Bay Area Air Quality Management District

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

Permit Evaluation
and
Statement of Basis
for
RENEWAL
of the

MAJOR FACILITY REVIEW PERMIT

for

General Chemical West, LLC
Facility #A0023

Facility Address:
525 Castro Street
Richmond, CA 94801

Mailing Address:
525 Castro Street
Richmond, CA 94801

Application Engineer: Jimmy Cheng
Site Engineer: Jimmy Cheng

Application: 3907

TABLE OF CONTENTS

Title V Statement of Basis

A. Background

This facility is subject to the Major Facility Operating Permit requirements of Title V of the federal Clean Air Act, Part 70 of Title 40 of the Code of Federal Regulations, and BAAQMD Regulation 2, Rule 6, Major Facility Review, because it is a major facility as defined by BAAQMD Regulation 2-6-212. It is a major facility because it has the "potential to emit," (as defined by BAAQMD Regulation 2-6-218) more than 100 tons per year of a regulated air pollutant.

Major Facility Operating permits (Title V permits) must meet specifications contained in 40 CFR Part 70. The permits must contain all applicable requirements (as defined in 40 CFR § 70.2), "monitoring requirements", recordkeeping requirements, and reporting requirements. The permit holders must submit reports of all monitoring at least every six months and compliance certifications at least every year.

Pursuant to Regulation 2, Rule 6, section 416, the District has reviewed the terms and conditions of this Major Facility Review permit and determined that they are still valid and correct. This review included an analysis of all applicability determinations for all sources, including those that have been modified or permitted since the issuance of the initial Major Facility Review Permit. The review also included an assessment of the sufficiency of all monitoring for determination of compliance with applicable requirements. The statement of basis documents for any permit revisions that may have occurred since the initial Major Facility Review permit was issued are hereby incorporated by reference and are available upon request.

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

Each facility in the Bay Area is assigned a facility identifier that consists of a letter and a 4-digit number. This identifier is also considered to be the identifier for the permit. The identifier for this facility is A0023.

This facility received its initial Title V permit on 9/14/98. This application is for a permit renewal. Although the current permit expired on 7/01/02, it continues in force until the District takes final action on the permit renewal. The standard sections of the permit have changed since 9/14/98. The proposed permit shows all changes to the permit in strikeout/underline format.

B. Facility Description

The facility produces high quality and specialty blends of sulfuric acid from spent alkylation acid piped from the neighboring refinery, Chevron U.S.A., and from elemental sulfur. The facility uses the decomposition chamber process where the spent acid and sulfur are burned to form sulfur dioxide, which is then reacted with oxygen to form sulfur trioxide. The sulfur trioxide is then hydrated to produce sulfuric acid. Over one half of the facility's capacity is returned to the refinery via pipeline. The remainder is used by a General Chemical electronic chemical operation in Bay Point, CA and by detergent, alum, fertilizer, and auto battery manufacturers. The plant is designed to decompose 600 tons per day of spent sulfuric acid while producing 600 tons per day of fresh sulfuric acid.

Since the District issued the first Title V permit to General Chemical Corporation on 9/14/98, the facility has submitted twelve new source review applications, four of which were cancelled. General Chemical has not submitted any applications to revise their Title V permit since the initial permit was issued.

1. Application 3157 was submitted on 7/18/01 for a backup abatement system for Alkylation Acid Storage Tanks (S-S3, S-10, S-13, S-16, and S-32). This system is consists of Activated Carbon Beds (A-4) to remove hydrocarbons and a Caustic Scrubber (A-5) to remove sulfur dioxide. Because this is a backup system, there is no change in emissions for this application during normal operation.
2. Application 3828 was submitted on 12/3/01 for Sulfuric Acid Storage Tank (S-35). Although the use of S-35 results in H_2SO_4 emissions of 0.047 tpy, Regulation 2-1-123.2.1 exempts this source from permitting requirements.
3. Application 4620 was submitted on 3/26/02 for the Back- up Pond Generator (S-33), which was exempt from permit requirements until 5/17/2000 when Regulation 1 and Regulation 2-1 were modified to require engines greater than 50 HP to require a Permit to Operate. There is no net increase in emission from S-33 because it had been in operation since before the District issued the Title V permit. S-33 is now permanently out of service.
4. Application 5782 was submitted on 7/10/02 for a new Emergency Caustic Scrubber System. This project consists of a Caustic Scrubber System (A-6) and a Diesel Caustic Pump(S-34). It will only be used in emergency situations for a maximum of 1 hr/day. A6 will not increase emissions for this plant, but use of the Diesel Pump will result in the following emission increases: NOx, 0.180 tpy; CO, 0.03 tpy; POC, 0.02 tpy; and PM10, 0.01 tpy.
5. Application 6994 was submitted on 1/27/03 for the installation of a new Natural Gas Generator (S-36) that is abated by a 3-way Non-Selective Catalytic Reduction System (A-33). This application increased annual NOx (2.76 tpy), CO (11.06 tpy), POC (2.76 tpy), SO_2 (0.03) and PM10 (0.58 tpy) emissions at General Chemical Corp.
6. Application 7350 was submitted on 4/11/03 to replace the damaged Primary Absorption Tower of the Sulfuric Acid Plant (S-1). The new primary Absorption tower resulted in no net difference in throughput or capacity, and thus there is no increase in emissions associated with this application.

