# Bay Area Air Quality Management District

~~939 Ellis Street~~375 Beale Street, Suite 600
San Francisco, CA 9410~~59~~
(415) 749-5000~~771-6000~~

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## ~~Final~~ Proposed

# MAJOR FACILITY REVIEW PERMIT

**Issued To:**

## Chemtrade~~General Chemical~~ West US, LLC
## Facility #A0023

**Facility Address:**
525 Castro Street
Richmond CA 94801

**Mailing Address:**
525 Castro Street
Richmond CA 94801

| Responsible Official | Facility Contact |
|---|---|
| ~~Michael Ware, Vice President of Manufacturing~~ Michael Shepherd, Plant Manager | ~~Kevin L. O'Kelley~~, ~~EHS Manager~~ Ana Dias, Process Engineer |
| (510) 232-7193 | (925) 458-7301~~(510) 237-3869~~ |

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**Type of Facility:** Sulfuric Acid Production
**Primary SIC:** 2819
**Product:** Sulfuric Acid

BAAQMD Engineering Division Contact:
Jimmy Cheng

**ISSUED BY THE BAY AREA AIR QUALITY MANAGEMENT DISTRICT**

~~Signed by Jeff McKay for Jack P. Broadbent~~ _____ ~~November 22, 2011~~
Jack P. Broadbent, Executive Officer/Air Pollution Control Officer Date

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# I. STANDARD CONDITIONS

## A. Administrative Requirements

The permit holder shall comply with all applicable requirements in the following regulations:

BAAQMD Regulation 1 - General Provisions and Definitions
(as amended by the District Board on 5/4/11);

SIP Regulation 1 - General Provisions and Definitions
(as approved by EPA through 6/28/99);

BAAQMD Regulation 2, Rule 1 - Permits, General Requirements
(as amended by the District Board on 12/19/12, effective 8/31/16~~3/4/09~~);

~~SIP Regulation 2, Rule 1 - Permits, General Requirements
(as approved by EPA through 1/26/99);~~

BAAQMD Regulation 2, Rule 2 - Permits, New Source Review
(as amended by the District Board on 12/19/12, effective 8/31/16~~6/15/05~~);

~~SIP Regulation 2, Rule 2 - Permits, New Source Review and Prevention of Significant Deterioration
(as approved by EPA through 1/26/99);~~

BAAQMD Regulation 2, Rule 4 - Permits, Emissions Banking
(as amended by the District Board on 12/19/12~~12/21/04~~);

SIP Regulation 2, Rule 4 - Permits, Emissions Banking
(as approved by EPA through 1/26/99);

BAAQMD Regulation 2, Rule 5 – New Source Review of Toxic Air Contaminants
(as amended by the District Board on 12/7/16~~1/6/10~~);

BAAQMD Regulation 2, Rule 6 - Permits, Major Facility Review
(as amended by the District Board on 4/16/03); and

SIP Regulation 2, Rule 6 – Permits, Major Facility Review
(as approved by EPA through 6/23/95)

## B. Conditions to Implement Regulation 2, Rule 6, Major Facility Review

1. This Major Facility Review Permit was issued on ~~November 22~~, 2017~~1~~ and expires on ~~November 21~~, 2022~~16~~. The permit holder shall submit a complete application for renewal of this Major Facility Review Permit no later than May ~~21~~, 2022~~16~~, and no earlier than November ~~21~~, 2021~~15~~. **If a complete application for renewal has not been submitted in accordance with these deadlines, the facility may not operate after ~~November 21~~, 2022~~16~~.** If the permit renewal has not been issued by November 21, 2022~~16~~, but a complete application for renewal has been submitted in accordance with the above deadlines, the existing permit will continue in force until the District takes final action on the renewal application. (Regulation 2-6-307, 404.2, 407, & 409.6; MOP Volume II, Part 3, §4.2)

2. The permit holder shall comply with all conditions of this permit. The permit consists of this document and all appendices. Any non-compliance with the terms and conditions of this permit will constitute a violation of the law and will be grounds for enforcement action; permit termination, revocation and re-issuance, or modification; or denial of a permit renewal application. (Regulation 2-6-307; MOP Volume II, Part 3, §4.11)

# I. Standard Conditions

3. In the event any enforcement action is brought as a result of a violation of any term or condition of this permit, the fact that it would have been necessary for the permittee to halt or reduce the permitted activity in order to maintain compliance with such term or condition shall not be a defense to such enforcement action. (MOP Volume II, Part 3, §4.11)
4. This permit may be modified, revoked, reopened and reissued, or terminated for cause. (Regulation 2-6-307, 409.8, 415; MOP Volume II, Part 3, §4.11)
5. The filing of a request by the facility for a permit modification, revocation and reissuance, or termination, or the filing of a notification of planned changes or anticipated non-compliance does not stay the applicability of any permit condition. (Regulation 2-6-409.7; MOP Volume II, Part 3, §4.11)
6. This permit does not convey any property rights of any sort, or any exclusive privilege. (Regulation 2-6-409.7; MOP Volume II, Part 3, §4.11)
7. The permit holder shall supply within 30 days any information that the District requests in writing to determine whether cause exists for modifying, revoking and reissuing, or terminating the permit or to determine compliance with the permit. (Regulation 1-441, Regulation 2-6-409.4 & 501; MOP Volume II, Part 3, §4.11)
8. Any records required to be maintained pursuant to this permit which the permittee considers to contain proprietary or trade secret information shall be prominently designated as such. Copies of any such proprietary or trade secret information which are provided to the District shall be maintained by the District in a locked confidential file, provided, however, that requests from the public for the review of any such information shall be handled in accordance with the District's procedures set forth in Section 11 of the District's Administrative Code. (Regulation 2-6-419; MOP Volume II, Part 3, §4.11)
9. Proprietary or trade secret information provided to EPA will be subject to the requirements of 40 CFR Part 2, Subpart B - Public Information, Confidentiality of Business Information. (40 CFR Part 2)
10. The emissions inventory submitted with the application for this Major Facility Review Permit is an estimate of actual emissions or the potential to emit for the time period stated and is included only as one means of determining applicable requirements for emission sources. It does not establish, or constitute a basis for establishing, any new emission limitations. (MOP Volume II, Part 3, §4.11)

11 The responsible official shall certify all documents submitted by the facility pursuant to the major facility review permit. The certification shall state that based on information and belief formed after reasonable inquiry, the statements and information in the document are true, accurate, and complete. The certifications shall be signed by a responsible official for the facility. (Regulation 2-6-409.20, MOP Volume II, Part 3, §4.11)

12. The permit holder is responsible for compliance, and certification of compliance, with all conditions of the permit, regardless of whether it acts through employees, agents, contractors, or subcontractors. (Regulation 2-6-307)

# I. Standard Conditions

## C. Requirement to Pay Fees

The permit holder shall pay annual fees in accordance with District Regulation 3, including Schedule P. (Regulation 2-6-402 & 409.13, Regulation 3; MOP Volume II, Part 3, §4.12)

## D. Inspection and Entry

Access to Facility: The permit holder shall provide reasonable access to the facility and equipment which is subject to this permit to the APCO and/or to his or her designee. (Regulation 1-440, Regulation 2-6-409.3; MOP Volume II, Part 3, §4.14)

## E. Records

1. The permit holder must provide any information, records, and reports requested or specified by the APCO. (Regulation 1-441, Regulation 2-6-409.4)
2. Notwithstanding the specific wording in any requirement, all records for federally enforceable requirements shall be maintained for at least five years from the date of creation of the record. (Regulation 2-6-501, MOP Volume II, Part 3, §4.7)

## F. Monitoring Reports

Reports of all required monitoring must be submitted to the District at least once every six months, except where an applicable requirement specifies more frequent reporting. Reports shall be submitted for the following periods: July 1st through December 31st and January 1st through June 30th, and are due on the last day of the month after the end of the reporting period. All instances of non-compliance shall be clearly identified in these reports. The reports shall be certified by the responsible official as true, accurate, and complete. In addition, all instances of non-compliance with the permit shall be reported in writing to the District's Compliance and Enforcement Division within 10 calendar days of the discovery of the incident. Within 30 calendar days of the discovery of any incident of non-compliance, the facility shall submit a written report including the probable cause of non-compliance and any corrective or preventative actions. The reports shall be sent by e-mail to compliance@baaqmd.gov or by postal mail to the following address:

Director of Compliance and Enforcement
Bay Area Air Quality Management District
375 Beale939 Ellis Street, Suite 600
San Francisco, CA 9410559
Attn: Title V Reports

(Regulation 2-6-502; MOP Volume II, Part 3, §4.7)

# I. Standard Conditions

## G. Compliance Certification

Compliance certifications shall be submitted annually by the responsible official of this facility to the Bay Area Air Quality Management District and to the Environmental Protection Agency. The certification period will be July 1st through June 30th. The certification shall be submitted by July 31st of each year. The certification must list each applicable requirement, the compliance status, whether compliance was continuous or intermittent, the method used to determine compliance, and any other specific information required by the permit. ~~The permit holder may satisfy this requirement through submittal of District-generated Compliance Certification forms.~~ The certification should be directed to the District's Compliance and Enforcement Division at the address above, and a copy of the certification shall be sent by e-mail to r9.aeo@epa.gov or postal mail to the Environmental Protection Agency at the following address:

~~Director of the Air Division~~
~~USEPA, Region IX~~
~~75 Hawthorne Street~~
~~San Francisco, CA 94105~~
~~Attention: Air-3~~

Director
Enforcement Division, TRI & Air Section (ENF-2-1)
USEPA Region 9
75 Hawthorne Street
San Francisco, California 94105

(MOP Volume II, Part 3, §4.5 and 4.15)

## H. Emergency Provisions

1. The permit holder may seek relief from enforcement action in the event of a breakdown, as defined by Regulation 1-208 of the District's Rules and Regulations, by following the procedures contained in Regulations 1-431 and 1-432. The District will thereafter determine whether breakdown relief will be granted in accordance with Regulation 1-433. (MOP Volume II, Part 3, §4.8)

2. The permit holder may seek relief from enforcement action for a violation of any of the terms and conditions of this permit by applying to the District's Hearing Board for a variance pursuant to Health and Safety Code Section 42350. The Hearing Board will determine after notice and hearing whether variance relief should be granted in accordance with the procedures and standards set forth in Health and Safety Code Section 42350 et seq. (MOP Volume II, Part 3, §4.8)

3. The granting by the District of breakdown relief or the issuance by the Hearing Board of a variance will not provide relief from federal enforcement. (MOP Volume II, Part 3, §4.8)

# I. Standard Conditions

**I. Severability**

In the event that any provision of this permit is invalidated by a court or tribunal of competent jurisdiction, or by the Administrator of the EPA, all remaining portions of the permit shall remain in full force and effect. (Regulation 2-6-409.5; MOP Volume II, Part 3, §4.10)

**J. Miscellaneous Conditions**

1. The maximum capacity for each source as shown in Table II-A is the maximum allowable capacity. An exceedance of the maximum allowable capacity for any source is a violation of Regulation 2, Rule 1, Section 301. (Regulation 2-1-301)

**K. Accidental Release**

This facility is subject to 40 CFR Part 68, Chemical Accident Prevention Provisions. The permit holder shall submit a risk management plan (RMP) by the date specified in §68.10. The permit holder shall also certify compliance with the requirements of Part 68 as part of the annual compliance certification, as required by Regulation 2, Rule 6. (40 CFR Part 68, Regulation 2, Rule 6)

# II. EQUIPMENT

## Table II-A - Permitted Sources

Each of the following sources has been issued a permit to operate pursuant to the requirements of BAAQMD Regulation 2, Permits. The capacities in this table are the maximum allowable capacities for each source, pursuant to Standard Condition I.J and Regulation 2-1-301.

| S-# | Description | Make or Type | Model | Capacity |
|---|---|---|---|---|
| S-1 | Sulfuric Acid Manufacturing Plant | CustomUnknown | none | 219,000 ton/yr |
| S-2 | Sulfuric Acid Storage Tank #10 | Unknown | none | 440 tons |
| S-3 | Alkylation Acid Storage Tank #12 (0.5 psia max. true vapor pressure) | Unknown | none | 63,000 gallons |
| S-5 | Sulfuric Acid Storage Tank #9 | Unknown | none | 210 tons |
| S-8 | New Sulfur Melting Pit | steel-lined underground pit | none | 80 tons |
| S-9 | Process Air Heater (refinery make gas, natural gas) | Direct-fired | none | 125 MM BTU/hr |
| S-10 | Alkylation Acid Storage Tank #11 (0.5 psia max. true vapor pressure) | Unknown | none | 126,000 gallons |
| S-11 | Sulfuric Acid Storage Tank #5 | Unknown | none | 105 tons |
| S-13 | Alkylation Acid Storage Tank #16 (0.5 psia max. true vapor pressure) | Unknown | none | 263,000 gallons |
| S-15 | Startup Air Heater (natural gas) | indirect-fired | none | 146.6 MM BTU/hr |
| S-16 | Alkylation Acid Storage Tank #13 | unknown | none | 66,000 gallons |
| S-17 | Railcar Loading/Unloading Station (Sulfuric/Alkylation Acid) | Durco | Mark III | 200 gpm |
| S-18 | Truck Unloading Station (Alkylation Acid) | Durco | Mark III | 200 gpm |
| S-20 | West Truck Loading/Unloading Station (Sulfuric Acid) | Durco | Mark III | 200 gpm |
| S-22 | Sulfur Unloading Station | unknown (gravity feed) | none | 17 ton/hr |
| S-24 | Electronic Grade Sulfuric Acid Manufacturing Process (integrated with S-1) | unknown | none | 15,000 ton/yr |
| S-28 | Sulfuric Acid Storage Tank #1 | unknown | unknown | 72,000 gallons |

# II. Equipment List

## Table II-A - Permitted Sources

Each of the following sources has been issued a permit to operate pursuant to the requirements of BAAQMD Regulation 2, Permits. The capacities in this table are the maximum allowable capacities for each source, pursuant to Standard Condition I.J and Regulation 2-1-301.

| S-# | Description | Make or Type | Model | Capacity |
|---|---|---|---|---|
| S-29 | Sulfuric Acid Storage Tank #2 | unknown | unknown | 72,000 gallons |
| S-30 | Sulfuric Acid Storage Tank #4 | unknown | unknown | 15,546 gallons |
| S-31 | Sulfuric Acid Storage Tank #7 | unknown | unknown | 15,546 gallons |
| S-32 | Alkylation Acid / Sulfuric Acid Storage Tank #14 | unknown | unknown | 210,000 gallons |
| S-34 | Caustic Pump Diesel Engine | Deutz | BF4M1011 F | 81 bhp; 178 $in^3$ 0.575 MM BTU/hr |
| S-36 | Natural Gas Fired IC Engine | Caterpillar | G3516B LE | 1971 bhp; 13.7 MM BTU/hr |

# II. Equipment List

## Table II-B – Abatement Devices

| A-# | Description | Source(s) Controlled | Applicable Requirement | Operating Parameters | Required Efficiency |
|---|---|---|---|---|---|
| A-1 | Sulfur Dioxide Abatement System ("Dual Absorption" process) | A-2 | BAAQMD 6-1-320 9-1-309 12-6-301 ~~SIP~~SIP REGULATION 6-320 | none | 9-1-309: limit $SO_2$ emissions to no more than 300 ppm @ 12% $O_2$ 6-1-320 and 6-320: limit $SO_3$ and H2SO4 emissions to less than 0.04 grain/dscf 12-6-301: limit acid mist emissions to no more than 0.15 gram per kilogram (0.3 lb/ton) of acid produced |
| A-2 | Mist Eliminator | S-1, S-16, S-24 | | None | none |
| A-4 | Acid Storage Back-Up Vent Activated Carbon Beds | S-3, S-10, S-13, S-16, S-17, S-18, S-32 | BAAQMD Condition #13215, part 2 BAAQMD Condition #19267, part 6 | VOC concen-tration at outlet | Limit hydrocarbon emissions to 0.37 lb/hour |
| A-5 | Acid Storage Back-Up Vent Packed Tower Caustic Scrubber | A-4 | BAAQMD Condition #19267, part 5 | Minimum pH of 8.5 | Limit $SO_2$ emissions to 10 pppmv; limit $H_2SO_4$ emissions to 5 ppmv |
| | | | BAAQMD Condition #19267, part 6 | | Limit $SO_2$ emissions to 0.09 lb/hr; limit $H_2SO_4$ emissions to 0.014 lb/hr |

