through 3/01/06. This review was initiated as part of the District evaluation of an application by Strongwell for a renewal Title V permit. During the period subject to review, activities known to the District include:

- There were no Notices of Violation issued during this review period.
- The District did not receive any alleged complaints.
- The District did not receive any Reportable Compliance Event notifications.
- The facility is not operating under a Variance or an Order of Abatement from the District Board.
- There were no monitor excesses or equipment breakdowns reported or documented by District staff.

The owner certified that all equipment was operating in compliance on November 22, 2004 when they submitted the application to renew their Title V permit. No incidences of non-compliance have been identified to date.

F. Differences between the Application and the Proposed Permit

None.

APPENDIX A
BAAQMD COMPLIANCE REPORT

APPENDIX B

GLOSSARY

ACT

Federal Clean Air Act

APCO

Air Pollution Control Officer

ARB

Air Resources Board

BAAQMD

Bay Area Air Quality Management District

BACT

Best Available Control Technology

Basis

The underlying authority which allows the District to impose requirements.

CAA

The federal Clean Air Act

CAAQS

California Ambient Air Quality Standards

CAPCOA

California Air Pollution Control Officers Association

CEQA

California Environmental Quality Act

CFR

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

CO

Carbon Monoxide

Cumulative Increase

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

District

The Bay Area Air Quality Management District

dscf

Dry Standard Cubic Feet

EPA

The federal Environmental Protection Agency.

Excluded

Not subject to any District regulations.

Federally Enforceable, FE

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

FP

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

HAP

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

Major Facility

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

MFR

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

MOP

The District's Manual of Procedures.

NAAQS

National Ambient Air Quality Standards

NESHAPS

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

NMHC

Non-methane Hydrocarbons (Same as NMOC)

NMOC

Non-methane Organic Compounds (Same as NMHC)

NO_x

Oxides of nitrogen.

NSPS

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

NSR

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

Offset Requirement

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

Phase II Acid Rain Facility

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

POC

Precursor Organic Compounds

PM

Particulate Matter

PM10

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

PSD

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

SIP

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

SO2

Sulfur dioxide

THC

Total Hydrocarbons (NMHC + Methane)

Title V

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

TOC

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

TPH

Total Petroleum Hydrocarbons

TRMP

Toxic Risk Management Plan

TSP

Total Suspended Particulate

VOC

Volatile Organic Compounds

Units of Measure:

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

APPENDIX C

Engineering Evaluation for Application 10806

**Engineering Evaluation
Strongwell
Application #10806
Plant #2918**

Background

Strongwell operates a manufacturing facility for casting concrete utility box enclosures (used by PG & E). The operation consist of mixing styrene polymer resin solution with sand and gravel in 5 gallon containers and then poured into semi-enclosed molds for curing. Styrene vapors are the only organic compound that are emitted from this source. The company does not expect to increase the cleanup solvent usage. Therefore, there will be no change in their organic compound cleanup solvent permitted level.

The aggregates (sand, gravel and filler) are stored in three silos. The particulate emissions from these silos will be abated by a dust collector. Only particulate emissions are expected from these sources (S-13, S-14, & S-15). Because of an increase in production, the company is planning to increase their hours from 8 to 12 hours per day.

Strongwell is requesting to increase the styrene monomer annual usage from 500,000 to 750,000 gallons at S-5 (Mixing and Casting Operation) and increase the annual materials usages at the three storage silos, S-13 (sand), S-14 (aggregate), and S-15 (filler). This request will allow them to increase the annual throughput from 575 to 875 tons per year. The following sources are affected

- S-5 Mixing (5 gallon containers) and Casting Operations**
- S-13 Aggregate Silo #1, Gravel Storage, 60,000 lb capacity, abated by A-3, Dust Collector, Saunco, Model WJB-64-580**
- S-14 Aggregate Silo #2, Sand Storage, 60,000 lb capacity, abated by A-3, Dust Collector, Saunco, Model WJB-64-580**
- S-15 Aggregate Silo #3, Sand/Filler Storage, 60,000 lb capacity, abated by A-3, Saunco, Model WJB-64-580 and A-4, Dust Collector, Pulse jet, FABRI-Pulse, Design "M" Model 2**

This facility is located at 615 North King Road, San Jose, CA..