7. Application 8786 was submitted on 12/23/03 to raise the emissions limits for A-4, Acid Storage Tanks Back-Up Vent Activated Carbon Beds, and A-5, Acid Storage Tanks Back-Up Vent Packed Tower Caustic Scrubber. There is no increase in emissions since the abatement system is only used in emergencies.
8. Application 21593 was submitted on 2/10/10 to replace two existing electrostatic precipitators at Sulfuric Acid Plant (S-1). There is no increase in emissions associated with this application.

C. Permit Content

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

I. Standard Conditions

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

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

Condition I.J has been added to clarify that the capacity limits shown in Table II-A are enforceable limits.

Changes to permit:
The dates of adoption and approval of rules in Standard Condition 1.A have been updated.

SIP Regulation 2, Rule 4 - Permits, Emissions Banking, BAAQMD Regulation 2, Rule 5 - New Source Review of Toxic Air Contaminants, BAAQMD Regulation 2, Rule 6 - Permits, Major Facility Review, and SIP Regulation 2, Rule 6 - Permits, Major Facility Review have been added to Standard Condition 1.A.

The following language was added to Standard Condition I.B.1: "This Major Facility Review Permit was issued on [ ] and expires on [ ]."

The following language was added to Standard Condition I.B.1: "If the permit renewal has not been issued by [ ], but a complete application for renewal has been submitted in accordance with the above deadlines, the existing permit will continue in force until the

District takes final action on the renewal application." This is the "application shield" pursuant to BAAQMD Regulation 2-6-407.

In Standard Condition I.B.2, “reissuance” has been changed to “re-issuance.”

The following language was added to Standard Condition I.B.5: “The filing of a request by the facility for a permit modification, revocation and reissuance, or termination, or (strikeout “or”) the filing of a notification of planned changes or anticipated non-compliance does not stay the applicability of any permit condition.”

The following correction was made to Standard Condition I.B.6: “This permit does not convey any property rights of any sort, (strikeout “nor”) or any exclusive privilege.”

The following correction was made to Standard Condition I.B.8: “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.”

The following language was added to Standard Condition I.B.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.”

Standard Condition I.B.11, which requires the responsible official to certify all documents submitted, was added to conform to changes in Regulation 2, Rule 6.

Standard Condition I.B.12, which requires the permit holder to comply and certify compliance of all conditions of the permit, has been added because it was omitted in error.

Standard Condition I.E.1 requiring the permit holder to provide any information, records, and reports requested or specified by the APCO, was added because it was omitted in error.

Standard Condition I.E is now Standard Condition I.E.2, and the following correction was made: “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 ~~entry~~ creation of the record.”

The basis BAAQMD Regulation 3 has been deleted from Standard Condition I.E.

The dates of the reporting periods and reporting deadlines have been added to Standard Conditions I.F and I.G for additional clarity. The reporting periods and deadlines have not changed.

The first sentence of Standard Condition I.F has been changed from " All required monitoring reports must be submitted to the District at least once every six months." to " 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. " to conform more closely to BAAQMD Regulation 2-6-409.18.

Standard Condition I.F was modified to conform to the current standard.

The following language was added to Standard Condition I.G: "The certification period will be July 1st through June 30th. The certification shall be submitted by July 31st of each year."

The following clarification was made to Standard Condition I.G: "The certification should be directed to the District's Compliance and Enforcement Division at the address above, and a copy of the certification ~~should~~ shall be sent to the Environmental Protection Agency at the following address."

Standard Condition I.H was modified to conform to the current standard.

Standard Condition I.J has been added to clarify that the capacity limits shown in Table II-A are enforceable limits.

Standard Condition I.J, Accidental Release, has been changed to Condition I.K.

II. Equipment

This section of the permit lists all permitted or significant sources. Each source is identified by an S and a number (e.g., S-24).

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

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

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

The equipment section is considered to be part of the facility description. It contains information that is necessary for applicability determinations, such as fuel types, contents or sizes of tanks, etc. This information is part of the factual basis of the permit.

Each of the permitted sources has previously been issued a permit to operate pursuant to the requirements of BAAQMD Regulation 2, Permits. These permits are issued in accordance with state law and the District's regulations. The capacities in the permitted sources table are the maximum allowable capacities for each source, pursuant to Standard Condition I.J and Regulation 2-1-403.

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

Devices Removed from Service or Archived since Application was submitted:

S-6 Sulfuric Acid Tank has been removed.

S-7 Sulfur Melting Pit is permanently out of service.

S-14 Gasoline Dispensing Facility (GDF #6363), is permanently out of service.

S-33 Standby Generator Diesel Engine is permanently out of service.

Devices Permitted Since Application was submitted:
An Authority to Construct was issued for A-6 Packed Bed Scrubber and S-34 Caustic Pump Diesel Engine on 6/5/02 under application 5782.

An Authority to Construct was issued for A-4 Back-up Vent Activated Carbon Beds and A-5 Back-Up Vent Packed Tower Caustic Scrubber on 5/7/03 under application 3157. The permit conditions were modified and a revised Permit to Operate was issued on October 1, 2003 under application 8786.

An Authority to Construct was issued for S-34 Caustic Pump Diesel Engine on 8/6/08 under application 5782.

A Letter of Exemption was issued for S-35 T-303, Sulfuric Acid Storage Tank on 8/20/02 under application 3828.

An Authority to Construct was issued for S-36 Natural Gas-Fired IC Engine on 1/9/04 under application 6994.

Devices with Changed Permit Status:
S-36 Natural Gas Generator has lost its permit exemption since the original Title V permit was issued in 1997.

District permit applications not included in this proposed permit

None

Corrections to Devices Shown in Application

None

Changes to permit:
The title of Section II has been changed from "Equipment List" to "Equipment."