# II. Equipment List

## Table II-B – Abatement Devices

| A-# | Description | Source(s) Controlled | Applicable Requirement | Operating Parameters | Required Efficiency |
|---|---|---|---|---|---|
| A-6 | Emergency Caustic Scrubber System | S-1 | BAAQMD Condition #20580, part 2 | In operation whenever $SO_2$ less than or equal to 51 ppmv and $H_2SO_4$ is less than or equal to 0.3 lb/ton of acid produced | Limit $SO_2$ emissions to 51 ppmv; limit $H_2SO_4$ emissions to 0.3 lb/ton of acid produced |
| | | | BAAQMD Condition #20580, part 3 | In operation whenever $SO_3$ and/or $H_2SO_4$ is less than or equal to 0.04 grains per dscf of exhaust gas | Limit $SO_3$ and/or $H_2SO_4$ emissions to 0.04 grain/dscf |
| A-33 | NSCR Emission Control System | S-36 | BAAQMD Condition #20509, part 2 | In operation whenever S-36 is operated | None |
| S-1 | Sulfuric Acid Manufacturing Plant | S-3, S-10, S-13, S-16, S-24, S-32 | | | None |

# II. Equipment List

## Table II-C – Significant Sources

The following source is exempt from the requirement to obtain an authority to construct and permit to operate, but is defined as a significant source pursuant to BAAQMD Regulation 2-6-239.

| S-# | Description | Make or Type | Model | Capacity |
|---|---|---|---|---|
| S-19 | East Loading/Unloading Station (Sulfuric Acid) | Durco | Mark III | 200 gpm |
| S-21 | South Loading/Unloading Station | Durco | Mark III | 200 gpm |
| S-35 | T-303, Sulfuric Acid Storage Tank | unknown | unknown | 7,500 gallons |

# III. GENERALLY APPLICABLE REQUIREMENTS

The permit holder shall comply with all applicable requirements, including those specified in the BAAQMD and SIP Rules and Regulations and other federal requirements cited below. These requirements apply in a general manner to the facility and/or to sources exempt from the requirement to obtain a District Permit to Operate. The District has determined that these requirements will not be violated under normal, routine operations, and that no additional periodic monitoring or reporting to demonstrate compliance is warranted. In cases where a requirement, in addition to being generally applicable, is also specifically applicable to one or more sources, the requirement and the source are also included in Section IV, Source-Specific Applicable Requirements, of this permit. This section also contains provisions that may apply to temporary sources.

The dates in parentheses in the Title column identify the versions of the regulations being cited and are, as applicable:

1. BAAQMD regulation(s):
   The date(s) of adoption or most recent amendment of the regulation by the District Board of Directors
2. Any federal requirement, including a version of a District regulation that has been approved into the SIP:
   The most recent date of EPA approval of any portion of the rule, encompassing all actions on the rule through that date

The full language of SIP requirements is available on the EPA Region 9 website. The address is:
http://yosemite.epa.gov/r9/r9sips.nsf/Agency?ReadForm&count=500&state=California&cat=Bay+Area+Air+Quality+Management+District-Agency-Wide+Provisions.

**NOTE:**

There are differences between the current BAAQMD rules and the versions of the rules in the SIP. All sources must comply with both versions of a rule until US EPA has reviewed and approved the District's revision of the regulation.

**Table III**
**Generally Applicable Requirements**

| Applicable Requirement | Regulation Title or Description of Requirement | Federally Enforce-able (Y/N) |
|---|---|---|
| BAAQMD Regulation 1 | General Provisions and Definitions (5/4/11) | N |
| SIP Regulation 1 | General Provisions and Definitions (6/28/99) | Y |
| BAAQMD Regulation 2, Rule 1 | General Requirements (12/19/12, effective 8/31/16~~3/4/09~~) | ~~N~~Y |
| ~~SIP Regulation 2, Rule 1~~ | ~~General Requirements (1/26/99)~~ | ~~Y~~ |

# III. Generally Applicable Requirements

## Table III
## Generally Applicable Requirements

| Applicable Requirement | Regulation Title or Description of Requirement | Federally Enforce-able (Y/N) |
|---|---|---|
| BAAQMD Regulation 2-1-429 | Federal Emissions Statement (12/21/04) | N |
| SIP Regulation 2-1-429 | Federal Emissions Statement (4/3/95) | Y |
| BAAQMD Regulation 4 | Air Pollution Episode Plan (3/20/91) | N |
| SIP Regulation 4 | Air Pollution Episode Plan (8/06/90) | Y |
| BAAQMD Regulation 5 | Open Burning (7/9/08) | N |
| SIP Regulation 5 | Open Burning (9/4/98) | Y |
| BAAQMD Regulation 6, Rule 1 | Particulate Matter, General Requirements (12/5/07) | N |
| SIP Regulation 6 | Particulate Matter and Visible Emissions (9/4/98) | Y |
| BAAQMD Regulation 7 | Odorous Substances (3/17/82) | N |
| BAAQMD Regulation 8, Rule 1 | Organic Compounds - General Provisions (6/15/94) | Y |
| BAAQMD Regulation 8, Rule 2 | Organic Compounds – Miscellaneous Operations (7/20/05) | N |
| SIP Regulation 8, Rule 2 | Organic Compounds – Miscellaneous Operations (3/22/95) | Y |
| BAAQMD Regulation 8, Rule 3 | Organic Compounds - Architectural Coatings (7/1/0911/21/01) | N |
| SIP Regulation 8, Rule 3 | Organic Compounds - Architectural Coatings (1/2/04) | Y |
| BAAQMD Regulation 8, Rule 4 | Organic compounds - General Solvent and Surface Coating Operations (10/16/02) | Y |
| BAAQMD Regulation 8, Rule 15 | Organic Compounds – Emulsified and Liquid Asphalts (6/1/94) | Y |
| BAAQMD Regulation 8, Rule 40 | Organic Compounds - Aeration of Contaminated Soil and Removal of Underground Storage Tanks (6/15/05) | N |
| SIP Regulation 8, Rule 40 | Organic Compounds - Aeration of Contaminated Soil and Removal of Underground Storage Tanks (4/19/01) | Y |
| BAAQMD Regulation 8, Rule 47 | Organic Compounds - Air Stripping and Soil Vapor Extraction Operations (6/15/05) | N |
| SIP Regulation 8, Rule 47 | Organic Compounds - Air Stripping and Soil Vapor Extraction Operations (4/26/95) | Y |
| BAAQMD Regulation 8, Rule 49 | Organic Compounds - Aerosol Paint Products (12/20/95) | N |
| SIP Regulation 8, Rule 49 | Organic Compounds - Aerosol Paint Products | Y |

# III. Generally Applicable Requirements

## Table III
## Generally Applicable Requirements

| Applicable Requirement | Regulation Title or Description of Requirement | Federally Enforce-able (Y/N) |
|---|---|---|
| | (3/22/95) | |
| BAAQMD Regulation 8, Rule 51 | Organic Compounds - Adhesive and Sealant Products (7/17/02) | N |
| SIP Regulation 8, Rule 51 | Organic Compounds - Adhesive and Sealant Products (2/26/02) | Y |
| BAAQMD Regulation 9, Rule 1 | Inorganic Gaseous Pollutants - Sulfur Dioxide (3/15/95) | N |
| SIP Regulation 9, Rule 1 | Inorganic Gaseous Pollutants - Sulfur Dioxide (6/8/995/20/92) | Y |
| BAAQMD Regulation 11, Rule 2 | Hazardous Pollutants - Asbestos Demolition, Renovation and Manufacturing (10/7/98) | N |
| BAAQMD Regulation 12, Rule 4 | Miscellaneous Standards of Performance - Sandblasting (7/11/90) | N |
| SIP Regulation 12, Rule 4 | Miscellaneous Standards of Performance - Sandblasting (9/2/81) | Y |
| California Health and Safety Code Section 41750 et seq. | Portable Equipment | N |
| California Health and Safety Code Section 44300 et seq. | Air Toxics "Hot Spots" Information and Assessment Act of 1987 | N |
| California Health and Safety Code Title 17, Section 93115 | Airborne Toxic Control Measure for Stationary Compression Ignition Engines | N |
| California Health and Safety Code Title 17, Section 93116 | Airborne Toxic Control Measure for Diesel Particulate Matter from Portable Engines Rated at 50 Horsepower and Greater | N |
| 40 CFR Part 61, Subpart M | National Emission Standards for Hazardous Air Pollutants – National Emission Standard for Asbestos (7/20/04) | Y |
| EPA Regulation 40 CFR 82 | Protection of Stratospheric Ozone (12/1/164/13/05) | Y |
| Subpart F, 40 CFR 82.156 | Recycling and Emissions Reductions – Required PracticesLeak Repair | Y |
| Subpart F, 40 CFR 82.161 | Recycling and Emissions Reductions – Technician Certification of Technicians | Y |
| Subpart F, 40 CFR 82.166 | Recycling and Emissions Reductions – Reporting and Recordkeeping Requirements Records of Refrigerant | Y |

# IV. SOURCE-SPECIFIC APPLICABLE REQUIREMENTS

The permit holder shall comply with all applicable requirements, including those specified in the BAAQMD and SIP Rules and Regulations and other federal requirements cited below. The requirements cited in the following tables apply in a specific manner to the indicated source(s).

The dates in parentheses in the Title column identify the versions of the regulations being cited and are, as applicable:

1. BAAQMD regulation(s):
   The date(s) of adoption or most recent amendment of the regulation by the District Board of Directors
2. Any federal requirement, including a version of a District regulation that has been approved into the SIP:
   The most recent date of EPA approval of any portion of the rule, encompassing all actions on the rule through that date

The full text of each permit condition cited is included in Section VI, Permit Conditions, of this permit. The full language of SIP requirements is available on the EPA Region 9 website. The address is:
http://yosemite.epa.gov/r9/r9sips.nsf/Agency?ReadForm&count=500&state=California&cat=Bay+Area+Air+Quality+Management+District-Agency-Wide+Provisions. All other text may be found in the regulations themselves.

**Table IV-A**
**Source-specific Applicable Requirements**
**S-1 SULFURIC ACID MANUFACTURING PROCESS**

| Applicable Requirement | Regulation Title or Description of Requirement | Federally Enforceable (Y/N) | Future Effective Date |
|---|---|---|---|
| **BAAQMD Regulation 1** | **General Provisions and Definitions (5/4/11)** | | |
| 1-520 | Continuous Emission Monitoring | Y | |
| 1-520.3 | $SO_2$ from Sulfuric Acid Plants | Y | |
| 1-522 | Continuous Emission Monitoring and Recordkeeping Requirements | | |
| 1-522.1 | Plans and Specifications | Y | |
| 1-522.2 | Installation Scheduling | Y | |
| 1-522.3 | Performance Testing | Y | |
| 1-522.4 | Periods of Non-operation Greater Than 24 Hours | Y | |
| 1-522.5 | Calibration | Y | |
| 1-522.6 | Accuracy | Y | |
| 1-522.7 | Excesses | N | |

# IV. Source-specific Applicable Requirements

## Table IV-A
## Source-specific Applicable Requirements
## S-1 SULFURIC ACID MANUFACTURING PROCESS

| Applicable Requirement | Regulation Title or Description of Requirement | Federally Enforceable (Y/N) | Future Effective Date |
|---|---|---|---|
| 1-522.8 | Monthly Reports | Y | |
| 1-522.9 | Records | Y | |
| 1-523 | Parametric Monitoring and Recordkeeping Procedures | | |
| 1-523.1 | Periods of Non-operation Greater Than 24 Hours | Y | |
| 1-523.2 | Periods of Non-operation Exceeding 15 Days | Y | |
| 1-523.3 | Violations | N | |
| 1-523.4 | Records | Y | |
| 1-523.5 | Maintenance and Calibration | N | |
| 1-602 | Area and Continuous Emission Monitoring Requirements | Y | |
| **SIP Regulation 1** | **General Provisions and Definitions (6/28/99)** | | |
| 1-522.7 | Excesses | Y | |
| 1-523.3 | Violations | Y | |
| 1-523.5 | Maintenance and Calibration | Y | |
| **BAAQMD Regulation 6, Rule 1** | **Particulate Matter, General Requirements (12/5/07)** | | |
| 6-1-301 | Ringelmann Number 1 Limitation | N | |
| 6-1-305 | Visible Particles | N | |
| 6-1-310 | Particulate Weight Limitation | N | |
| 6-1-311 | General Operations | N | |
| 6-1-320 | Sulfuric Acid Manufacturing Plants | N | |
| 6-1-401 | Appearance of Emissions | N | |
| **SIP Regulation 6** | **Particulate Matter and Visible Emissions (9/4/98)** | | |
| 6-301 | Ringelmann No. 1 Limitation | Y | |
| 6-305 | Visible Particles | Y | |
| 6-310 | Particulate Weight Limitation | Y | |
| 6-311 | General Operations | Y | |
| 6-320 | Sulfuric Acid Manufacturing Plants | Y | |
| 6-401 | Appearance of Emissions | Y | |

# IV. Source-specific Applicable Requirements

## Table IV-A
## Source-specific Applicable Requirements
## S-1 SULFURIC ACID MANUFACTURING PROCESS

| Applicable Requirement | Regulation Title or Description of Requirement | Federally Enforceable (Y/N) | Future Effective Date |
|---|---|---|---|
| **BAAQMD Regulation 9, Rule 1** | **Inorganic Gases - Sulfur Dioxide (3/15/95)** | | |
| 9-1-301 | Limitations on Ground Level Concentrations | N~~Y~~ | |
| 9-1-309 | Emission Limitations for Sulfuric Acid Plants | N~~Y~~ | |
| 9-1-502 | Emission Monitoring Requirements | N~~Y~~ | |
| 9-1-601 | Sampling and Analysis of Gas Streams | N~~Y~~ | |
| 9-1-603 | Averaging Times | N~~Y~~ | |
| 9-1-604 | Ground Level Monitoring | N~~Y~~ | |
| 9-1-605 | Emission Monitoring | N~~Y~~ | |
| **SIP Regulation 9, Rule 1** | **Inorganic Gaseous Pollutants – Sulfur Dioxide (6/8/1999)** | | |
| 9-1-301 | Limitations on Ground Level Concentrations | Y | |
| 9-1-309 | Emission Limitations for Sulfuric Acid Plants | Y | |
| 9-1-502 | Emission Monitoring Requirements | Y | |
| 9-1-601 | Sampling and Analysis of Gas Streams | Y | |
| 9-1-603 | Averaging Times | Y | |
| 9-1-604 | Ground Level Monitoring | Y | |
| 9-1-605 | Emission Monitoring | Y | |
| **BAAQMD Regulation 12, Rule 6** | Acid Mist from Sulfuric Acid Plants (12/6/78) | N | |
| 12-6-301 | Acid Mist | N | |
| 12-6-501 | Production Rate and Hours of Operation | N | |
| 12-6-601 | Testing Procedures | N | |
| **40 CFR, Part 60, Subpart Cd** | **Emissions Guidelines and Compliance Times for Sulfuric Acid Production Units (12/19/95)** | Y | |
| Section 60.30d | Designated Facilities | Y | |
| Section 60.31d | Emissions Guidelines | Y | |
| Section 60.32d | Compliance Times | Y | |