The proposed changes are considered significant revision to the existing Title V permit as per Regulation 2-6-226, and therefore subject to a 45-day EPA review. The Title V permit is revised to reflect these changes. Strongwell is subject to the Reinforced Plastics Industry NESHAP, Subpart WWWW. The final rule gives no emissions limits or emissions reduction for polymer casting (the primary process at the facility). The facility must comply with reporting requirements and ancillary process requirements such as mixing and cleaning.

Emissions calculations

Strongwell does not expect to increase their permitted level of solvent cleanup solution therefore they are not charge with any organic compound cleanup increase.

S-5: Mixing and Casting Operation

At this source, the styrene resin material is mixed into containers combined with sand, gravel and filler and poured into semi-enclosed molds for curing. Styrene is the only organic compound that is emitted from this source.

Emission are calculated based on source test data:

In December 2000, Strongwell conducted source tests to establish an emission factor for their operation. Testings were conducted in accordance with EPA Method 204 and reviewed by Bob Bartley of the Source Test Section and were found to be acceptable. Three different sets of tests were conducted ranging between 0.46 and 1.13% of styrene emissions. The highest styrene emission factor of 1.13% will be used to estimate the VOC emissions from S-5 process.

Styrene Emission Factor

The styrene content used in the calculations is 43%, based on resin manufacturer information. MSDS shows 9.0 lb per gallon
1.13% of styrene monomer in the resin solution is emitted into the atmosphere.

$$\begin{aligned} &= (1 \text{ gallon of resin})(9.0 \text{ lb of resin/gallon})(0.43 \text{ lb of styrene/lb of resin})(0.0113 \text{ lbb/lb styrene monomer}) \\ &= 0.04373 \text{ lb of VOC emitted/gallon of resin applied} \end{aligned}$$

Resin material throughput: 500,000 gallons (current)

Applicant requesting to use 750,000 gallons of resin per year (proposed)

Total VOC emission

$$(750,000 \text{ gallons/yr})(0.04373 \text{ lb of VOC emitted/gallon}) = \mathbf{32,798 \text{ lb/yr or } 16.4 \text{ tons/yr}}$$

VOC emissions increase

$$(32,798 - 21,865) \text{ lb/yr}/365 \text{ days/yr} = \mathbf{30 \text{ lb of VOC/day emissions increase}}$$

S-13, 14 and 15 (silos)

Only particulate emissions are expected from these silos. Particulate emissions were estimated on the basis of an exhaust flow of 5000 cfm, an exhaust grain loading of 0.01 grain/ dscf from the baghouse, A-3 and an operating schedule increase from 8 hrs/day to 12 hours/day and 365 days/yr.

$$\begin{aligned} \text{PM-10 emission increase} &= (0.01 \text{ gr/dscf})(5,000 \text{ cfm})(720-480 \text{ min/day})/(7000 \text{ gr/lb}) = 1.71 \text{ lb/day} \\ &365 \text{ days/yr} \times 1.71 \text{ lb/day} = \mathbf{625.71 \text{ lb/yr}} \\ &\text{PM-10 increase} \end{aligned}$$

$$625.71 \text{ lb/yr} / 2000 \text{ lb/ton} = \mathbf{0.31 \text{ ton/yr}}$$

The calculated PM-10 emissions increase are expected to be the maximum emissions from these sources. This increase takes in consideration that the production increase from 575 to 875 tons per year

Plant Cumulative Emissions

POC cumulative

$$\mathbf{POC} = 10.9 \text{ (Current)} + 5.51 \text{ tons/yr (New)} = \mathbf{16.4 \text{ ton/yr}}$$

PM-10 cumulative

$$\text{PM-10} = 0.1 \text{ (current)} + 0.31 \text{ ton/yr (New)} = \mathbf{0.41 \text{ ton/yr}}$$

BACT

In accordance with Regulation 2, Rule 2, Section 301, BACT is triggered for any new or modified source with the potential to emit 10 pounds or more per highest day of VOC. Based on the emissions calculations above, the owner/operator of S-5 is subject to BACT for the VOC.