The following changes were made to Table II-A:

- Added language to clarify that the capacity limits in the Table are enforceable limits.
- S-6 Sulfur Storage Tank, deleted, removed from service
- S-7 Sulfur Melting Pit, deleted, removed from service
- S-14 Gasoline Dispensing Facility (GDF #6363), deleted, removed from service
- Added S-34 Caustic Pump Diesel Engine
- Added S-36 Natural Gas Fired IC Engine

The following changes were made to Table II-B:

- Changed title of table to "Table II-B – Abatement Devices"
- Removed source numbers in Applicable Requirement description
- For A-1, BAAQMD Regulation 6-1-320 was added to Applicable Requirement description because it was previously omitted
- For A-1, BAAQMD Regulation 12-6-301 was added to Applicable Requirement description because it was previously omitted
- For A-1, SIP Regulation 6-320 was added to Applicable Requirement description because it was previously omitted
- For A-1, added reference to BAAQMD Regulation 9-1-309 because it was previously omitted
- For A-1, added BAAQMD Regulation 6-1-320 and SIP Regulation 6-320 emission limit to Required Efficiency description
- For A-1, added BAAQMD Regulation 12-6-301 emission limit to Required Efficiency description
- For A-1, removed Condition #13507, part 2 from Applicable Requirement description
- For A-2, added S-16 to Source(s) Controlled description because it was previously omitted
- For A-2, removed BAAQMD Regulation 6-320 emission limits because A-2 vents directly to A-1 and does not vent to atmosphere
- For A-2, removed BAAQMD Regulation 12-6-301 emission limits because A-2 vents directly to A-1 and does not vent to atmosphere
- For A-2, removed Condition #13507, part 2 from Applicable Requirement description
- A-4 Acid Storage Back-Up Vent Activated Carbon Beds, added per NSR # 3157
- A-5 Acid Storage Back-Up Vent Packed Tower Caustic Scrubber, added per NSR # 3157
- A-6 Emergency Caustic Scrubber System, added per NSR # 5782

- A-33 SCR Emission Control System, added per NSR # 6994
- S-1 Sulfuric Acid Manufacturing Plant, added per NSR # 1592

Table II-C was added for exempt sources S-19 East Loading/Unloading Station (Sulfuric Acid), S-21 South Loading/Unloading Station, and S-35 T-303, Sulfuric Acid Storage Tank. Pursuant to Regulation 2-6-239, these sources are considered to be significant because each has a potential to emit more than 2 TPY of a regulated air pollutant.

III. Generally Applicable Requirements

This section of the permit lists requirements that generally apply to all sources at a facility including insignificant sources and portable equipment that may not require a District permit. If a generally applicable requirement applies specifically to a source that is permitted or significant, the standard will also appear in Section IV and the monitoring for that requirement will appear in Sections IV and VII of the permit. Parts of this section apply to all facilities (e.g., particulate, architectural coating, odorous substance, and sandblasting standards). In addition, standards that apply to insignificant or unpermitted sources at a facility (e.g., refrigeration units that use more than 50 pounds of an ozone-depleting compound) are placed in this section.

Unpermitted sources are exempt from normal District permits pursuant to an exemption in BAAQMD Regulation 2, Rule 1. They may, however, be specifically described in a Title V permit if they are considered ***significant sources*** pursuant to the definition in BAAQMD Rule 2-6-239.

Changes to permit:

The title of Section III has been changed from "General Applicable Requirements" to "Generally Applicable Requirements."

The following correction was made to Section III: "The District has determined that these requirements ~~would~~ will not be violated under normal, routine operations, and that no additional periodic monitoring or reporting to demonstrate compliance is warranted."

The following clarification was made to Section III: "The date(s) of adoption or most recent amendment of the regulation by the District Board of Directors."

Language has been added to Section III to clarify that this section contains requirements that may apply to temporary sources. This provision allows contractors that have "portable" equipment permits that require them to comply with all applicable requirements to work at the facility on a temporary basis, even if the permit does not specifically list the temporary source. Examples are temporary sand-blasting or soil-vapor extraction equipment.

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

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

A note has been added to clarify the difference between BAAQMD rules and the versions of the rules in the SIP.

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

- BAAQMD Regulation 2, Rule 1, General Requirements
- BAAQMD 2-1-429, Federal Emissions Statement
- SIP Regulation 2, Rule 1, General Requirements
- SIP Regulation 2-1-429, Federal Emissions Statement
- BAAQMD Regulation 2, Rule 5, New Source Review of Toxic Air Contaminants
- Regulation 6, Particulate Matter and Visible Emissions, was renumbered as Regulation 6, Rule 1, and renamed as Particulate Matter, General Requirements on December 5, 2007. The equivalent rule in the State Implementation Plan (SIP) is Regulation 6, Particulate Matter and Visible Emissions, which was approved in a Federal Register notice of September 4, 1998. The BAAQMD rule is technically not federally enforceable, although the requirements are identical. This change is also reflected in the Section IV and VII
- Regulation 8, Rule 2, Miscellaneous Operations
- SIP Regulation 8, Rule 2, Miscellaneous Operations
- Regulation 8, Rule 4, General Solvent and Surface Coating Operations
- Regulation 8, Rule 15, Emulsified and Liquid Asphalts
- BAAQMD Regulation 8, Rule 40 Aeration of Contaminated Soil and Removal of Underground Storage Tanks
- SIP Regulation 8, Rule 40, Aeration of Contaminated Soil and Removal of Underground Storage Tanks
- BAAQMD Regulation 8, Rule 47, Air Stripping and Soil Vapor Extraction Operations
- SIP Regulation 8, Rule, 47, Air Stripping and Soil Vapor Extraction Operations
- SIP Regulation 8, Rule 51, Adhesive and Sealant Products
- SIP Regulation 9, Rule 1, Inorganic Gaseous Pollutants — Sulfur Dioxide
- California Health and Safety Code Section 41750 et seq., Portable Equipment
- California Health and Safety Code Section 44300 et seq., Air Toxics "Hot Spots" Information and Assessment Act of 1987
- California Health and Safety Code Section 93115 et seq., Airborne Toxic Control Measure for Stationary Compression Ignition Engines
- 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
- 40 CFR Part 61, Subpart M, National Emission Standards for Hazardous Air Pollutants – National Emission Standard for Asbestos
- 40 CFR Part 82, Protection of Stratospheric Ozone
- Subpart F, 40 CFR 82.156, Leak Repair