# IV. Source-specific Applicable Requirements

## Table IV-A
## Source-specific Applicable Requirements
## S-1 SULFURIC ACID MANUFACTURING PROCESS

| Applicable Requirement | Regulation Title or Description of Requirement | Federally Enforceable (Y/N) | Future Effective Date |
|---|---|---|---|
| **BAAQMD Cond #14980** | | | |
| Part 1 | Acid Mist/$SO_3$ Annual Source Test (basis: 2-6-409.2, 2-6-501, 40 CFR 60.31d) | Y | |
| Part 2 | Maintenance of equipment (basis: cumulative increase) | Y | |

# IV. Source-specific Applicable Requirements

## Table IV-B
## Source-specific Applicable Requirements
## S-9 PROCESS AIR HEATER

| Applicable Requirement | Regulation Title or Description of Requirement | Federally Enforceable (Y/N) | Future Effective Date |
|---|---|---|---|
| **BAAQMD Regulation 6, Rule 1** | **Particulate Matter, General Requirements (12/5/07)** | | |
| 6-1-301 | Ringelmann Number 1 Limitation | N | |
| 6-1-305 | Visible Particles | N | |
| 6-1-310 | Particulate Weight Limitation | N | |
| 6-1-401 | Appearance of Emissions | N | |
| **SIP Regulation 6** | **Particulate Matter and Visible Emissions (9/4/98)** | | |
| 6-301 | Ringelmann No. 1 Limitation | Y | |
| 6-305 | Visible Particles | Y | |
| 6-310 | Particulate Weight Limitation | Y | |
| 6-401 | Appearance of Emissions | Y | |
| **BAAQMD Regulation 9, Rule 1** | **Inorganic Gases - Sulfur Dioxide (3/15/95)** | | |
| 9-1-301 | Limitations on Ground Level Concentrations | N~~Y~~ | |
| 9-1-302 | General Emission Limitations | N~~Y~~ | |
| **SIP Regulation 9, Rule 1** | **Inorganic Gaseous Pollutants – Sulfur Dioxide (6/8/1999)** | | |
| 9-1-301 | Limitations on Ground Level Concentrations | Y | |
| 9-1-302 | General Emission Limitations | Y | |
| **BAAQMD Regulation 9, Rule 2** | **Inorganic Gaseous Pollutants - Hydrogen Sulfide (10/6/99)** | | |
| 9-2-301 | Limitations on Hydrogen Sulfide | N | |
| 9-2-501 | Area Monitoring Requirements | N | |
| **BAAQMD Regulation 9, Rule 7** | **Inorganic Gaseous Pollutants - Nitrogen Oxides and Carbon Monoxide from Industrial, Institutional, and Commercial Boilers, Steam Generators, and Process Heaters (5/4/11)** | | |
| 9-7-301 | Interim Emission Limits | N | |
| ~~9-7-301.1~~ | ~~Performance Standard, NOx (Effective until 1/1/2012)~~ | ~~N~~ | |
| ~~9-7-301.4~~ | ~~Performance Standard, CO (Effective until 1/1/2012)~~ | ~~N~~ | |
| 9-7-307 | Final Emission Limits | N | |

# IV. Source-specific Applicable Requirements

## Table IV-B
## Source-specific Applicable Requirements
## S-9 PROCESS AIR HEATER

| Applicable Requirement | Regulation Title or Description of Requirement | Federally Enforceable (Y/N) | Future Effective Date |
|---|---|---|---|
| 9-7-307.3 | Limits for Rated Heat Input >=10 and <20 MMBtu/hr | N | ~~1/1/12~~ |
| 9-7-308 | Compliance Schedule | N | |
| 9-7-311 | Insulation Requirements | N | |
| 9-7-312 | Stack Gas Temperature Limits | N | |
| 9-7-403 | Initial Demonstration of Compliance | N | |
| 9-7-503 | Records | N | |
| 9-7-503.4 | §403 or 506 Test Results | N | |
| 9-7-506 | Periodic Testing | N | |
| 9-7-601 | Determination of NOx | N | |
| 9-7-602 | Determination of CO and Stack-Gas $O_2$ | N | |
| 9-7-603 | Compliance Determination | N | |
| 9-7-605 | Determination of Higher Heating Value | N | |
| 9-7-606 | Certification, Initial Demonstration of Compliance and Periodic Test Methods | N | |
| **SIP Regulation 9, Rule 7** | **Inorganic Gaseous Pollutants - Nitrogen Oxides and Carbon Monoxide from Industrial, Institutional, and Commercial Boilers, Steam Generators, and Process Heaters (12/15/97)** | | |
| 9-7-301 | Emission Limits - Gaseous Fuel | Y | |
| 9-7-301.1 | Performance Standard, NOx | Y | |
| 9-7-301.2 | Performance Standard, CO | Y | |
| 9-7-403 | Initial Compliance Demonstration | Y | |
| 9-7-502 | Modified Maximum Heat Input | Y | |
| 9-7-503 | Records | Y | |
| 9-7-503.1 | §304.2 Records | Y | |
| 9-7-503.2 | Records, Curtailment | Y | |
| 9-7-503.3 | §306.3 Records | Y | |
| 9-7-503.4 | §403 Records and Record Retention | Y | |
| 9-7-601 | Determination of NOx | Y | |
| 9-7-602 | Determination of CO and Stack-Gas $O_2$ | Y | |
| 9-7-603 | Compliance Determination | Y | |
| 9-7-605 | Determination of Higher Heating Value | Y | |
| **BAAQMD Condition #7934** | | | |
| part 1 | Allowed Fuels Specified (basis: cumulative increase) | Y | |

# IV. Source-specific Applicable Requirements

## Table IV-B
## Source-specific Applicable Requirements
## S-9 PROCESS AIR HEATER

| Applicable Requirement | Regulation Title or Description of Requirement | Federally Enforceable (Y/N) | Future Effective Date |
|---|---|---|---|
| part 2 | Annual Fuel Use Limit (basis: NOx offsets, cumulative increase) | Y | |
| part 3 | Record Retention Requirement (basis: cumulative increase) | Y | |

## Table IV-C
## Source-specific Applicable Requirements
## S-13 ALKYLATION ACID STORAGE TANK #16

| Applicable Requirement | Regulation Title or Description of Requirement | Federally Enforceable (Y/N) | Future Effective Date |
|---|---|---|---|
| **BAAQMD Condition #2051** | | | |
| part 1 | Abatement Requirement (basis: cumulative increase) | Y | |

## Table IV-D
## Source-specific Applicable Requirements
## S-15 STARTUP AIR HEATER

| Applicable Requirement | Regulation Title or Description of Requirement | Federally Enforceable (Y/N) | Future Effective Date |
|---|---|---|---|
| **BAAQMD Regulation 6, Rule 1** | **Particulate Matter, General Requirements (12/5/07)** | | |
| 6-1-301 | Ringelmann Number 1 Limitation | N | |
| 6-1-305 | Visible Particles | N | |
| 6-1-310 | Particulate Weight Limitation | N | |
| 6-1-401 | Appearance of Emissions | N | |
| **SIP Regulation 6** | **Particulate Matter and Visible Emissions (9/4/98)** | | |
| 6-301 | Ringelmann No. 1 Limitation | Y | |

# IV. Source-specific Applicable Requirements

## Table IV-D
## Source-specific Applicable Requirements
## S-15 STARTUP AIR HEATER

| Applicable Requirement | Regulation Title or Description of Requirement | Federally Enforceable (Y/N) | Future Effective Date |
|---|---|---|---|
| 6-305 | Visible Particles | Y | |
| 6-310 | Particulate Weight Limitation | Y | |
| 6-401 | Appearance of Emissions | Y | |
| **BAAQMD Regulation 9, Rule 1** | **Inorganic Gases - Sulfur Dioxide (3/15/95)** | | |
| 9-1-301 | Limitations on Ground Level Concentrations | N~~Y~~ | |
| 9-1-302 | General Emission Limitations | N~~Y~~ | |
| **SIP Regulation 9, Rule 1** | **Inorganic Gaseous Pollutants – Sulfur Dioxide (6/8/1999)** | | |
| 9-1-301 | Limitations on Ground Level Concentrations | Y | |
| 9-1-302 | General Emission Limitations | Y | |
| **BAAQMD Regulation 9, Rule 7** | **Inorganic Gaseous Pollutants - Nitrogen Oxides and Carbon Monoxide from Industrial, Institutional, and Commercial Boilers, Steam Generators, and Process Heaters (5/4/11)** | | |
| 9-7-111 | Limited Exemption, Low-fuel Usage – Section 9-7-301 | N | |
| 9-7-304 | Low-Fuel Usage Requirements – Section 9-7-111 | N | |
| 9-7-307 | Final Emission Limits | N | |
| 9-7-307.3 | Limits for Rated Heat Input >=10 and <20 MMBtu/hr | N | ~~1/1/12~~ |
| 9-7-308 | Compliance Schedule | N | |
| 9-7-311 | Insulation Requirements | N | |
| 9-7-312 | Stack Gas Temperature Limits | N | |
| 9-7-403 | Initial Demonstration of Compliance | N | |
| 9-7-503 | Records | N | |
| 9-7-503.4 | §403 or 506 Test Results | N | |
| 9-7-506 | Periodic Testing | N | |
| 9-7-601 | Determination of NOx | N | |
| 9-7-602 | Determination of CO and Stack-Gas $O_2$ | N | |
| 9-7-603 | Compliance Determination | N | |
| 9-7-605 | Determination of Higher Heating Value | N | |
| 9-7-606 | Certification, Initial Demonstration of Compliance and Periodic Test Methods | N | |
| **SIP Regulation 9, Rule 7** | **Inorganic Gaseous Pollutants - Nitrogen Oxides and Carbon Monoxide from Industrial, Institutional, and Commercial Boilers, Steam Generators, and Process Heaters (12/15/97)** | | |

# IV. Source-specific Applicable Requirements

## Table IV-D
## Source-specific Applicable Requirements
## S-15 STARTUP AIR HEATER

| Applicable Requirement | Regulation Title or Description of Requirement | Federally Enforceable (Y/N) | Future Effective Date |
|---|---|---|---|
| 9-7-111 | Limited Exemption, Low Fuel Usage | Y | |
| 9-7-304 | Low Fuel Usage Requirements | Y | |
| 9-7-403 | Initial Compliance Demonstration | Y | |
| 9-7-502 | Modified Maximum Heat Input | Y | |
| 9-7-503 | Records | Y | |
| 9-7-503.1 | §304.2 Records | Y | |
| 9-7-503.2 | Records, Curtailment | Y | |
| 9-7-503.3 | §306.3 Records | Y | |
| 9-7-503.4 | §403 Records and Record Retention | Y | |
| 9-7-601 | Determination of NOx | Y | |
| 9-7-602 | Determination of CO and Stack-Gas $O_2$ | Y | |
| 9-7-603 | Compliance Determination | Y | |
| 9-7-605 | Determination of Higher Heating Value | Y | |
| **BAAQMD Condition #7606** | | | |
| part 1 | Allowed Fuels Specified (basis: BACT) | Y | |
| part 2 | Annual Fuel Use Limit (basis: NOx offsets, cumulative increase) | Y | |
| part 3 | Exhaust NOx Concentration Limit (basis: NOx offsets, NOx BACT, cumulative increase) | Y | |
| part 4 | Exhaust CO Concentration Limit (basis: CO BACT, cumulative increase) | Y | |
| part 5 | Record Retention Requirement (basis: NOx offsets, cumulative increase) | Y | |

# IV. Source-specific Applicable Requirements

## Table IV-E
## Source-specific Applicable Requirements
## S-16 ALKYLATION ACID STORAGE TANK #13

| Applicable Requirement | Regulation Title or Description of Requirement | Federally Enforceable (Y/N) | Future Effective Date |
|---|---|---|---|
| **BAAQMD Condition #13215** | | | |
| part 1 | Annual Throughput Limit (basis: cumulative increase) | Y | |
| part 2 | Abatement Requirement (basis: cumulative increase) | Y | |
| part 3 | Abatement Requirement (basis: cumulative increase) | Y | |
| part 4 | Record Retention Requirement (basis: cumulative increase) | Y | |

# IV. Source-specific Applicable Requirements

## Table IV-F
## Source-specific Applicable Requirements
## S-17 RAILCAR LOADING/UNLOADING STATION (SULFURIC/ALKYLATION ACID)

| Applicable Requirement | Regulation Title or Description of Requirement | Federally Enforceable (Y/N) | Future Effective Date |
|---|---|---|---|
| BAAQMD Condition #12051 | | | |
| part 1 | Allowable Materials Specified (basis: cumulative increase) | Y | |
| part 2 | Abatement Requirement (basis: cumulative increase) | Y | |
| part 3 | Record Retention Requirement (basis: cumulative increase) | Y | |

## Table IV-G
## Source-specific Applicable Requirements
## S-18 TRUCK UNLOADING STATION (ALKYLATION ACID)

| **Applicable Requirement** | **Regulation Title or Description of Requirement** | **Federally Enforceable (Y/N)** | **Future Effective Date** |
|---|---|---|---|
| **BAAQMD Condition #12052** | | | |
| part 1 | Allowable Materials Specified (basis: cumulative increase) | Y | |
| part 2 | Abatement Requirement (basis: cumulative increase) | Y | |

## Table IV-H
## Source-specific Applicable Requirements
## S-24 ELECTRONIC GRADE SULFURIC ACID MANUFACTURING PROCESS

| **Applicable Requirement** | **Regulation Title or Description of Requirement** | **Federally Enforceable (Y/N)** | **Future Effective Date** |
|---|---|---|---|
| **BAAQMD Regulation 1** | **General Provisions and Definitions (5/4/11)** | | |
| 1-520 | Continuous Emission Monitoring | Y | |
| 1-520.3 | $SO_2$ from Sulfuric Acid Plants | Y | |
| 1-522 | Continuous Emission Monitoring and Recordkeeping Requirements | | |
| 1-522.1 | Plans and Specifications | Y | |

# IV. Source-specific Applicable Requirements

## Table IV-H
## Source-specific Applicable Requirements
## S-24 ELECTRONIC GRADE SULFURIC ACID MANUFACTURING PROCESS

| Applicable Requirement | Regulation Title or Description of Requirement | Federally Enforceable (Y/N) | Future Effective Date |
|---|---|---|---|
| 1-522.2 | Installation Scheduling | Y | |
| 1-522.3 | Performance Testing | Y | |
| 1-522.4 | Periods of Inoperation Greater Than 24 Hours | Y | |
| 1-522.5 | Calibration | Y | |
| 1-522.6 | Accuracy | Y | |
| 1-522.7 | Excesses | N | |
| 1-522.8 | Monthly Reports | Y | |
| 1-522.9 | Records | Y | |
| 1-602 | Area and Continuous Emission Monitoring Requirements | N | |
| **SIP Regulation 1** | **General Provisions and Definitions (6/28/99)** | | |
| 1-522.7 | Excesses | Y | |
| **BAAQMD Regulation 6, Rule 1** | **Particulate Matter, General Requirements (12/5/07)** | | |
| 6-1-301 | Ringelmann Number 1 Limitation | N | |
| 6-1-305 | Visible Particles | N | |
| 6-1-310 | Particulate Weight Limitation | N | |
| 6-1-311 | General Operations | N | |
| 6-1-320 | Sulfuric Acid Manufacturing Plants | N | |
| 6-1-401 | Appearance of Emissions | N | |
| **SIP Regulation 6** | **Particulate Matter and Visible Emissions (9/4/98)** | Y | |
| 6-301 | Ringelmann No. 1 Limitation | Y | |
| 6-305 | Visible Particles | Y | |
| 6-310 | Particulate Weight Limitation | Y | |
| 6-311 | General Operations | Y | |
| 6-320 | Sulfuric Acid Manufacturing Plants | Y | |
| 6-401 | Appearance of Emissions | Y | |
| **BAAQMD Regulation 9, Rule 1** | **Inorganic Gases - Sulfur Dioxide (3/15/95)** | | |
| 9-1-301 | Limitations on Ground Level Concentrations | N~~Y~~ | |
| 9-1-309 | Emission Limitations for Sulfuric Acid Plants | N~~Y~~ | |
| 9-1-502 | Emission Monitoring Requirements | N~~Y~~ | |