The original BACT analysis was based on an engineering study and cost analysis performed by Comprehensive Environmental Solutions, San Geronimo, Ca. This updated analysis calculations are based on the April 2001 cost analysis that have been increased by 9% to allow for consumer price index. The emissions are based on the proposed throughput of resin and the established emissions rate of 0.0113 lb of VOC emitted/lb of styrene applied.

Afterburner system (summary of cost effectiveness-see attached cost effectiveness)

Total annual cost = \$1,331,439
VOC reduction (16.4 tpy) (0.90 capture & control) = 14.76 tpy
Cost of abatement = \$1,331,439/14.76 = \$90,206 per ton reduction

Carbon adsorption system

Total annual cost = \$ 533,254
VOC reduction = (16.4 tpy) (0.90 capture & control) = 14.76 tpy
Cost of abatement = \$533,254 /14.76 tpy = \$ 36,128 per ton reduction

The cost of abatement for S-5 is greater than the cost effectiveness of \$17,500/ton of POC reduced, therefore BACT 1 was determined to be not cost effective. This source meets BACT2 standards (ie compliance w/District regulation).

S-13, S-14 & S-15

The PM-10 emissions are less than 10 pounds per highest day, therefore BACT is not triggered.

Offsets

Facility wide VOC emissions are greater than 15 tons per year, and therefore are subject to the offset requirements of Regulation 2-2-302. The facility qualifies for offsets from the small facility bank and had received offsets of 16.4 TPY from the Bank in their previous application.

toxics risk screening analysis

Styrene is listed in Table 2-1-316 of Regulation 2, Rule 1 and is a toxic compound. Emissions of styrene are less than the toxic trigger level of 140,000 pound per year. Therefore, a health risk screening analysis is not required.

statement of compliance

The project is considered to be ministerial under District's proposed CEQA Regulation 2-1-311 and therefore is not subject to CEQA review.

A toxics risk screen is not required because no toxic substance will be emitted above its trigger level. TBACT does not apply.

PSD, and NSPS do not apply.

The project is over 1000 feet from the nearest school and therefore not subject to the public notification requirements of Regulation 2-1-412.

Section 112 (g) of the Federal Clean Air Act is implemented by the Bay Area AQMD Regulation 2, Rule 2, Section 114 and 317. This project is subject to the Maximum Achievable Control Technology (MACT) requirement pursuant to Section 2-2-114 because the proposed and existing HAP emissions are greater than 10 ton per year of styrene.

Strongwell is subject to The Reinforced Plastics Industry Plastics NESHAP, Subpart WWWW. This regulation does not give emissions limit or emissions reduction for polymer casting. The facility must comply with the reporting requirement and ancillary process requirements, such as mixing and cleaning in Subpart WWWW, tables 1 through 9. In the Title V renewal application #11267, the applicant demonstrates compliance to the requirements of Subpart WWWW, tables 1-9.

PERMIT CONDITIONS

The permit conditions ID 16674 for three silos (S-13, 14 and 15) and ID #17170 for mixing and casting operations are revised.

Recommendations

It is recommended that change of permit conditions be issued to Strongwell for:

- S-5 Mixing (5 gallon containers) and Casting Operations**
- S-13 Aggregate Silo #1, Gravel Storage, 60,000 lb capacity, abated by A-3, Dust Collector, Saunco, Model WJB-64-580**
- S-14 Aggregate Silo #2, Sand Storage, 60,000 lb capacity, abated by A-3, Dust Collector, Saunco, Model WJB-64-580**
- S-15 Aggregate Silo #3, Sand/Filler Storage, 60,000 lb capacity, abated by A-3, Saunco, Model WJB-64-580 and A-4, Dust Collector, Pulse jet, FABRI-Pulse, Design "M" Model 2**

by: _____ Date:

12/02/04

Allan Chiu
Air Quality Engineer II