- Subpart F, 40 CFR 82.161, Certification of Technicians
- Subpart F, 40 CFR 82.166, Records of Refrigerant

The dates of adoption or approval of the rules and their "federal enforceability" status in Table III have also been updated.

IV. Source-Specific Applicable Requirements

This section of the permit lists the applicable requirements that apply to permitted or significant sources. These applicable requirements are contained in tables that pertain to one or more sources that have the same requirements. The order of the requirements is:

- District Rules
- SIP Rules (if any) are listed following the corresponding District rules. SIP rules are District rules that have been approved by EPA for inclusion in the California State Implementation Plan. SIP rules are "federally enforceable" and a "Y" (yes) indication will appear in the "Federally Enforceable" column. If the SIP rule is the current District rule, separate citation of the SIP rule is not necessary and the "Federally Enforceable" column will have a "Y" for "yes". If the SIP rule is not the current District rule, the SIP rule or the necessary portion of the SIP rule is cited separately after the District rule. The SIP portion will be federally enforceable; the non-SIP version will not be federally enforceable, unless EPA has approved it through another program.
- Other District requirements, such as the Manual of Procedures, as appropriate.
- Federal requirements (other than SIP provisions)
- BAAQMD permit conditions. The text of BAAQMD permit conditions is found in Section VI of the permit.
- Federal permit conditions. The text of Federal permit conditions, if any, is found in Section VI of the permit.

Section IV of the permit contains citations to all of the applicable requirements. The text of the requirements is found in the regulations, which are readily available on the District's or EPA's websites, or in the permit conditions, which are found in Section VI of the permit. All monitoring requirements are cited in Section IV. Section VII is a cross-reference between the limits and monitoring requirements. A discussion of monitoring is included in Section C.VII of this permit evaluation/statement of basis.

Complex Applicability Determinations:

Applicability of EPA NESHAPs

One of the goals of the federal Clean Air Act is to reduce the emission of Hazardous Air Pollutants (HAPs). The reduction of HAPs is achieved through the promulgation of, and compliance with, emission standards for categories of sources that emit HAPs. The United States Environmental Protection Agency (EPA) identified 30 HAPs that pose the greatest threat to public health in urban areas. The U.S. EPA has identified categories of sources that account for 90 percent of the release of these particular HAPs and is now promulgating standards to

reduce their emissions. These federal standards are referred to as the National Emissions Standards for Hazardous Air Pollutants (NESHAP). The four NESHAPs (in 40 CFR, Part 63) pertinent to this facility are:

Subpart B- Requirements for Control Technology Determinations for Major Sources in Accordance With Clean Air Act Sections, Sections 112(g) and 112(j)
Subpart DDDDD- National Emission Standards for Hazardous Air Pollutants for Industrial, Commercial, and Institutional Boilers and Process Heaters
Subpart JJJJJJ- National Emission Standards for Hazardous Air Pollutants for Industrial, Commercial, and Institutional Boilers Area Sources
Subpart ZZZZ- National Emissions Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines

Subpart B and Subpart DDDDD apply to only major sources of HAPs, Subpart JJJJJJ applies to only area sources of HAPs, and Subpart ZZZZ applies to both major and area sources of HAPs. A major source of HAPs is one in which the maximum plantwide potential to emit of all HAPs (including fugitive emissions) is greater than or equal to 10 tons per year of a single HAP or HAP compound category, or is greater than or equal to 25 tons per year of aggregated HAPs or HAP compound categories. An area source of HAPs is one that is not a major source of HAPs (that is, one that is a minor source of HAPs).

As demonstrated in the tables below, General Chemical is an area source of HAPs. The sources that emit HAPs at this facility are: S-9 Process Air Heater, S-15 Startup Air Heater, S-34 Caustic Pump Diesel Engine, and S-36 Natural Gas-Fired IC Engine. Emission factors for S-9 and S-15 are from the CARB database of "California Air Toxics Emissions Factors" (CATEF) for Natural Gas Heaters. Emission factors for S-34 are from EPA AP-42 Chapter 3.3- Gasoline and Diesel Industrial Engines, Table 3.3-2 (Speciated Organic Compound Emission Factors for Uncontrolled Diesel Engines). Emission factors for S-36 are from EPA AP-42 Chapter 3.2- Natural Gas-fired Reciprocating Engines, Table 3.2-2 (Uncontrolled Emission Factors for 4-Stroke Lean-Burn Engines).