# IV. Source-specific Applicable Requirements

## Table IV-H
## Source-specific Applicable Requirements
## S-24 ELECTRONIC GRADE SULFURIC ACID MANUFACTURING PROCESS

| Applicable Requirement | Regulation Title or Description of Requirement | Federally Enforceable (Y/N) | Future Effective Date |
|---|---|---|---|
| 9-1-601 | Sampling and Analysis of Gas Streams | N~~Y~~ | |
| 9-1-603 | Averaging Times | N~~Y~~ | |
| 9-1-604 | Ground Level Monitoring | N~~Y~~ | |
| 9-1-605 | Emission Monitoring (2/17/82) | N~~Y~~ | |
| **SIP Regulation 9, Rule 1** | **Inorganic Gaseous Pollutants – Sulfur Dioxide (6/8/1999)** | | |
| 9-1-301 | Limitations on Ground Level Concentrations | Y | |
| 9-1-309 | Emission Limitations for Sulfuric Acid Plants | Y | |
| 9-1-502 | Emission Monitoring Requirements | Y | |
| 9-1-601 | Sampling and Analysis of Gas Streams | Y | |
| 9-1-603 | Averaging Times | Y | |
| 9-1-604 | Ground Level Monitoring | Y | |
| 9-1-605 | Emission Monitoring (2/17/82) | Y | |
| **BAAQMD Regulation 12, Rule 6** | **Acid Mist From Sulfuric Acid Plants (12/6/78)** | | |
| 12-6-301 | Acid Mist | N | |
| 12-6-501 | Production Rate and Hours of Operation | N | |
| 12-6-601 | Testing Procedures | N | |
| **40 CFR, Part 60, Subpart Cd** | **Emissions Guidelines and Compliance Times for Sulfuric Acid Production Units (12/19/95)** | Y | |
| Section 60.30d | Designated Facilities | Y | |
| Section 60.31d | Emissions Guidelines | Y | |
| Section 60.32d | Compliance Times | Y | |
| **BAAQMD Condition #13507** | | | |
| part 1 | Annual Throughput Limit (basis: cumulative increase) | Y | |
| part 2 | Abatement Requirement (basis: $SO_2$ BACT, PM10 BACT, cumulative increase) | Y | |
| part 3 | Record Retention Requirement (basis: cumulative increase) | Y | |

# IV. Source-specific Applicable Requirements

## Table IV-I
## Source-specific Applicable Requirements
## S-32 Alkylation Acid/Sulfuric Acid Tank

| Applicable Requirement | Regulation Title or Description of Requirement | Federally Enforceable (Y/N) | Future Effective Date |
|---|---|---|---|
| **BAAQMD Condition #13889** | | | |
| part 1 | Abatement Requirement (basis: cumulative increase) | Y | |
| part 2 | Annual Throughput Limit (basis: cumulative increase) | Y | |
| part 3 | Record Retention Requirement (basis: cumulative increase) | Y | |

## Table IV-J
## Source-specific Applicable Requirements
## S-2 Sulfuric Acid Storage Tank, S-5 Sulfuric Acid Storage Tank, S-11 Sulfuric Acid Storage Tank, S-28 Sulfuric Acid Storage Tank, S-29 Sulfuric Acid Storage Tank, S-30 Sulfuric Acid Storage Tank, S-31 Sulfuric Acid Storage Tank

| Applicable Requirement | Regulation Title or Description of Requirement | Federally Enforceable (Y/N) | Future Effective Date |
|---|---|---|---|
| None | | | |

## Table IV-K
## Source-specific Applicable Requirements
## S-3 Alkylation Acid Storage Tank, S-10 Alkylation Acid Storage Tank

| Applicable Requirement | Regulation Title or Description of Requirement | Federally Enforceable (Y/N) | Future Effective Date |
|---|---|---|---|
| **BAAQMD Condition #19267** | | | |
| part 1 | Abatement Requirement (basis: cumulative increase) | Y | |
| part 4 | Recordkeeping Requirement (basis: Reg. 2-6-501) | N | |

# IV. Source-specific Applicable Requirements

## Table IV-L
## Source-specific Applicable Requirements
## S-8 NEW SULFUR MELTING PIT

| Applicable Requirement | Regulation Title or Description of Requirement | Federally Enforceable (Y/N) | Future Effective Date |
|---|---|---|---|
| None | | | |

## Table IV-M
## Source-specific Applicable Requirements
## S-20 TRUCK LOADING/UNLOADING STATION, S-22 SULFUR UNLOADING STATION

| Applicable Requirement | Regulation Title or Description of Requirement | Federally Enforceable (Y/N) | Future Effective Date |
|---|---|---|---|
| None | | | |

## Table IV-N
## Source-specific Applicable Requirements
## S-34 CAUSTIC PUMP DIESEL ENGINE

| Applicable Requirement | Regulation Title or Description of Requirement | Federally Enforceable (Y/N) | Future Effective Date |
|---|---|---|---|
| **BAAQMD Regulation 6, Rule 1** | **Particulate Matter, General Requirements (12/5/07)** | | |
| 6-1-303 | Ringelmann Number 2 Limitation | N | |
| 6-1-303.1 | Ringelmann Number 2 Limitation | N | |
| 6-1-305 | Visible Particles | N | |
| 6-1-310 | Particulate Weight Limitation | N | |
| ~~6-1-310.3~~ | ~~Heat Transfer Operations~~ | ~~N~~ | |
| 6-1-401 | Appearance of Emissions | N | |
| **SIP Regulation 6** | **Particulate Matter and Visible Emissions (9/4/98)** | | |
| 6-303 | Ringelmann Number 2 Limitation | Y | |

# IV. Source-specific Applicable Requirements

## Table IV-N
## Source-specific Applicable Requirements
## S-34 CAUSTIC PUMP DIESEL ENGINE

| Applicable Requirement | Regulation Title or Description of Requirement | Federally Enforceable (Y/N) | Future Effective Date |
|---|---|---|---|
| 6-303.1 | Ringelmann Number 2 Limitation | Y | |
| 6-305 | Visible Particles | Y | |
| 6-310 | Particulate Weight Limitation | Y | |
| ~~6-310.3~~ | ~~Heat Transfer Operations~~ | ~~Y~~ | |
| 6-401 | Appearance of Emissions | Y | |
| **BAAQMD Regulation 9, Rule 1** | **Inorganic Gaseous Pollutants - Sulfur Dioxide (3/15/95)** | | |
| 9-1-301 | Limitations on Ground Level Concentrations | N~~Y~~ | |
| 9-1-304 | Fuel Burning (Liquid and Solid Fuels) | N~~Y~~ | |
| **SIP Regulation 9, Rule 1** | **Inorganic Gaseous Pollutants – Sulfur Dioxide (6/8/1999)** | | |
| 9-1-301 | Limitations on Ground Level Concentrations | Y | |
| 9-1-304 | Fuel Burning (Liquid and Solid Fuels) | Y | |
| **BAAQMD Regulation 9, Rule 8** | **Inorganic Gaseous Pollutants - Nitrogen Oxides and Carbon Monoxide from Stationary Internal Combustion Engines (7/25/07)** | | |
| 9-8-330 | Emergency Standby Engines, Hours of Operation | N | |
| 9-8-502 | Recordkeeping | N | |
| 9-8-502.1 | Monthly records of usage | N | |
| 9-8-530 | Emergency Standby and Low Usage Engines, Monitoring and Recordkeeping | N | |
| **CCR,Title 17, Section 93115** | **ATCM for Stationary Compression Ignition Engines** | | |
| 93115.5 | Fuel Requirements | N | |
| 93115.6 | ATCM for Stationary CI Engines – Emergency Standby Diesel-Fueled CI Engine (>50 bhp) Operating Requirements and Emission Standards | N | |
| 93115.6(b) | In-Use Emergency Standby Diesel-Fueled CI Engine (> 50 bhp) Operating Requirements and Emission Standards | N | |
| 93115.6(b)(3) | Emission and operation standards | N | |
| 93115.6(b)(3)(A) | Diesel PM Standard and Hours of Operation Limitations | N | |

# IV. Source-specific Applicable Requirements

## Table IV-N
## Source-specific Applicable Requirements
## S-34 CAUSTIC PUMP DIESEL ENGINE

| Applicable Requirement | Regulation Title or Description of Requirement | Federally Enforceable (Y/N) | Future Effective Date |
|---|---|---|---|
| 93115.6(b)(3)(A)(1) | General Requirements | N | |
| 93115.6(b)(3)(A)(1)(a) | 20 hours/yr for maintenance & testing | N | |
| 93115.10(e)(1) | Monitoring Equipment | N | |
| 93115.10(g) | Reporting Requirements for Emergency Standby Engines | N | |
| 93115.11 | ATCM for Stationary CI Engines – Compliance Schedule for Owners or Operators of Three or Fewer Engines (>50 bhp) Located within a District | N | |
| 93115.11(a) | Compliance by 1/1/06 for engines complying by reducing hours of operation | N | |
| 93115.15 | Severability | N | |
| **BAAQMD Condition #22820** | | | |
| part 1 | 20 hours/year for maintenance and testing. (Stationary Diesel Engine ATCM" section 93115.6 (a) or (b), title 17 CCR, Regulation 2, Rule 5) | N | |
| part 2 | Unlimited Emergency Use, (Stationary Diesel Engine ATCM" section 93115.6 (a) or (b), title 17 CCR) | N | |
| part 3 | Totalizing Meter, (Stationary Diesel Engine ATCM" section 93115.10(e), title 17 CCR) | N | |
| part 4 | Recordkeeping, (Stationary Diesel Engine ATCM" section 93115.10(g), title 17 CCR, Regulation 2-6-501) | N | |
| part 5 | Near School Conditions, (Stationary Diesel Engine ATCM" section 93115.6(a) or (b), title 17 CCR) | N | |
| **40 CFR 63 Subpart A** | **National Emissions Standards for Hazardous Air Pollutants for Source Categories, Subpart A – General Provisions** | | |
| 63.1 | General Applicability of the General Provisions | Y | |
| 63.2 | Definitions | Y | |
| 63.3 | Units and Abbreviations | Y | |
| 63.4 | Prohibited activities and circumvention | Y | |

# IV. Source-specific Applicable Requirements

## Table IV-N
## Source-specific Applicable Requirements
## S-34 CAUSTIC PUMP DIESEL ENGINE

| Applicable Requirement | Regulation Title or Description of Requirement | Federally Enforceable (Y/N) | Future Effective Date |
|---|---|---|---|
| 63.6(a) | Compliance with standards and maintenance requirements - Applicability | Y | |
| 63.6(c) | Compliance dates for existing sources | Y | |
| 63.6(f)(2) | Methods for determining compliance | Y | |
| 63.6(f)(3) | Finding of compliance | Y | |
| 63.6(g) | Use of an alternative non-opacity emission standard | Y | |
| 63.6(i) | Compliance extension procedures and criteria | Y | |
| 63.6(j) | Presidential compliance exemption | Y | |
| 63.10(a) | Recordkeeping and reporting requirements, applicability and general information | Y | |
| 63.10(b)(1) | Record retention | Y | |
| 63.10(f) | Administrator waiver of recordkeeping or reporting requirements | Y | |
| 63.12 | State authority and delegations | Y | |
| 63.13 | Addresses of air pollution control agencies and EPA Regional Offices | Y | |
| 63.14 | Incorporation by reference | Y | |
| 63.15 | Availability of information and confidentiality | Y | |
| **40 CFR 63, Subpart ZZZZ** | **National Emission Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines** | | |
| 63.6585 | Am I subject to this subpart? | Y | |
| 63.6585(a) | Applicable to stationary RICE | Y | |
| 63.6585(c) | Applicable to area source of HAP emissions | Y | |
| 63.6590(a)(1)(iii) | Affected source under existing stationary RICE located at an area source of HAP emissions, constructed before 6/12/06 | Y | |
| 63.6595 | When do I have to comply with this subpart? | Y | ~~5/3/13~~ |
| 63.6595(a)(1) | Must comply with applicable emission limitations and operating limitations no later than May 3, 2013 | Y | ~~5/3/13~~ |
| 63.6595(c) | Comply with applicable notification requirements in 63.6645 and 40 CFR Part 63, subpart A | Y | ~~5/3/13~~ |

# IV. Source-specific Applicable Requirements

## Table IV-N
## Source-specific Applicable Requirements
## S-34 CAUSTIC PUMP DIESEL ENGINE

| Applicable Requirement | Regulation Title or Description of Requirement | Federally Enforceable (Y/N) | Future Effective Date |
|---|---|---|---|
| 63.6603(a) | Comply with requirements of Table 2d, Part 4 (operating limitations of Tables 1b and 2b do not apply):<br>1. Change oil & filter every 500 hours of operation or annually, whichever comes first. Oil analysis program may be used to extend period.<br>2. Inspect all hoses and belts every 500 hours or annually, whichever comes first, and replace as necessary | Y | ~~5/3/13~~ |
| 63.6605 | General Requirements<br>1. Must be in compliance with applicable emission limitations and operating limitations<br>2. Operate engine in a manner consistent with safety and good air pollution control practices to minimize emissions | Y | ~~5/3/13~~ |
| 63.6625(e)(3) | Maintain RICE and abatement controls according to manufacturer's instructions or develop own plan | Y | ~~5/3/13~~ |
| 63.6625(h) | Minimize idling, and minimize startup time to not exceed 30 minutes | Y | ~~5/3/13~~ |
| 63.6640(a) | Demonstrate compliance with the requirements of Table 2d according to work or management practices of Table 6, Part 9a. | Y | ~~5/3/13~~ |
| 63.6640(b) | Report deviations from the requirements of Table 2d. | Y | ~~5/3/13~~ |
| 63.6640(e) | Report non-compliance with the any applicable requirement of Table 8. | Y | ~~5/3/13~~ |
| 63.6640(f) | Comply with requirements of (f)(1)(i) through (iii) below | Y | ~~5/3/13~~ |
| 63.6640(f)(1)(i) | No time limit when engine is used for emergencies | Y | ~~5/3/13~~ |
| 63.6640(f)(1)(ii) | Operation of engine for maintenance checks and readiness testing limited to 100 hours per year | Y | ~~5/3/13~~ |
| 63.6640(f)(1)(iii) | Operation of engine for non-emergency and not associated with maintenance checks and readiness testing is limited to 50 hours, which is counted towards the 100 hours per year maximum specified in 63.6640(f)(1)(ii) | Y | ~~5/3/13~~ |
| 63.6645(a)(5) | The notification requirements of 63.6645(a) do not apply to this engine | Y | ~~5/3/13~~ |
| 63.6655 | Record Keeping<br>1. Record hours of operation<br>2. Install non-resettable hour meter | Y | ~~5/3/13~~ |
| 63.6660 | Instructions for Records | Y | ~~5/3/13~~ |
| 63.6670 | Implementation and enforcement of Subpart ZZZZ | Y | ~~5/3/13~~ |