S-9 and S-15 HAP/TAC Emissions

S-9 Annual Limit on Natural Gas Usage (from Permit Condition #7934): 61.3 MMcf/yr
S-15 Annual Limit on Natural Gas Usage (from Permit Condition #7606): 5.0 MMcf/yr

Combustion Pollutant	CATEF (Mean) Emission Factor (lb/MMcf, NG)	TAC Emissions (lb/yr)	
		S-9	S-15
Acenaphthene	1.39E-06	8.52E-05	6.95E-06
Acenaphthylene	1.21E-05	7.42E-04	6.05E-05
Acetaldehyde	1.40E-02	8.58E-01	7.00E-02
Acrolein	4.84E-03	2.97E-01	2.42E-02
Anthracene	1.61E-06	9.87E-05	8.05E-06
Benzene	1.12E-02	6.87E-01	5.60E-02
Benzo(a)anthracene	1.96E-06	1.20E-04	9.80E-06
Benzo(a)pyrene	9.80E-07	6.01E-05	4.90E-06

Combustion Pollutant	CATEF (Mean) Emission Factor (lb/MMcf, NG)	TAC Emissions (lb/yr)	
		S-9	S-15
Benzo(b)fluoranthene	1.14E-06	6.99E-05	5.70E-06
Benzo(g,h,i)perylene	1.25E-06	7.66E-05	6.25E-06
Benzo(k)fluoranthene	9.90E-07	6.07E-05	4.95E-06
Chrysene	1.39E-06	8.52E-05	6.95E-06
Dibenz(a,h)anthracene	9.17E-07	5.62E-05	4.59E-06
Ethylbenzene	2.25E-03	1.38E-01	1.13E-02
Fluoranthene	1.19E-05	7.29E-04	5.95E-05
Fluorene	4.59E-06	2.81E-04	2.30E-05
Formaldehyde	7.40E-02	4.54E+00	3.70E-01
Indeno(1,2,3-cd)pyrene	1.17E-06	7.17E-05	5.85E-06
Naphthalene	1.12E-03	6.87E-02	5.60E-03
Phenanthrene	3.37E-05	2.07E-03	1.69E-04
Propylene	2.35E-01	1.44E+01	1.18E+00
Pyrene	5.60E-06	3.43E-04	2.80E-05
Toluene	2.95E-02	1.81E+00	1.48E-01
Xylene (Total)	1.43E-02	8.77E-01	7.15E-02

S-34 HAP/TAC Emissions

Engine Specifications:

Max Fuel Rate(gal/hr)	Annual Usage (hr/yr)	Heat Content (BTU/Gal)	MM Btu/hr
4.200	8760	140000	0.588

Emission Calculation: POLLUTANT	AP-42 Table 3-3.2 (lb/MMBtu)	Total Annual Emissions (lb/yr) Note 1
Benzene	9.33E-04	4.81E+00
1,3-Butadiene <	3.91E-05	1.01E-01
Acenaphthene <	1.42E-06	3.66E-03
Acenaphthylene <	5.06E-06	1.30E-02
Acetaldehyde	7.67E-04	3.95E+00
Acrolein <	9.25E-05	2.38E-01
Anthracene	1.87E-06	9.63E-03
Benzo(a)anthracene	1.68E-06	8.65E-03
Benzo(a)pyrene <	1.88E-07	4.84E-04
Benzo(b)fluoranthene <	9.91E-08	2.55E-04
Benzo(g,h,i)perylene <	4.89E-07	1.26E-03
Benzo(k)fluoranthene <	1.55E-07	3.99E-04
Chrysene	3.53E-07	1.82E-03
Dibenz(a,h)anthracene <	5.83E-07	1.50E-03
Fluoranthene	7.61E-06	3.92E-02
Fluorene	2.92E-05	1.50E-01
Formaldehyde	1.18E-03	6.08E+00
Indeno(1,2,3-cd)pyrene <	3.75E-07	9.66E-04
Naphthalene	8.48E-05	4.37E-01
Phenanthrene	2.94E-05	1.51E-01
Propylene	2.58E-03	1.33E+01
Pyrene	4.78E-06	2.46E-02
Toluene	4.09E-04	2.11E+00
Xylenes	2.85E-04	1.47E+00

Note 1: Compounds whose factor is shown as less than (<) in AP-42 is taken as half the calculated value.

S-36 HAP/TAC Emissions

Maximum Engine Heat Input Rating: 13.7 MMBTU/hr
Maximum Annual Operation Hours: 8760 hr/yr
Maximum Annual Heat Input: 116, 639 MMBTU/yr

TAC	Emission Factor lb/MM BTU	Emission Rate lb/yr
Acenaphthylene	5.53E-06	0.45
Acetaldehyde	8.36E-03	683.74
Acrolein	5.14E-03	420.39
Benzene	4.40E-04	35.99
Benzo(b)fluoranthene	1.66E-07	0.01
Benzo(e)pyrene	4.15E-07	0.03
Benzo(g,h,i)perylene	4.14E-07	0.03
Biphenyl	2.12E-04	17.34
Butyr/Isobutyraldehyde	1.01E-04	8.26
Carbon Tetrachloride	3.67E-05	3.00
Chlorobenzene	3.04E-05	2.49
Chloroethane	1.87E-06	0.15
Chloroform	2.85E-05	2.33
Chrysene	6.93E-07	0.06
Cyclopentane	2.27E-04	18.57
Ethylbenzene	3.97E-05	3.25
Ethylene Dibromide	4.43E-05	3.62
Fluoranthene	1.11E-06	0.09
Fluorene	5.67E-06	0.46
Formaldehyde	5.28E-02	4,318.37
Methanol	2.50E-03	204.47
Methylcyclohexane	1.23E-03	100.60
Methylene Chloride	2.00E-05	1.64
n-Hexane	1.11E-03	90.78
n-Nonane	1.10E-04	9.00
n-Octane	3.51E-04	28.71
n-Pentane	2.60E-03	212.65
Naphthalene	7.44E-05	6.08
PAH	2.69E-05	2.20
Phenanthrene	1.04E-05	0.85
Phenol	2.40E-05	1.96
Pyrene	1.36E-06	0.11
Styrene	2.36E-05	1.93
Tetrachloroethane	2.48E-06	0.20
Toluene	4.08E-04	33.37
Vinyl Chloride	1.49E-05	1.22
Xylene	1.84E-04	15.05
1,1,2,2-Tetrachloroethane	4.00E-05	3.27
1,1,2-Trichloroethane	3.18E-05	2.60
1,1-Dichloroethane	2.36E-05	1.93
1,2,3-Trimethylbenzene	2.30E-05	1.88
1,2,4-Trimethylbenzene	1.43E-05	1.17
1,2-Dichloroethane	2.36E-05	1.93
1,2-Dichloropropane	2.69E-05	2.20
1,3,5-Trimethylbenzene	3.38E-05	2.76
1,3-Butadiene	2.67E-04	21.84
1,3-Dichloropropene	2.64E-05	2.16
2-Methylnaphthalene	3.32E-05	2.72
2,2,4-Trimethylpentane	2.50E-04	20.45
Acenaphthene	1.25E-06	0.10

Facilitywide HAP Emissions Summary

	Annual Combined HAP Emissions (lb/yr)
S-9	23.68
S-15	1.93
S-34	32.90
S-36	6294.46
All other existing sources	0
TOTAL (lb/yr)	6352.97
TOTAL (TPY)	3.18

Therefore, Subparts B and DDDDD do not apply to General Chemical. Subpart JJJJJJ does not apply to General Chemical because process heaters are not subject to this subpart; S-9 Process Air Heater and S-15 Startup Air Heater are process heaters.

Subpart ZZZZ consists of four standards, or four rules. The standards were developed with the first rule, promulgated in 2004, regulating RICE rated greater than 500 HP at only the major sources of HAPs. In 2008, the second rule incorporated RICE rated less than or equal to 500 HP at major sources, as well as area sources with RICE greater than 500 HP. The last two rules finalizing the Subpart ZZZZ were promulgated in 2010 and expanded those regulated by adding RICE rated less than or equal to 500 HP at area sources. The area source requirements in Subpart ZZZZ apply to the reciprocating internal combustion engines (RICE) at this facility: S-34 Caustic Pump Diesel Engine, and S-36 Natural Gas-Fired IC Engine. Applicable requirements for Subpart ZZZZ and Subpart A (General Provisions) have been included in the proposed Title V permit, including the future effective dates.

Applicability of 40 CFR, Part 64, Compliance Assurance Monitoring

The Compliance Assurance Monitoring (CAM) regulation in 40 CFR, Part 64 was developed to provide assurance that facilities comply with applicable emissions limitations by adequately monitoring control devices. The CAM rule was effective on November 21, 1997. However, most facilities are not affected by CAM requirements until they submit applications for Title V permit renewal. CAM applies to a source of criteria pollutant or hazardous air pollutant (HAP) emissions if all the following requirements are met:

• The source is located at a major source for which a Title V permit is required; and
• The source is subject to a federally enforceable emission limitation or standard for criteria pollutant or HAP; and

• The source uses a control device to comply with the federally enforceable emission limitation or standard; and
• The source has potential pre-control emissions of the regulated pollutant that are equal to or greater than the major source threshold for the pollutant (in BAAQMD, the major source thresholds are 100 tons per year for each criteria pollutant, 10 tons per year for a single HAP, and 25 tons per year for two or more HAPs); and
• The source is not otherwise exempt from CAM.

The applicability of 40 CFR, Part 64, Compliance Assurance Monitoring, was reviewed for the sources at this facility that use control devices to comply with federally enforceable emission limitations or standards.

A-2 Mist Eliminator

For S-1, CAM does not apply for sulfuric acid mist because the A-2 Mist Eliminator is considered to be inherent process equipment as defined in the CAM regulation since the primary purpose of the mist eliminator is to recover sulfuric acid to minimize corrosion in ductwork and other downstream equipment and to recover sulfuric acid for sale. In addition, operating without the mist eliminator would result in much faster deterioration of downstream ductwork and equipment including the A-1 SO2 Abatement Unit and would result in a reduction in the amount of sulfuric acid produced. The overall impact would be a decrease in production from the facility. Therefore, the mist eliminator is necessary for the proper and safe functioning of the sulfuric acid production process. For these reasons, the facility would operate the mist eliminator even if the sulfuric acid plant were not subject to any sulfuric acid mist emission limitations.

The preamble to the CAM Regulation (Federal Register, Vol. 62, No. 204, October 22, 1997, 54913) specifies three criteria that can be used to distinguish inherent process equipment from control devices.

1. Is the primary purpose of the equipment to control air pollution? As discussed above, the primary purpose of the mist eliminator is to prevent acid from attacking downstream equipment and recover product.
2. Where the equipment is recovering product, how do the cost savings from the product recovery compare to the cost of the equipment? The cost of the recovered product together with cost-savings associated with the increased life of the downstream equipment, justify the cost of the mist eliminator.
3. Would the equipment be installed if no air quality regulations are in place? As discussed above, the mist eliminator would be used even if no emission limits applied, because it recovers product and protects downstream equipment.