# IV. Source-specific Applicable Requirements

## Table IV-O
## Source-specific Applicable Requirements
## S-36 NATURAL GAS FIRED IC ENGINE

| Applicable Requirement | Regulation Title or Description of Requirement | Federally Enforceable (Y/N) | Future Effective Date |
|---|---|---|---|
| **BAAQMD Regulation 6, Rule 1** | **Particulate Matter, General Requirements(12/5/07)** | | |
| 6-1-303 | Ringelmann Number 2 Limitation | N | |
| 6-1-303.1 | Ringelmann Number 2 Limitation | N | |
| 6-1-305 | Visible Particles | N | |
| 6-1-310 | Particulate Weight Limitation | N | |
| 6-1-401 | Appearance of Emissions | N | |
| **SIP Regulation 6** | **Particulate Matter and Visible Emissions (9/4/98)** | | |
| 6-303 | Ringelmann Number 2 Limitation | Y | |
| 6-303.1 | Ringelmann Number 2 Limitation | Y | |
| 6-305 | Visible Particles | Y | |
| 6-310 | Particulate Weight Limitation | Y | |
| 6-401 | Appearance of Emissions | Y | |
| **BAAQMD Regulation 9, Rule 1** | **Inorganic Gaseous Pollutants - Sulfur Dioxide (3/15/95)** | | |
| 9-1-301 | Limitations on Ground Level Concentrations | N~~Y~~ | |
| 9-1-302 | General Emission Limitation | N~~Y~~ | |
| **SIP Regulation 9, Rule 1** | **Inorganic Gaseous Pollutants – Sulfur Dioxide (6/8/1999)** | | |
| 9-1-301 | Limitations on Ground Level Concentrations | Y | |
| 9-1-302 | General Emission Limitation | Y | |
| **BAAQMD Regulation 9, Rule 8** | **Nitrogen Oxides and Carbon Monoxide from Stationary Internal Combustion Engines (7/25/07)** | | |
| 9-8-301 | Emission Limits - Spark-Ignited Engines Powered by Fossil Derived Fuels | N | |
| 9-8-502 | Recordkeeping | N | |
| 9-8-502.1 | Monthly records of usage | N | |

# IV. Source-specific Applicable Requirements

## Table IV-O
## Source-specific Applicable Requirements
## S-36 NATURAL GAS FIRED IC ENGINE

| Applicable Requirement | Regulation Title or Description of Requirement | Federally Enforceable (Y/N) | Future Effective Date |
|---|---|---|---|
| **SIP Regulation 9, Rule 8** | **Nitrogen Oxides and Carbon Monoxide from Stationary Internal Combustion Engines (12/15/97)** | | |
| 9-8-301 | Emission Limits - Fossil Derived Fuel Gas | Y | |
| 9-8-502 | Recordkeeping | Y | |
| **BAAQMD Condition #20509** | | | |
| part 1 | Allowable Fuels Specified (basis: cumulative increase, BACT) | Y | |
| part 2 | Abatement Requirement (basis: cumulative increase, BACT) | Y | |
| part 3 | NOx, CO, POC Emission Limits (basis: cumulative increase) | Y | |
| part 4 | Initial Source Test Requirement (basis: cumulative increase, BACT, Regulation 9-8-501) | Y | |
| part 5 | Record Retention Requirement (basis: BACT, cumulative increase, Regulation 9-8-530) | N | |
| **40 CFR 63 Subpart A** | **National Emissions Standards for Hazardous Air Pollutants for Source Categories, Subpart A – General Provisions** | | |
| 63.1 | General Applicability of the General Provisions | Y | |
| 63.2 | Definitions | Y | |
| 63.3 | Units and Abbreviations | Y | |
| 63.4 | Prohibited activities and circumvention | Y | |
| 63.6(a) | Compliance with standards and maintenance requirements - Applicability | Y | |
| 63.6(c) | Compliance dates for existing sources | Y | |
| 63.6(f)(2) | Methods for determining compliance | Y | |
| 63.6(f)(3) | Finding of compliance | Y | |
| 63.6(g) | Use of an alternative non-opacity emission standard | Y | |
| 63.6(i) | Compliance extension procedures and criteria | Y | |
| 63.6(j) | Presidential compliance exemption | Y | |
| 63.10(a) | Recordkeeping and reporting requirements, applicability and general information | Y | |
| 63.10(b)(1) | Record retention | Y | |
| 63.10(f) | Administrator waiver of recordkeeping or reporting requirements | Y | |

# IV. Source-specific Applicable Requirements

## Table IV-O
## Source-specific Applicable Requirements
## S-36 NATURAL GAS FIRED IC ENGINE

| Applicable Requirement | Regulation Title or Description of Requirement | Federally Enforceable (Y/N) | Future Effective Date |
|---|---|---|---|
| 63.12 | State authority and delegations | Y | |
| 63.13 | Addresses of air pollution control agencies and EPA Regional Offices | Y | |
| 63.14 | Incorporation by reference | Y | |
| 63.15 | Availability of information and confidentiality | Y | |
| **40 CFR 63, Subpart ZZZZ** | **National Emission Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines** | | |
| 63.6585 | Am I subject to this subpart? | Y | |
| 63.6585(a) | Applicable to stationary RICE | Y | |
| 63.6585 | Applicable to area source of HAP emissions | Y | |
| 63.6590(a)(1)(iii) | Affected source under existing stationary RICE located at an area source of HAP emissions, constructed before 6/12/06 | Y | |
| 63.6595 | When do I have to comply with this subpart? | Y | ~~10/19/13~~ |
| 63.6595(a)(1) | Must comply with applicable emission limitations and operating limitations no later than October 19, 2013 | Y | ~~10/19/13~~ |
| 63.6603(a) | Emission Limitations and Operating Limitations | Y | ~~10/19/13~~ |
| 63.6600(a), Table 2d, part 8. | Non-Emergency, non-black start 4SLB stationary RICE > 500 hp | Y | ~~10/19/13~~ |
| | a. Limit concentration of CO in the stationary RICE exhaust to 47 ppmvd at 15% O2. or b. Reduce CO emissions by 93 percent or more | Y | ~~10/19/13~~ |
| 63.6600(a), Table 2b, part 1. | 4SLB stationary RICE complying with the requirement to limit the concentration of CO in the stationary RICE exhaust using an oxidation catalyst | Y | ~~10/19/13~~ |
| | a. Maintain pressure drop across catalyst and b. Maintain exhaust temperature | Y | ~~10/19/13~~ |
| 63.6605 | General Compliance Requirements | Y | ~~10/19/13~~ |
| 63.6612 | Initial Compliance Demonstrations for existing stationary RICE at an area source of HAP emissions | Y | |
| Table 4 | Requirements for performance tests | Y | ~~10/19/13~~ |
| Table 4, part 1. | 4SLB Stationary RICE required to reduce CO emissions | Y | ~~10/19/13~~ |
| Table 5 | Initial Compliance with Emission Limitations and Operating Limitations | Y | ~~10/19/13~~ |

# IV. Source-specific Applicable Requirements

## Table IV-O
## Source-specific Applicable Requirements
## S-36 NATURAL GAS FIRED IC ENGINE

| Applicable Requirement | Regulation Title or Description of Requirement | Federally Enforceable (Y/N) | Future Effective Date |
|---|---|---|---|
| Table 5, part 1. | Existing, non-emergency 4SLB stationary RICE > 500 HP located at an area source of HAP that are operated more than 24 hours per calendar year | Y | ~~10/19/13~~ |
| 63.6615 | When must I conduct subsequent performance Tests? | Y | ~~10/19/13~~ |
| Table 3 | Subsequent Performance Tests | Y | ~~10/19/13~~ |
| Table 3, part 4. | Existing non-emergency, non-black start 4SLB stationary RICE located at an area source of HAP emissions with a brake horsepower > 500 that are operated more than 24 hours per calendar year that are not limited use stationary RICE | Y | ~~10/19/13~~ |
| 63.6620 | What performance tests and other procedures must I use | Y | ~~10/19/13~~ |
| 63.6625 | What are my monitoring, installation, collection, operation, and maintenance requirements? | Y | ~~10/19/13~~ |
| 63.6625(e) (10) | Operation and maintenance of RICE and after-treatment control device in accordance with manufacturer's emission-related written instructions | Y | ~~10/19/13~~ |
| 63.6625(h) | Minimize idle and startup time | Y | ~~10/19/13~~ |
| 63.6635(a) | Monitoring and data collection requirements | Y | ~~10/19/13~~ |
| 63.6640(a) | Demonstrate continuous compliance with each applicable emission and operation limitation in Tables 1a, 1b, 2a, 2b, 2c, and 2d per Table 6 | Y | ~~10/19/13~~ |
| Table 6, part 10 | Existing 4SLB stationary RICE > 500 HP located at an area source of HAP that operates more than 24 hours per calendar year and is not a limited use stationary RICE | Y | ~~10/19/13~~ |
| | i. Source testing for CO every 8,760 hours or 3 years, whichever comes fist | Y | ~~10/19/13~~ |
| 63.6645(a) | What notifications must I submit and when | Y | ~~10/19/13~~ |
| 63.6650 | What reports must I submit and when | Y | ~~10/19/13~~ |
| 63.6650(a) Table 7, part 1. | Compliance Report | Y | ~~10/19/13~~ |
| 63.6655(a) | Recordkeeping Requirements | Y | ~~10/19/13~~ |

# V. SCHEDULE OF COMPLIANCE

None

The permit holder shall comply with all applicable requirements cited in this permit. The permit holder shall also comply with applicable requirements that become effective during the term of this permit on a timely basis.

# VI. PERMIT CONDITIONS

Any condition that is preceded by an asterisk is not federally enforceable.

## A. Source Specific Permit Conditions

**Condition #2051**
For S-13 Alkylation Acid Storage Tank #13

1. The owner/operator shall ensure that S-13 Alkylation Acid Storage Tank is maintained in a gas-tight condition and is vented to the S-1 decomposition furnaces. Whenever the S-1 decomposition chamber is not available, due to either planned or unplanned circumstances, the owner/operator shall ensure that S-13 is vented to A-4 Acid Storage Tanks Back-up Vent Activated Carbon Beds and A-5 Acid Storage Tanks Back-up Vent Packed Tower Caustic Scrubber. (basis: cumulative increase)

**Condition #7606**
For S-15 Startup Air Heater

1. The owner/operator shall ensure that Startup Air Heater S-15 burns only natural gas. (basis: BACT)
2. The owner/operator shall ensure that natural gas usage at S-15 does not exceed five million (5,000,000) standard cubic feet during any consecutive 12-month period. (Basis: NOx offsets, cumulative increase)
3. The owner/operator shall ensure that NOx emissions from S-15 do not exceed 15~~66~~ ppmv and the applicable Regulation 9-7 NOx emission limit at 3% O2 on a dry basis, at any firing rate, except during the first fifteen minutes of start-up of the S-15 Air Preheater. (basis: NOx offsets, NOx BACT, cumulative increase, Regulation 9-7)
4. The owner/operator shall ensure that CO emissions from S-15 do not exceed 50 ppmv and the applicable Regulation 9-7 CO emission limit at 3% O2 on a dry basis, at any firing rate, except during the first fifteen minutes of start-up of the S-15 Air Preheater. (basis: CO BACT, cumulative increase, Regulation 9-7)
5. The owner/operator of S-15 shall maintain monthly records of natural gas usage at S-15 in a District approved log. These records shall be kept on site for a minimum of five years from the date of entry and shall be made available to District personnel upon request. (basis: cumulative increase, BAAQMD Regulation 2-6-501)

# VI. Permit Conditions

**Condition #7934**
For S-9 Process Air Heater

1. The owner/operator shall ensure that the Direct Fired Air Heater S-9 burns only Natural Gas. (basis: cumulative increase)
2. The owner/operator shall ensure that the usage of Natural Gas at S-9 does not exceed 61.3 million cubic feet during any consecutive 12-month period. (basis: NOx offsets, cumulative increase)
3. The owner/operator of S-9 shall maintain monthly records of natural gas usage at S-9 in a District approved log for a minimum of five years from the date of entry. These records shall be kept on site and made available to district personnel upon request. (basis: cumulative increase, BAAQMD Regulation 2-6-501)

**Condition #12051**
For S-17 Railcar Loading/Unloading Station (Sulfuric/Alkylation Acid)

1. The S-17 Rail Car Loading/Unloading Station may be used to transfer:

   (a) Sulfuric Acid (no more than 99% H2SO4 by weight) from storage tanks into rail cars and from rail cars into storage tanks, or

   (b) Alkylation Acid from rail cars into storage tanks and from storage tanks into rail cars.

   The owner/operator of S-17 shall obtain a Change of Permit Conditions from the District before performing any other type of transfer operation at S-17. (basis: cumulative increase)

2. During all transfers of alkylation acid from rail cars into storage tanks, the owner/operator shall ensure that S-17 is vented to the composition furnaces of the Sulfuric Acid Plant (S-1). During all transfers of alkylation acid from storage tanks into rail cars, the owner/operator shall ensure that S-17is vented to the decomposition furnaces of S-1. Whenever the S-1 decomposition chamber is not available due to planned or unplanned circumstances, the owner/operator shall ensure that S-17 is vented to A-4 Acid Storage Tanks Back-up Vent Activated Carbon Beds and A-5 Acid Storage Tanks Back-up Vent Packed Tower Caustic Scrubber. (basis: cumulative increase)

3. The owner/operator of S-17 shall maintain daily records (summarized on a monthly basis) in a District approved log of the amount of alkylation acid loaded into rail cars at S-17. These records shall be kept on site for minimum of five years and shall be made available to District personnel upon request. (basis: cumulative increase, BAAQMD Regulation 2-6-501)

# VI. Permit Conditions

**Condition #12052**
For S-18 Truck Unloading Station (Alkylation Acid)

1. The owner/operator shall ensure that the S-18 Alkylation Acid Unloading Station is only used to transfer alkylation Acid from tank trucks into storage tanks. The owner/operator of S-18 shall obtain a Change of Permit Conditions from the District before performing any other type of transfer operation at S-18. (basis: cumulative increase)
2. During all transfers of alkylation acid from tank trucks into storage tanks, the owner/operator shall ensure that S-18 is vented to the decomposition furnaces of the Sulfuric Acid Plant (S-1). Whenever the S-1 decomposition chamber is not available due to planned or unplanned circumstances the owner/operator shall ensure that S-18 is vented to A-4 Acid Storage Tanks Back-up Vent Activated Carbon Beds and A-5 Acid Storage Tanks Back-up Vent Packed Tower Caustic Scrubber. (basis: cumulative increase)

**Condition #13215**
For S-16 Alkylation Acid Tank #13

1. The owner/operator shall ensure that the throughput of alkylation acid at S-16 does not exceed 146,000 tons in any consecutive twelve-month period. (basis: cumulative increase)
2. The owner/operator shall maintain S-16 in a gas-tight condition and ensure that S-16 is vented to the S-1 Decomposition Chambers. Whenever the S-1 decomposition chamber is not available due to planned or unplanned circumstances, the owner/operator shall ensure that S-16 is vented to A-4 Acid Storage Tanks Back-up Vent Activated Carbon Beds and A-5 Acid Storage Tanks Back-up Vent Packed Tower Caustic Scrubber. (basis: cumulative increase)
3. The owner/operator shall ensure that S-16 is abated by A-1 (SO2 Abatement Facility) and A-2 (Mist Eliminator). (basis: cumulative increase)
4. The owner/operator of S-16 shall maintain monthly records of throughputs at S-16 in a District-approved log. These records shall be retained on-site for a minimum of five years from the date of entry and made available to District personnel upon request. (basis: cumulative increase, BAAQMD Regulation 2-6-501)

# VI. Permit Conditions

**Condition #13507**
For S-24 Electronic Grade Sulfuric Acid Manufacturing Process

1. The owner/operator shall ensure that the production rate of electronic grade sulfuric acid from S-24 does not exceed 15,000 tons during any consecutive 12-month period. (basis: cumulative increase)
2. The owner/operator shall ensure that the EGSA Process (S-24) is vented to the properly maintained and properly operated S-1 Sulfuric Acid Plant (upstream of the $SO_2$ to $SO_3$ Converter) during all times that S-24 is operating. The owner/operator shall ensure that emissions from the S-1 Sulfuric Acid Plant are vented to the properly maintained and properly operated A-1 Sulfur Dioxide Abatement System and A-2 Mist Eliminator. (basis: $SO_2$ BACT, PM10 BACT, cumulative increase)
3. To confirm compliance with Condition #1, the owner/ operator of S-24 shall maintain monthly records of the amount of electronic grade sulfuric acid produced at S-24. These records shall be kept on site for a minimum of five years from the date of entry and shall be made available to District personnel upon request. (basis: cumulative increase, BAAQMD Regulation 2-6-501)

**Condition #13889**
For S-32 Alkylation Acid/Sulfuric Acid Storage Tank #14

1. The owner/operator shall maintain S-32 Acid Tank in gas tight condition and ensure that S-32 is vented to the S-1 Sulfuric Acid Plant upstream of the Decomposition Chambers whenever S-32 contains spent alkylation acid. Whenever the S-1 decomposition chamber is not available, due to planned or unplanned circumstances, and the tank contains spent alkylation acid, the owner/operator shall ensure that S-32 is vented to A-4 Acid Storage Tanks Back-up Vent Activated Carbon Beds and A-5 Acid Storage Tanks Back-up Vent Packed Tower Caustic Scrubber. (basis: cumulative increase)
2. The owner/operator shall ensure that the total throughput of spent alkylation acid at S-32 does not exceed 219,000 tons during any consecutive 12 month period. (basis: cumulative increase)
3. To confirm compliance with Condition #2, the owner/operator shall maintain monthly records of spent alkylation acid throughput at S-32 in a District approved log. These records shall be kept on site for a minimum of five years from the date of entry and shall be made available to District personnel upon request. (basis: cumulative increase, BAAQMD Regulation 2-6-501)

# VI. Permit Conditions

**Condition #14980**
For S-1 Sulfuric Acid Manufacturing Process

~~1.~~2. To demonstrate compliance with BAAQMD Regulation 6-1-320, Sulfuric Acid Manufacturing Plants, BAAQMD Regulation 12-6-301, Acid Mist, and 40 CFR 60.31d, the owner/operator shall perform an annual source test at the exhaust from the A-1, Sulfur Dioxide Abatement Unit. The owner/operator shall obtain approval for all test procedures from the District's Source Test Section at least 7 days before conducting any tests. The results of this annual source test shall be submitted to the District within 30 days of conducting the test. The source test data and the summarized results shall be kept on site for at least five years after the test date. (basis: BAAQMD Regulation 2-6-409.2, 2-6-501, 40 CFR 60.31d)

~~2.~~3. The owner/operator shall properly maintain all equipment in good operation conditions. (basis: Cumulative increase)

**Condition #19267**
For Acid Storage Tanks Back-up Vent Scrubbing System consisting of
A-4 Acid Storage Tanks Back-up Vent Activated Carbon Beds
A-5 Acid Storage Tanks Back-up Vent Packed Tower Caustic Scrubber

1. The owner/operator shall maintain S-3 and S-10 (Storage Tank #12 and #11, respectively) in a gas-tight condition and ensure that S-3 and S-10 are vented to the S-1 decomposition chamber. Whenever the S-1 decomposition chamber is not available, due to planned or unplanned circumstances, the owner/operator shall ensure that S-3 and S-10 are vented to A-4 Acid Storage Tanks Back-up Vent Activated Carbon Beds and A-5 Acid Storage Tanks Back-up Vent Packed Tower Caustic Scrubber. Note: S-13, S-16 and S-32, Storage Tanks #16, #13, and #14, respectively, are covered by conditions 2051, 13215 and 13889. (basis: Cumulative increase)

2. The owner/operator shall perform a District approved source test (sulfuric acid and $SO_2$) with 60 days of start-up, in accordance with the District's Manual of Procedures. The owner/operator of the shall notify the Manager of the District of the District's Source Test Section at least seven (7) days prior to the test, to provide the District staff the option of observing the testing. With 45 days of test completion, a comprehensive report of the test results shall be submitted to the manager of the Source Test Section for review and disposition. (basis: Regulation 2-1-403)

## VI. Permit Conditions

3. Within 30 days of the start up of the A-4 Acid Storage Tanks Back-up Vent Activated Carbon Beds and A-5 Acid Storage Tanks Back-up Vent Packed Tower Caustic Scrubber, the owner/operator shall submit a Process Flow Diagram or suitably detailed sketch that shows the vent streams of the plant, including those abated by A-4 Acid Storage Tanks Back-up Vent Activated Carbon Beds and A-5 Acid Storage Tanks Back-up Vent Packed Tower Caustic Scrubber, those vent streams flowing to the A-3 Oleum Vent System, and the vent streams of all storage tank and truck loading/unloading sources. (basis: Cumulative increase)

4. The owner/operator shall monitor and record the following key operating parameters. The owner/operator shall record these parameters upon initial start-up of the system and at least weekly thereafter. For operational times less than a week, the owner/operator shall record the parameters at start-up and prior to shutdown. In any case the system must be started up, tested, and the parameters recorded quarterly. The owner/operator shall monitor and record the following parameters:
   a. The hydrocarbon concentration at the outlet of A-4 and/or A-5. The hydrocarbon concentration must be monitored with a District approved hydrocarbon detector.
   b. The circulating caustic liquor pH to A-5 packed tower.
   c. Throughput of acids for S-3, S-10, S-13, S-16 & S-32 on monthly basis with indication of emission destination (A-4/A-5 or S-1 Decomposition Chamber).
   d. Date when the A-4 activated carbon canisters are changed. These records must be maintained and kept on-site for at least 5 years and made available to the APCO upon request. (basis: Recordkeeping 2-6-501)

5. The owner/operator shall maintain at least a pH 8.5 or higher at the circulating inlet to A-5 packed tower scrubber. The pH of the caustic scrubber liquor may be changed if the owner/operator can demonstrate that a lower pH is sufficient to remove sulfur dioxide to less than 10 ppm or sulfuric acid gases to less than 5 ppm at the stack outlet. (basis: Cumulative increase)

6. The owner/operator of A-4 Acid Storage Tanks Back-up Vent Activated Carbon Beds and A-5 Acid Storage Tanks Back-up Vent Packed Tower Caustic Scrubber shall not allow more than 0.37 lb/hr of hydrocarbon emissions, 0.09 lb/hr of $SO_2$ emissions, or 0.014 lb/hr of $H_2SO_4$ emissions into the atmosphere from A-4 Acid Storage Tanks Back-up Vent Activated Carbon Beds or A-5 Acid Storage Tanks Back-up Vent Packed Tower Caustic Scrubber. (Basis: cumulative increase)

# VI. Permit Conditions

**Condition #20509**
For S-36 Natural Gas Fired IC Engine

1. The owner/operator of S-36 Generator shall fire the engine exclusively with natural gas at a rate not to exceed 13.7 MMBtu/hr (HHV). (basis: Cumulative Increase, BACT)

2. The owner/operator shall not operate the engine unless NOx, CO and POC emissions are abated by the properly functioning A-33 NSCR unit. (basis: Cumulative Increase, BACT)

3. The owner/operator of S-36 shall ensure that the engine emissions do not exceed the following limits:

   NOx 0.15 g/bhp-hr
   CO 0.6 g/bhp-hr
   POC 0.15 g/bhp-hr
   (basis: Cumulative Increase, BACT)

4. To demonstrate compliance with part 3, the owner/operator shall measure the NOx and CO concentration from the S-36 engine. Measurements may be made using a District-approved source test, or using hand-held portable NOx and CO monitors. The owner/operator shall ensure that testing is executed in accordance with the following schedule:

   a) The initial source test shall occur within 30 days of startup or longer with written approval from the District. The owner/operator may submit a request detailing why an extension should be granted.
   b) If using a hand-held monitor, subsequent testing shall occur at least once per consecutive 6-month period, following startup.
   c) If using a District-approved source test, subsequent testing shall occur at least once per consecutive 24-month period, following startup.

   Hand-held portable monitors shall be operated, maintained and calibrated in accordance with manufacturer guidelines. All source testing shall be done in accordance with the District's Manual of Procedures. The facility shall receive approval from the District's Source Test Manager for installation of test ports and source testing procedures. The results shall be delivered to the District no later than 30 days from the date of the source test.
   (basis: Cumulative Increase, BACT, Regulation 9-8-501)

# VI. Permit Conditions

5. The owner/operator shall retain the following records on-site for a minimum of two years from the date of entry and make them available for inspection by District staff upon request.
   a) NOx and CO concentration measurements taken as per part 4
   b) b) Any source test records
   (basis: BACT, Cumulative Increase, Reg. 9-8-530:Record keeping)

**Condition #20580**
For A-6 Emergency Caustic Scrubber System

1. The owner/operator shall only operate A-6 scrubber during emergency or upset conditions, planned shutdowns, or when the equipment upstream of the main blowers changes from vacuum operation to positive pressure.

2. The owner/operator shall operate A-6 emergency caustic scrubber so that the emissions of sulfur dioxide do not exceed 51 ppmv, at zero excess air, dry, and the acid mist emissions do not exceed 0.3 pounds per ton of sulfuric acid produced. (Basis: Cumulative emissions, 12-6-301)

3. The owner/operator shall operate A-6 emergency caustic scrubber so that the emissions of sulfur trioxide or sulfuric acid, expressed as 100% sulfuric acid, do not exceed a concentration of 0.04 grains per dscf of exhaust gas volume. (Basis: 6-320)

4. The owner/operator shall monitor and record all key operating parameters required to verify compliance. Parameters shall be recorded upon initial start-up of the system and at least twice an hour thereafter. In any case the system must be started up, tested, and the parameters recorded quarterly. The following parameters shall be monitored and recorded:
   a. The nature of the emergency event and the duration the A-6 abatement system was placed in service.
   b. The gas flowrate to the abatement system, either by direct measurement or by District approved engineering calculations.
   c. The concentration of $SO_2$ in the gas stream to the abatement system, either by direct measurement or by District approved engineering calculations.
   d. The pressure drop across the venturi scrubber.
   e. The concentration of $SO_2$ leaving the abatement system, either by direct measurement or by District approved engineering calculations.
   f. The circulating caustic solution pH to A-6 packed tower.
   g. The circulating caustic solution flowrate to A-6 packed tower in GPM.
   h. The absorbing tower performance, including gas load, liquid load, percent of flood and abatement efficiency.

# VI. Permit Conditions

i. Date and quantity of all materials added to or removed from liquid surge section, acidulation tank, or any other part of the abatement system. These records must be maintained and kept on-site for at least 5 years and made available to the APCO upon request. (Basis: Recordkeeping 2-6-501)

**Condition #22820**
For S-34 Caustic Pump Diesel Engine

1.Operating for reliability-related activities is limited to 20 hours per year per engine.
[Basis: "Stationary Diesel Engine ATCM", CA Code of Regulations, Title 17, Section 93115.6(b)(3)(A)(1)(a)]

2. The owner or operator shall operate each emergency standby engine only for the following purposes: to mitigate emergency conditions, for emission testing to demonstrate compliance with a District, state or Federal emission limit, or for reliability-related activities (maintenance and other testing, but excluding emission testing). Operating hours while mitigating emergency conditions or while emission testing to show compliance with District, state or Federal emission limits is not limited.
[Basis: "Stationary Diesel Engine ATCM", CA Code of Regulations, Title 17, Section 93115.6(b)(3)(A)(1)(a)]

3. The owner/operator shall operate each emergency standby engine only when a non-resettable totalizing meter (with a minimum display capability of 9,999 hours) that measures the hours of operation for the engine is installed, operated and properly maintained.
[Basis: "Stationary Diesel Engine ATCM", CA Code of Regulations, Title 17, Section 93115.10(e)(1)]

4. Records: The owner/operator shall maintain the following monthly records in a District-approved log for at least 36 months from the date of entry (60 months if the facility has been issued a Title V Major Facility Review Permit or a Synthetic Minor Operating Permit). Log entries shall be retained on-site, either at a central location or at the engine's location, and made immediately available to the District staff upon request.

a. Hours of operation for reliability-related activities (maintenance and testing).
b. Hours of operation for emission testing to show compliance with emission limits.
c. Hours of operation (emergency).

## VI. Permit Conditions

d. For each emergency, the nature of the emergency condition.
e. Fuel usage for each engine(s).
[Basis: "Stationary Diesel Engine ATCM", CA Code of Regulations, Title 17, Section 93115.10(g), or (Regulation 2-6-501)]

5. At School and Near-School Operation:
If the emergency standby engine is located on school grounds or within 500 feet of any school grounds, the following requirements shall apply:
The owner or operator shall not operate each stationary emergency standby diesel-fueled engine for non-emergency use, including maintenance and testing, during the following periods:
a. Whenever there is a school-sponsored activity (if the engine is located on school grounds).
b. Between 7:30 a.m. and 3:30 p.m. on days when school is in session "School" or "School Grounds" means any public or private school used for the purposes of the education of more than 12 children in kindergarten or any of grades 1 to 12, inclusive, but does not include any private school in which education is primarily conducted in a private home(s). "School" or "School Grounds" includes any building or structure, playground, athletic field, or other areas of school property but does not include unimproved school property.
[Basis: "Stationary Diesel Engine ATCM", CA Code of Regulations, Title 17, Section 93115.6(a)(1)]

# VII. APPLICABLE LIMITS & COMPLIANCE MONITORING REQUIREMENTS

This section has been included to summarize the applicable emission limits contained in Section IV, Source-Specific Applicable Requirements, of this permit. The following tables show the relationship between each emission limit and the associated compliance monitoring provisions, if any. The monitoring frequency column indicates whether periodic (P) or continuous (C) monitoring is required. For periodic monitoring, the frequency of the monitoring has also been shown, using the following codes: annual (A), quarterly (Q), monthly (M), weekly (W), daily (D), or on an event basis (E). No monitoring (N) has been required if the current applicable rule or regulation does not require monitoring, and the operation is unlikely to deviate from the applicable emission limit based upon the nature of the operation.

This section is only a summary of the limits and monitoring requirements. In the case of a conflict with any requirement in Sections I-VI, the preceding sections take precedence over Section VII.