Other Control Devices

CAM does not apply to all other abated sources at this facility. For S-1, pre-control device emissions of SO2 exceed the BAAQMD major source threshold of 100 tons per year. However, S-1 uses a continuous emissions monitor for SO2 and therefore CAM does not apply per 40 CFR 64.2(b)(1)(vi). For the other sources, CAM does not apply because pre-control device emissions do not exceed any of the BAAQMD major source thresholds. The table below summarizes the

pre-control device emissions for these sources. The pre-control device emissions calculations are based on maximum source throughput rates or permitted throughput limits, emission factors/rates, and total annual operating hours, which are taken from District permit evaluations and data forms for this facility. In the absence of permitted throughput limits, maximum source throughput rates were used for the pre-control device emission calculations.

CAM Applicability

A-#	Description	Required Efficiency	Source(s) Controlled	Pre-Control Emissions					
				SO2	PM	H2SO4	POC	NOx	CO
A-1	Sulfur Dioxide Abatement System ("Dual Absorption" process)	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	S-1 Sulfuric Acid Manufacturing Plant	(25 tons/hr)*(8760 hr/yr)*(49.5 lb/ton)/(2000 lb/ton) = **5420.25 TPY (exempt from CAM because S-1 has CEM)**	(25 tons/hr)* (8760 hr/yr)* (0.1 lb/ton)/ (2000 lb/ton) = **10.95 TPY**	(25 tons/hr)* (8760 hr/yr)* (0.0234 lb/ton)/ (2000 lb/ton) = **2.56 TPY**	No emission limit or standard	No emission limit or standard	No emission limit or standard
			S-16 Alkylation Acid Storage Tank #13	(0.04 lb/hr)*(8760 hr/yr)/(2000 lb/ton) = **0.175 TPY**	SO3: [(2.797E-17 mmHg)/ (760 mmHg)]* (27 lb-mol/day)* (80 lb SO3/lb-mol)* (365 days/yr) = 0 TPY H2SO4: (25 tons/hr)* (8760 hr/yr)* (1.72E-7 lb/ton)/ (2000 lb/ton) = 0 TPY **Combined: 0 TPY**	(25 tons/hr)* (8760 hr/yr)* (1.72E-7 lb/ton)/ (2000 lb/ton) = **0 TPY**	No emission limit or standard	No emission limit or standard	No emission limit or standard
			S-24 Electronic Grade Sulfuric Acid Manufacturing Process	(15000 TPY)*(0.093 lb/ton)/(2000 lb/ton) = **0.698 TPY**	Conservatively assuming that SO3 emissions equal H2SO4 emissions: SO3: (15000 TPY)*(0.0974 lb/ton)/(2000 lb/ton) = 0.731 TPY H2SO4:	(15000 TPY)* (0.0974 lb/ton)/ (2000 lb/ton) = **0.731TPY**	No emission limit or standard	No emission limit or standard	No emission limit or standard

A-#	Description	Required Efficiency	Source(s) Controlled	Pre-Control Emissions					
				SO2	PM	H2SO4	POC	NOx	CO
					(15000 TPY)*(0.0974 lb/ton)/(2000 lb/ton) = **0**.731 TPY **Combined: 0.731+0.731 = 1.462 TPY**				
A-4 & A-5	Acid Storage Back-Up Vent Activated Carbon Beds Acid Storage Back-Up Vent Packed Tower Caustic Scrubber	Limit hydrocarbon emissions to 0.37 lb/hour Limit SO2 emissions to 10 ppmv limit H2SO4 emissions to 5 ppmv Limit SO2 emissions to 0.09 lb/hr limit H2SO4 emissions to 0.014 lb/hr	S-3 Alkylation Acid Storage Tank #12 S-10 Alkylation Acid Storage Tank #11 S-13 Alkylation Acid Storage Tank #16 S-16 Alkylation Acid Storage Tank #13 S-17 Railcar Loading/Unloading Station (Sulfuric/Alkylation Acid) S-18 Truck Unloading Station (Alkylation Acid) S-32 Alkylation Acid / Sulfuric Acid Storage Tank #14	Total: (0.04 lb/hr)* (8760 hr/yr)/ (2000 lb/ton) = **0.175 TPY**	Total (as H2SO4): (25 tons/hr)* (5.8E-6 lb/ton)* (8760 hr/yr)/ (2000 lb/ton)= **0.0006 TPY**	Total: (25 tons/hr)* (5.8E-6 lb/ton)* (8760 hr/yr)/ (2000 lb/ton)= **0.0006 TPY**	Total: (25 tons/hr)* (6.7E-3 lb/ton)* (8760 hr/yr)/ (2000 lb/ton)= **0.717 TPY**	No emission limit or standard	No emission limit or standard
A-6	Emergency Caustic Scrubber System	Limit SO2 emissions to 51 ppmv limit H2SO4	S-1 Sulfuric Acid Manufacturing Plant	Assuming maximum of 1 hr/day, 365 day/yr operation of	Assuming maximum of 1 hr/day, 365 day/yr operation of	Assuming maximum of 1 hr/day, 365 day/yr operation of	No emission limit or standard	No emission limit or standard	No emission limit or standard