**Table VII-A**
**Applicable Limits and Compliance Monitoring Requirements**
**S-1 Sulfuric Acid Manufacturing Process**

| Type of Limit | Citation of Limit | FE Y/N | Future Effective Date | Limit | Monitoring Requirement Citation | Monitoring Frequency (P/C/N) | Monitoring Type |
|---|---|---|---|---|---|---|---|
| SO2 | BAAQMD 9-1-301 | N~~Y~~ | | ground level concentrations shall not exceed: 0.5 ppm for 3 consecutive minutes AND 0.25 ppm averaged over 60 consecutive minutes AND 0.05 ppm averaged over 24 hours | | N | |
| $SO_2$ | BAAQMD 9-1-309 | N~~Y~~ | | gaseous emissions from any source at an $H_2SO_4$ plant shall not exceed 300 ppm @ 12% oxygen | BAAQMD 9-1-502 | C | CEM |

# VII. Applicable Limits & Compliance Monitoring Requirements

## Table VII-A
## Applicable Limits and Compliance Monitoring Requirements
## S-1 Sulfuric Acid Manufacturing Process

| Type of Limit | Citation of Limit | FE Y/N | Future Effective Date | Limit | Monitoring Requirement Citation | Monitoring Frequency (P/C/N) | Monitoring Type |
|---|---|---|---|---|---|---|---|
| SO2 | SIP Regulation 9-1-301 | Y | | ground level concentrations shall not exceed: 0.5 ppm for 3 consecutive minutes AND 0.25 ppm averaged over 60 consecutive minutes AND 0.05 ppm averaged over 24 hours | | N | |
| $SO_2$ | SIP Regulation 9-1-309 | Y | | gaseous emissions from any source at an $H_2SO_4$ plant shall not exceed 300 ppm @ 12% oxygen | SIP 9-1-502 | C | CEM |
| Sulfuric Acid mist | BAAQMD 12-6-301 | N | | gaseous emissions from an H2SO4 production unit shall not exceed 0.15 g/kg (0.3 lb/ton) of acid produced | BAAQMD Condition #14980, part 1 | P/A | Source test |
| | 40 CFR 60.31d | Y | | 0.5 lb/ton of sulfuric acid produced | BAAQMD Condition #14980, part 1 | P/A | Source test |
| SO3 and H2SO4 | BAAQMD 6-1-320 | N | | 0.04 grain/dscf | BAAQMD Condition #14980, part 1 | P/A | Source Test |
| Opacity | BAAQMD 6-1-301 | N | | Ringelmann No. 1 | | N | |
| FP | BAAQMD 6-1-310 | N | | 0.15 grain/dscf | | N | |
| FP | BAAQMD 6-1-311 | N | | 36.5 lb/hr | | N | |

# VII. Applicable Limits & Compliance Monitoring Requirements

## Table VII-A
## Applicable Limits and Compliance Monitoring Requirements
## S-1 Sulfuric Acid Manufacturing Process

| Type of Limit | Citation of Limit | FE Y/N | Future Effective Date | Limit | Monitoring Requirement Citation | Monitoring Frequency (P/C/N) | Monitoring Type |
|---|---|---|---|---|---|---|---|
| SO3 and H2SO4 | SIP 6-320 | Y | | 0.04 grain/dscf | BAAQMD Condition #14980, part 1 | P/A | Source Test |
| Opacity | SIP 6-301 | Y | | Ringelmann No. 1 | | N | |
| FP | SIP 6-310 | Y | | 0.15 grain/dscf | | N | |
| FP | SIP 6-311 | Y | | 36.5 lb/hr | | N | |

## Table VII-B
## Applicable Limits and Compliance Monitoring Requirements
## S-9 Process Air Heater

| Type of Limit | Citation of Limit | FE Y/N | Future Effective Date | Limit | Monitoring Requirement Citation | Monitoring Frequency (P/C/N) | Monitoring Type |
|---|---|---|---|---|---|---|---|
| ~~NOx~~ | ~~BAAQMD 9-7-301.1~~ | ~~N~~ | | ~~emissions shall not exceed 30 ppmv, dry @ 3% oxygen~~ | | ~~N~~ | |
| NOx | BAAQMD 9-7-307.3 | N | ~~1/1/12~~ | emissions shall not exceed 15 ppmv, dry @ 3% oxygen | BAAQMD 9-7-506 | P | Annual Source Test |
| NOx | SIP 9-7-301.1 | Y | | emissions shall not exceed 30 ppmv, dry @ 3% oxygen | | N | |
| ~~CO~~ | ~~BAAQMD 9-7-301.2~~ | ~~N~~ | | ~~emissions shall not exceed 400 ppmv, dry @ 3% oxygen~~ | | ~~N~~ | |
| CO | BAAQMD 9-7-307.3 | N | ~~1/1/12~~ | emissions shall not exceed 400 ppmv, dry @ 3% oxygen | BAAQMD 9-7-506 | P | Annual Source Test |

# VII. Applicable Limits & Compliance Monitoring Requirements

## Table VII-B
## Applicable Limits and Compliance Monitoring Requirements
## S-9 Process Air Heater

| Type of Limit | Citation of Limit | FE Y/N | Future Effective Date | Limit | Monitoring Requirement Citation | Monitoring Frequency (P/C/N) | Monitoring Type |
|---|---|---|---|---|---|---|---|
| CO | SIP 9-7-301.2 | Y | | emissions shall not exceed 400 ppmv, dry @ 3% oxygen | | N | |
| $H_2S$ | BAAQMD 9-2-301 | N | | GLC[3] of 0.06 ppm min. average, or 0.03 ppm 60 min. average | | N | |
| $SO_2$ | BAAQMD 9-1-301 | N~~Y~~ | | GLC[3] of 0.5 ppm for 3 min or 0.25 ppm for 60 min or 0.05 ppm for 24 hours | | N | |
| | BAAQMD 9-1-302 | N~~Y~~ | | 300 ppm (dry) | | N | |
| | SIP 9-1-301 | Y | | GLC[3] of 0.5 ppm for 3 min or 0.25 ppm for 60 min or 0.05 ppm for 24 hours | | N | |
| | SIP 9-1-302 | Y | | 300 ppm (dry) | | N | |
| Opacity | BAAQMD 6-1-301 | N | | Ringelmann No. 1 | | N | |
| FP | BAAQMD 6-1-310 | N | | 0.15 grain/dscf | | N | |
| Opacity | SIP 6-301 | Y | | Ringelmann No. 1 | | N | |
| FP | SIP 6-310 | Y | | 0.15 grain/dscf | | N | |
| NOx, CO, VOC, PM10 | BAAQMD Condition #7934 part 2 | Y | | fuel consumption shall not exceed 61.3 million cubic feet / 12 month period | BAAQMD Condition #7934 part 3 | P/M | monthly records |

[3]Ground Level Concentration

# VII. Applicable Limits & Compliance Monitoring Requirements

## Table VII-C
## Applicable Limits and Compliance Monitoring Requirements
## S-15 Startup Air Heater

| Type of Limit | Citation of Limit | FE Y/N | Future Effective Date | Limit | Monitoring Requirement Citation | Monitoring Frequency (P/C/N) | Monitoring Type |
|---|---|---|---|---|---|---|---|
| NOx | BAAQMD 9-7-307.3 | N | ~~1/1/12~~ | emissions shall not exceed 15 ppmv, dry @ 3% oxygen | BAAQMD 9-7-506 | P | Annual Source Test |
| NOx | BAAQMD Condition #7606 part 3 | Y | | emissions shall not exceed 15~~66~~ ppmv | | N | |
| ~~CO~~ | ~~BAAQMD Regulation 9-7-301.2~~ | ~~N~~ | | ~~emissions shall not exceed 400 ppmv @ 3% O2~~ | | ~~N~~ | |
| CO | BAAQMD 9-7-307.3 | N | ~~1/1/12~~ | emissions shall not exceed 400 ppmv, dry @ 3% oxygen | BAAQMD 9-7-506 | P | Annual Source Test |
| CO | SIP 9-7-301.2 | Y | | emissions shall not exceed 400 ppmv, dry @ 3% oxygen | | N | |
| CO | BAAQMD Condition #7606 part 4 | Y | | Emissions shall not exceed 50 ppmv | | N | |
| NOx, CO, VOC, PM10 | BAAQMD Condition #7606 part 2 | Y | | fuel consumption shall not exceed 5 million cubic feet / 12 month period | BAAQMD Condition #7606 part 2 | P/M | monthly records |
| $SO_2$ | BAAQMD 9-1-301 | N~~Y~~ | | GLC[3] of 0.5 ppm for 3 min or 0.25 ppm for 60 min or 0.05 ppm for 24 hours | | N | |
| | BAAQMD 9-1-302 | N~~Y~~ | | 300 ppm (dry) | | N | |
| | SIP 9-1-301 | Y | | GLC[3] of 0.5 ppm for 3 min or 0.25 ppm for 60 min or 0.05 ppm for 24 hours | | N | |
| | SIP 9-1-302 | Y | | 300 ppm (dry) | | N | |

# VII. Applicable Limits & Compliance Monitoring Requirements

## Table VII-C
## Applicable Limits and Compliance Monitoring Requirements
## S-15 Startup Air Heater

| Type of Limit | Citation of Limit | FE Y/N | Future Effective Date | Limit | Monitoring Requirement Citation | Monitoring Frequency (P/C/N) | Monitoring Type |
|---|---|---|---|---|---|---|---|
| Opacity | BAAQMD 6-1-301 | N | | Ringelmann No. 1 | | N | |
| FP | BAAQMD 6-1-310 | N | | 0.15 grain/dscf | | N | |
| Opacity | SIP 6-301 | Y | | Ringelmann No. 1 | | N | |
| FP | SIP 6-310 | Y | | 0.15 grain/dscf | | N | |

## Table VII-D
## Applicable Limits and Compliance Monitoring Requirements
## S-16 Alkylation Acid Storage Tank #13

| Type of Limit | Citation of Limit | FE Y/N | Future Effective Date | Limit | Monitoring Requirement Citation | Monitoring Frequency (P/C/N) | Monitoring Type |
|---|---|---|---|---|---|---|---|
| VOC, PM10 | BAAQMD Condition #13215, part 1 | Y | | throughput shall not exceed 146,000 ton per 12 month period | BAAQMD Condition #13215 part 4 | P/M | monthly records |

# VII. Applicable Limits & Compliance Monitoring Requirements

## Table VII-E
## Applicable Limits and Compliance Monitoring Requirements
## S-24 Electronic Grade Sulfuric Acid Manufacturing Process

| Type of Limit | Citation of Limit | FE Y/N | Future Effective Date | Limit | Monitoring Requirement Citation | Monitoring Frequency (P/C/N) | Monitoring Type |
|---|---|---|---|---|---|---|---|
| $SO_2$ | BAAQMD 9-1-301 | N~~Y~~ | | ground level concentrations shall not exceed: 0.5 ppm for 3 consecutive minutes AND 0.25 ppm averaged over 60 consecutive minutes AND 0.05 ppm averaged over 24 hours | BAAQMD 9-1-501 | N | Compliance with 9-1-309 ensures compliance with 9-1-301 at this facility |
| | BAAQMD 9-1-309 | N~~Y~~ | | gaseous emissions from any source at an $H_2SO_4$ plant shall not exceed 300 ppmv @ 12% oxygen | BAAQMD 9-1-502 | C | CEM |
| | SIP 9-1-301 | Y | | ground level concentrations shall not exceed: 0.5 ppm for 3 consecutive minutes AND 0.25 ppm averaged over 60 consecutive minutes AND 0.05 ppm averaged over 24 hours | SIP 9-1-501 | N | Compliance with 9-1-309 ensures compliance with 9-1-301 at this facility |
| | SIP 9-1-309 | Y | | gaseous emissions from any source at an $H_2SO_4$ plant shall not exceed 300 ppmv @ 12% oxygen | SIP 9-1-502 | C | CEM |

# VII. Applicable Limits & Compliance Monitoring Requirements

## Table VII-E
## Applicable Limits and Compliance Monitoring Requirements
## S-24 Electronic Grade Sulfuric Acid Manufacturing Process

| Type of Limit | Citation of Limit | FE Y/N | Future Effective Date | Limit | Monitoring Requirement Citation | Monitoring Frequency (P/C/N) | Monitoring Type |
|---|---|---|---|---|---|---|---|
| | BAAQMD Condition #13507, part 1 | Y | | production shall not exceed 15,000 ton/12 month period | Condition #13507 part 3 | P/M | monthly records |
| Sulfuric acid mist | BAAQMD 12-6-301 | Y | | gaseous emissions from an $H_2SO_4$ production unit shall not exceed 0.15 g/kg (0.3 lb/ton) of acid produced | | N | |
| Opacity | BAAQMD 6-1-301 | N | | Ringelmann No. 1 | | N | |
| FP | BAAQMD 6-1-310 | N | | 0.15 grain/dscf | | N | |
| FP | BAAQMD 6-1-311 | N | | 2.75 lb/hr | | N | |
| $SO_3$ and $H_2SO_4$ | BAAQMD 6-1-320 | N | | 0.04 grain/dscf | | N | |
| Opacity | SIP 6-301 | Y | | Ringelmann No. 1 | | N | |
| FP | SIP 6-310 | Y | | 0.15 grain/dscf | | N | |
| FP | SIP 6-311 | Y | | 2.75 lb/hr | | N | |
| $SO_3$ and $H_2SO_4$ | SIP 6-320 | Y | | 0.04 grain/dscf | | N | |

# VII. Applicable Limits & Compliance Monitoring Requirements

## Table VII-F
## Applicable Limits and Compliance Monitoring Requirements
## S-32 Alkylation Acid / Sulfuric Acid Storage Tank #14

| Type of Limit | Citation of Limit | FE Y/N | Future Effective Date | Limit | Monitoring Requirement Citation | Monitoring Frequency (P/C/N) | Monitoring Type |
|---|---|---|---|---|---|---|---|
| VOC, PM10 | BAAQMD Condition #13889 part 2 | Y | | alkylation acid throughput shall not exceed 219,000 ton per 12 month period | BAAQMD Condition #13889 part 3 | P/M | monthly records |

## Table VII - G
## Applicable Limits and Compliance Monitoring Requirements
## S-2 Sulfuric Acid Storage Tank, S-5 Sulfuric Acid Storage Tank, S-11 Sulfuric Acid Storage Tank, S-28 Sulfuric Acid Storage Tank, S-29 Sulfuric Acid Storage Tank, S-30 Sulfuric Acid Storage Tank, S-31 Sulfuric Acid Storage Tank

| Type of Limit | Citation of Limit | FE Y/N | Future Effective Date | Limit | Monitoring Requirement Citation | Monitoring Frequency (P/C/N) | Monitoring Type |
|---|---|---|---|---|---|---|---|
| None | | | | | | | |

## Table VII - H
## Applicable Limits and Compliance Monitoring Requirements
## S-3 Alkylation Acid Storage Tank, S-10 Alkylation Acid Storage Tank

| Type of Limit | Citation of Limit | FE Y/N | Future Effective Date | Limit | Monitoring Requirement Citation | Monitoring Frequency (P/C/N) | Monitoring Type |
|---|---|---|---|---|---|---|---|
| None | | | | | | | |

# VII. Applicable Limits & Compliance Monitoring Requirements

## Table VII - I
## Applicable Limits and Compliance Monitoring Requirements
## S-8 New Sulfur Melting Pit

| Type of Limit | Citation of Limit | FE Y/N | Future Effective Date | Limit | Monitoring Requirement Citation | Monitoring Frequency (P/C/N) | Monitoring Type |
|---|---|---|---|---|---|---|---|
| None | | | | | | | |

## Table VII - J
## Applicable Limits and Compliance Monitoring Requirements
## S-13 Alkylation Acid Storage Tank #16

| Type of Limit | Citation of Limit | FE Y/N | Future Effective Date | Limit | Monitoring Requirement Citation | Monitoring Frequency (P/C/N) | Monitoring Type |
|---|---|---|---|---|---|---|---|
| None | | | | | | | |

## Table VII - K
## Applicable Limits and Compliance Monitoring Requirements
## S-17 Railcar Loading/Unloading Station (Sulfuric/Alkylation Acid)

| Type of Limit | Citation of Limit | FE Y/N | Future Effective Date | Limit | Monitoring Requirement Citation | Monitoring Frequency (P/C/N) | Monitoring Type |
|---|---|---|---|---|---|---|---|
| None | | | | | | | |

## Table VII - L
## Applicable Limits and Compliance Monitoring Requirements
## S-18 Truck Unloading Station (Alkylation Acid)

| Type of Limit | Citation of Limit | FE Y/N | Future Effective Date | Limit | Monitoring Requirement Citation | Monitoring Frequency (P/C/N) | Monitoring Type |
|---|---|---|---|---|---|---|---|
| None | | | | | | | |

# VII. Applicable Limits & Compliance Monitoring Requirements

## Table VII - M
## Applicable Limits and Compliance Monitoring Requirements
## S-20 Truck Loading/Unloading Station, S-22 Sulfur Unloading Station

| Type of Limit | Citation of Limit | FE Y/N | Future Effective Date | Limit | Monitoring Requirement Citation | Monitoring Frequency (P/C/N) | Monitoring Type |
|---|---|---|---|---|---|---|---|
| None | | | | | | | |

## Table VII – N
## Applicable Limits and Compliance Monitoring Requirements
## S-34 CAUSTIC PUMP DIESEL ENGINE

| Type of Limit | Citation of Limit | FE Y/N | Future Effective Date | Limit | Monitoring Requirement Citation | Monitoring Frequency (P/C/N) | Monitoring Type |
|---|---|---|---|---|---|---|---|
| Opacity | BAAQMD 6-1-303.1 | N | | > Ringelmann No. 2 for no more than 3 minutes in any hour | | N | |
| Opacity | SIP 6-303.1 | Y | | > Ringelmann No. 2 for no more than 3 minutes in any hour | | N | |
| FP | BAAQMD 6-1-310 | N | | 0.15 grain/dscf | | N | |
| FP | SIP 6-310 | Y | | 0.15 grain/dscf | | N | |
| SO2 | BAAQMD 9-1-304 | N~~Y~~ | | Fuel Sulfur Limit 0.5% | None | P/E | Vendor Certification |
| SO2 | SIP 9-1-304 | Y | | Fuel Sulfur Limit 0.5% | None | P/E | Vendor Certification |
| Reliability-related activities | BAAQMD Condition #22820, part 1 | N | | 20 hours per calendar year | BAAQMD Condition #22820, part 3, 4 | P/E | Totalizing meter, record-keeping |
| Hours of Operation | BAAQMD 9-8-330 | N | | 20 hours/yr for maintenance and testing | BAAQMD 9-8-530 | C | Totalizing Counter |

# VII. Applicable Limits & Compliance Monitoring Requirements

## Table VII – N
## Applicable Limits and Compliance Monitoring Requirements
## S-34 CAUSTIC PUMP DIESEL ENGINE

| Type of Limit | Citation of Limit | FE Y/N | Future Effective Date | Limit | Monitoring Requirement Citation | Monitoring Frequency (P/C/N) | Monitoring Type |
|---|---|---|---|---|---|---|---|
| Hours of Operation | BAAQMD 9-8-330 | N | | 20 hours/yr for maintenance and testing | BAAQMD 9-8-520.1 & 9-8-530 | M | Records |
| Hours of Operation | CCR, Title 17, Section 93115. 6(b)(3)(A)(1)(a) | N | | 20 hours/yr for maintenance and testing | CCR, Title 17, Section 93115.10(e)(1) | C | Totalizing Counter |
| Hours of Operation | CCR, Title 17, Section 93115. 6(b)(3)(A)(1)(a) | N | | 20 hours/yr for maintenance and testing | CCR, Title 17, Section 93115.10(g) | M | Records |

## Table VII – O
## Applicable Limits and Compliance Monitoring Requirements
## S-36 NATURAL GAS-FIRED IC ENGINE

| Type of Limit | Citation of Limit | FE Y/N | Future Effective Date | Limit | Monitoring Requirement Citation | Monitoring Frequency (P/C/N) | Monitoring Type |
|---|---|---|---|---|---|---|---|
| Opacity | BAAQMD 6-1-303.1 | N | | > Ringelmann No. 2 for no more than 3 minutes in any hour | | N | |
| Opacity | SIP 6-303.1 | Y | | > Ringelmann No. 2 for no more than 3 minutes in any hour | | N | |
| FP | BAAQMD 6-1-310 | N | | 0.15 grain/dscf | | N | |
| FP | SIP 6-310 | Y | | 0.15 grain/dscf | | N | |

# VII. Applicable Limits & Compliance Monitoring Requirements

## Table VII – O
## Applicable Limits and Compliance Monitoring Requirements
## S-36 NATURAL GAS-FIRED IC ENGINE

| Type of Limit | Citation of Limit | FE Y/N | Future Effective Date | Limit | Monitoring Requirement Citation | Monitoring Frequency (P/C/N) | Monitoring Type |
|---|---|---|---|---|---|---|---|
| $SO_2$ | BAAQMD 9-1-301 | N | | GLC[3] of 0.5 ppm for 3 min or 0.25 ppm for 60 min or 0.05 ppm for 24 hours | | N | |
| $SO_2$ | BAAQMD 9-1-302 | N | | 300 ppm (dry) | | N | |
| $SO_2$ | SIP 9-1-301 | Y | | GLC[3] of 0.5 ppm for 3 min or 0.25 ppm for 60 min or 0.05 ppm for 24 hours | | N | |
| $SO_2$ | SIP 9-1-302 | Y | | 300 ppm (dry) | | N | |
| NOx | BAAQMD 9-8-301.2 | N | | 65 ppmvd @ 15% O2 | | P | Portable Analyzer |
| NOx | SIP 9-8-301.2 | Y | | 140 ppmvd @ 15% O2 | | N | |
| NOx | BAAQMD Condition #20509, part 3 | Y | | 0.15 g/bhp-hr | | P | |
| CO | BAAQMD 9-8-301.3 | N | | 2000 ppmvd @ 15% O2 | | P | Portable Analyzer |
| CO | SIP 9-8-301.3 | Y | | 2000 ppmvd @ 15% O2 | | N | |
| CO | BAAQMD Condition #20509, part 3 | Y | | 0.6 g/bhp-hr | | P | |
| CO | 63.6600(a), Table 2d, part 8.a. | Y | ~~10/19/13~~ | 47 ppmvd @15% O2 or reduce CO emissions by 93% or more by weight | 63.6612, Table 6, part 10. | P; Every 8,760 hours or 3 years, whichever comes first | Source Test |
| POC | BAAQMD Condition #20509, part 3 | Y | | 0.15 g/bhp-hr | | P | |

# VIII. TEST METHODS

The test methods associated with the emission limit of a District regulation are generally found in Section 600 et. seq of the regulation. The following table indicates only the test methods associated with the emission limits included in Section VII - Applicable Limits & Compliance Monitoring Requirements, of this permit.

| Applicable Requirement | Description of Requirement | Acceptable Test Methods |
|---|---|---|
| BAAQMD 6-1-301 | Ringelmann No. 1 Limitation | Manual of Procedures, Volume I, Evaluation of Visible Emissions; or US EPA Method 9 |
| BAAQMD 6-1-303 | Ringelmann No. 2 Limitation | Manual of Procedures, Volume I, Evaluation of Visible Emissions; or US EPA Method 5, Determination of Particulate Matter Emissions from Stationary Sources |
| BAAQMD 6-1-310 | Particulate Weight Limitation | Manual of Procedures, Volume IV, ST-15, Particulates Sampling or US EPA Method 5, Determination of Particulate Matter Emissions from Stationary Sources |
| BAAQMD 6-1-311 | General Operations | Manual of Procedures, Volume IV, ST-15, Particulates Sampling or US EPA Method 5, Determination of Particulate Matter Emissions from Stationary Sources |
| BAAQMD 6-1-320 | Sulfuric Acid Manufacturing Plants | Manual of Procedures, Volume IV, ST-20, Sulfur Dioxide, Sulfur Trioxide and Sulfuric Acid Mist |
| BAAQMD Regulation 8-7-301.2 | Gasoline Vapor Recovery | BAAQMD Manual of Procedures, Volume IV, ST-36 |
| BAAQMD Regulation 9-1-301 | Ground Level $SO_2$ | BAAQMD Manual of Procedures, Volume VI, Section 1 |
| BAAQMD 9-1-302 | General Emission Limitation | Manual of Procedures, Volume IV, ST-19A, Sulfur Dioxide, Continuous Sampling; or ST-19B, Total Sulfur Oxides Integrated Sample |
| BAAQMD 9-1-304 | Fuel Burning (Liquid and Solid Fuels) | Manual of Procedures, Volume III, Method 10, Determination of Sulfur in Fuel Oil |
| BAAQMD 9-1-309 | $SO_2$ Emission Point | Manual of Procedures, Volume V (CEM Policy and Procedures) |
| BAAQMD 12-6-301 | Acid Mist Emission Point | 40 CFR 60, Appendix A, Method 8, Determination of Sulfuric Acid Mist and Sulfur Dioxide Emissions from Stationary Sources |
| BAAQMD 9-7-301.1 | NOx Concentration Limit | Manual of Procedures, Volume IV, ST-13A, Oxides of Nitrogen, Continuous Sampling and ST-14, Oxygen, Continuous Sampling |
| BAAQMD 9-7-301.2 | CO Concentration Limit | BAAQMD Manual of Procedures, Volume IV, ST-6, Carbon Monoxide, Continuous Sampling and ST-14, Oxygen, Continuous Sampling |

# VIII. Test Methods

| Applicable Requirement | Description of Requirement | Acceptable Test Methods |
|---|---|---|
| BAAQMD 9-7-307.3 | NOx and CO Concentration Limit | Manual of Procedures, Volume IV, ST-13A, Oxides of Nitrogen, Continuous Sampling; ST-6, Carbon Monoxide, Continuous Sampling; and ST-14, Oxygen, Continuous Sampling |
| 40 CFR 60.31d | Emissions Guidelines | 40 CFR 60, Appendix A, Method 8, Determination of Sulfuric Acid Mist and Sulfur Dioxide Emissions from Stationary Sources |
| BAAQMD Condition #7606, part 2 | NOx Concentration Limit | BAAQMD Manual of Procedures, Volume IV, ST-13A, Oxides of Nitrogen, Continuous Sampling |
| BAAQMD Condition #7606, part 3 | CO Concentration Limit | BAAQMD Manual of Procedures, Volume IV, ST-6, Carbon Monoxide, Continuous Sampling |

# IX. PERMIT SHIELD

Pursuant to District Regulations 2-6-233 and 2-6-409.12, the federally enforceable regulations and/or standards cited in the following table[s] do not apply to the source or group of sources identified at the top of the table[s]. Enforcement actions and litigation may not be initiated against the source or group of sources covered by this shield based on the regulatory and/or statutory provisions cited, as long as the reasons listed below remain valid for the source or group of sources covered by this shield.

**Table IX-A**
**S-1 Sulfuric Acid Manufacturing Process**

| Citation | Title or Description (Reason not applicable) |
|---|---|
| BAAQMD 9-1-302 | General Emission Limitation (Source is subject to Section 9-1-309) |
| BAAQMD 6-302 | Opacity Limitation (SIP regulations do not require opacity monitoring for this source) |
| 40 CFR 60.82 | Standards of Performance for Sulfuric Acid Plants (Source constructed prior to 8/17/71 and not modified as defined by 40 CFR 60.14 since 8/17/71) |
| 40 CFR 60.83 | Standards of Performance for Sulfuric Acid Plants (Source constructed prior to 8/17/71 and not modified as defined by 40 CFR 60.14 since 8/17/71) |

**Table IX-B**
**S-24 Sulfuric Acid Manufacturing Process**

| Citation | Title or Description (Reason not applicable) |
|---|---|
| BAAQMD 9-1-302 | General Emission Limitation (Source is subject to Section 9-1-309) |
| BAAQMD 6-302 | Opacity Limitation (SIP regulations do not require opacity monitoring for this source) |
| 40 CFR 60.82 | Standards of Performance for Sulfuric Acid Plants (Source is not Sulfuric Acid Manufacturing as defined by 60.81(a)) |
| 40 CFR 60.83 | Standards of Performance for Sulfuric Acid Plants (Sources is not Sulfuric Acid Manufacturing as defined by 60.81(a)) |

**Table IX-C**
**Facility-Wide**

| Citation | Title or Description (Reason not applicable) |
|---|---|
| BAAQMD 6-302 | Opacity Limitation (SIP regulations do not require opacity monitoring for these sources) |

# X. Revision History

| | | |
|---|---|---|
| **Initial Title V Permit Issuance:** | **Application No. 25858** | **July 1, 1997** |
| **Renewal Title V Permit Issuance:** | **Application No. 3907** | **November 22, 2011** |
| **Renewal Title V Permit Issuance:** | **Application No. 27973** | **TBD, 2017** |

# XI. 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

**BARCT**
Best Available Retrofit Control Technology

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

**C5**
An Organic chemical compound with five carbon atoms

**C6**
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

**CEQA**
California Environmental Quality Act

**CEM**
A "continuous emission monitor" is a monitoring device that provides a continuous direct measurement of some pollutant (e.g. NOx concentration) in an exhaust stream.

**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.

# X. Glossary (continued)

**CO**
Carbon Monoxide

**$CO_2$**
Carbon Dioxide

**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

**GDF**
Gasoline Dispensing Facility

# X. Glossary (continued)

**GLM**
Ground Level Monitor

**grains**
1/7000 of a pound

**Graphitic**
Made of graphite.

**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.

**$H_2S$**
Hydrogen Sulfide

**$H_2SO_4$**
Sulfuric Acid

**Hg**
Mercury

**HHV**
Higher Heating Value. The quantity of heat evolved as determined by a calorimeter where the combustion products are cooled to 60F and all water vapor is condensed to liquid.

**LHV**
Lower Heating Value. Similar to the higher heating value (see HHV) except that the water produced by the combustion is not condensed but retained as vapor at 60F.

**Long ton**
2200 pounds

**Major Facility**
A facility with potential emissions of regulated air pollutants greater than or equal to 100 tons per year, greater than or equal to 10 tons per year of any single hazardous air pollutant, and/or greater than or equal to 25 tons per year of any combination of hazardous air pollutants, or such lesser quantity 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.

# X. Glossary (continued)

**MSDS**
Material Safety Data Sheet

**NA**
Not Applicable

**NAAQS**
National Ambient Air Quality Standards

**NESHAPs**
National Emission Standards for Hazardous Air Pollutants. Contained in 40 CFR Part 61.

**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.)

**$O_2$**
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 on site contemporaneous emission reduction credits. The offsets requirement applies to emissions of POC, NOx, PM10, and $SO_2$.

**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.

# X. Glossary (continued)

**Permit Shield**
A provision in an operating permit issued under Title V of the federal Clean Air Act as amended in 1990 that identifies federally enforceable requirements that do not apply to a source or group of sources. Once such provisions are put under a permit shield, enforcement actions and litigation may not be initiated against the source or group of sources covered by this shield based on the regulatory and/or statutory provisions cited.

**POC**
Precursor Organic Compounds

**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 Ambient Air Quality Standards. Mandated by Title I of the Act and implemented by both 40 CFR Part 52 and District Regulation 2, Rule 2.

**RMG**
Refinery Make Gas

**SCR**
A "selective catalytic reduction" unit is an abatement device that reduces NOx concentrations in the exhaust stream of a combustion device. SCRs utilize a catalyst, which operates at a specific temperature range, and injected ammonia to promote the conversion of NOx compounds to nitrogen gas.

**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.

**$SO_2$**
Sulfur dioxide

**$SO_3$**
Sulfur trioxide

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

**therm**
100,000 British Thermal Unit

# X. Glossary (continued)

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

**TRMP**
Toxic Risk Management Plan

**TRS**
"Total reduced sulfur" is a measure of the amount of sulfur-containing compounds in a gas stream, typically a fuel gas stream, including, but not limited to, hydrogen sulfide. The TRS content of a fuel gas determines the concentration of SO2 that will be present in the combusted fuel gas, since sulfur compounds are converted to SO2 by the combustion process.

**TSP**
Total Suspended Particulate

**TVP**
True Vapor Pressure

**VOC**
Volatile Organic Compounds

**Units of Measure:**

| | | |
|---|---|---|
| bbl | = | barrel of liquid (42 gallons) |
| bhp | = | brake-horsepower |
| BTU | = | British Thermal Unit |
| C | = | degrees Celsius |
| F | = | degrees Fahrenheit |
| $f^3$ | = | cubic feet |
| g | = | grams |
| gal | = | gallon |
| gpm | = | gallons per minute |
| hp | = | horsepower |
| hr | = | hour |
| lb | = | pound |
| in | = | inches |
| max | = | maximum |
| $m^2$ | = | square meter |
| min | = | minute |
| M | = | thousand |
| Mg | = | mega-gram, one thousand grams |
| µg | = | micro-gram, one millionth of a gram |

# X. Glossary (continued)

**Units of Measure:**

| | | |
|---|---|---|
| MM | = | million |
| mm | = | millimeter |
| MM BTU | = | million BTU |
| mm Hg | = | millimeters of Mercury (pressure) |
| MW | = | megawatts |
| 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 |

**Symbols:**

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