A-#	Description	Required Efficiency	Source(s) Controlled	Pre-Control Emissions					
				SO2	PM	H2SO4	POC	NOx	CO
		emissions to 0.3 lb/ton of acid produced Limit SO3 and/or H2SO4 emissions to 0.04 grain/dscf		A-6: (1.26 lb/day)* (365 hr/yr)/ (2000 lb/ton) = **0.23 TPY**	A-6: (25 tons/hr)* (365 hr/yr)* (0.1 lb/ton)/ (2000 lb/ton) = **0.456 TPY**	A-6: (25 tons/hr)* (365 hr/yr)* (0.0234 lb/ton)/ (2000 lb/ton) = **0.107 TPY**			
A-33	SCR Emission Control System	Limit NOx emissions to 0.15 g/bhp-hr Limit CO emissions to 0.6 g/bhp-hr Limit POC emissions to 0.15 g/bhp-hr	S-36 Natural Gas -Fired IC Engine	No emission limit or standard	No emission limit or standard	No emission limit or standard	(0.2 g/hp-hr)* (1971 hp)* 8760 hr/yr)/ (453.6 g/lb)/ (2000 lb/ton) = **3.806 TPY**	(0.5 g/hp-hr)* (1971 hp)* 8760 hr/yr)/ (453.6 g/lb)/ (2000 lb/ton) = **9.516 TPY**	(2.5 g/hp-hr)* (1971 hp)* 8760 hr/yr)/ (453.6 g/lb)/ (2000 lb/ton) = **47.58 TPY**

Changes to permit:

The following clarification was made to Section IV: "The date(s) of adoption or most recent amendment of the regulation by the District Board of Directors."

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

Regulation 6, Particulate Matter and Visible Emissions, was renumbered as Regulation 6, Rule 1, and renamed as Particulate Matter, General Requirements on December 5, 2007. The equivalent rule in the State Implementation Plan (SIP) is Regulation 6, Particulate Matter and Visible Emissions, which was approved in a Federal Register notice of September 4, 1998. The BAAQMD rule is technically not federally enforceable, although the requirements are identical. This change is also reflected in the Section IV and VII tables.

The dates of adoption or approval of the rules and their "federal enforceability" status in each of the tables have also been updated.

The following changes were made to Table IV-A, S-1 Sulfuric Acid Manufacturing Process:

- Added BAAQMD Regulation 1-523.1 since it was previously omitted
- Added BAAQMD Regulation 1-523.2 since it was previously omitted
- Added BAAQMD Regulation 1-523.3 since it was previously omitted
- Added BAAQMD Regulation 1-523.4 since it was previously omitted

- Added SIP Regulation 1-522.7 since BAAQMD Regulation 1-522.7 is no longer federally enforceable
- Added SIP Regulation 1-523.3 since it was previously omitted
- Added SIP Regulation 1-523.5 since it was previously omitted
- Removed 11/10/82 version of SIP Regulation 1 because it has been replaced with the 6/28/99 version
- Removed 6/16/83 version of SIP Regulation 6 because it has been replaced with the 9/4/98 version
- Removed 5/3/84 version of SIP Regulation 9, Rule 1 because BAAQMD Regulation 9, Rule 1 is now federally enforceable
- Added NSPS 40 CFR, Part 60 Subpart Cd since it was previously omitted
- Added BAAQMD Condition #14980 Part 2 per application #21593

The following changes were made to Table IV-B, S-9 Process Air Heater:

- Added BAAQMD Regulation 9, Rule 7 because it was previously omitted
- Removed 5/3/84 version of SIP Regulation 9, Rule 1 because BAAQMD Regulation 9, Rule 1 is now federally enforceable

The following changes were made to Table IV-D, S-14 Gasoline Dispensing Facility:

- Deleted Table IV-D because S-14 is permanently out of service

The following tables have been renumbered:

- Table IV-E renumbered to Table IV-D
- Table IV-F renumbered to Table IV-E
- Table IV-G renumbered to Table IV-F
- Table IV-H renumbered to Table IV-G
- Table IV-I renumbered to Table IV-H
- Table IV-J renumbered to Table IV-I

The following changes were made to Table IV-D (renumbered from Table IV-E), S-15 Startup Air Heater:

- Added BAAQMD Regulation 9, Rule 7 because it was previously omitted
- Removed 5/3/84 version of SIP Regulation 9, Rule 1 because BAAQMD Regulation 9, Rule 1 is now federally enforceable
- For BAAQMD Condition #7606 Part 1, deleted “Annual Fuel Use Limit” and the corresponding basis from description of equipment because the annual fuel use limit is in Part 2
- Added BAAQMD Condition #7606 Part 2 because it was previously omitted
- BAAQMD Condition #7606 Part 2 renumbered Part 3
- BAAQMD Condition #7606 Part 3 renumbered Part 4
- BAAQMD Condition #7606 Part 4 renumbered Part 5

The following changes were made to Table IV-H (renumbered from Table IV-I), S-24 Electronic Grade Sulfuric Acid Manufacturing Process:

- Added "BAAQMD" to Regulation 1 for clarification
- Added SIP Regulation 1-522.7 since BAAQMD Regulation 1-522.7 is no longer federally enforceable
- Removed 11/10/82 version of SIP Regulation 1 because it has been replaced with the 6/28/99 version
- Removed 6/16/83 version of SIP Regulation 6 because it has been replaced with the 9/4/98 version
- Removed 5/3/84 version of SIP Regulation 9, Rule 1 because BAAQMD Regulation 9, Rule 1 is now federally enforceable
- Added NSPS 40 CFR, Part 60 Subpart Cd since it was previously omitted

The following tables have been added:

- Table IV-J for 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
- Table IV-K for S-3 Alkylation Acid Storage Tank, S-10 Alkylation Acid Storage Tank
- Table IV-L for S-8 New Sulfur Melting Pit
- Table IV-M for S-20 Truck Loading/Unloading Station, S-22 Sulfur Unloading Station
- Table IV-N for S-34 Caustic Pump Diesel Engine
- Table IV-O for S-36 Natural Gas Fired IC Engine

V. Schedule of Compliance

A schedule of compliance is required in all Title V permits pursuant to BAAQMD Regulation 2-6-409.10 which provides that a major facility review permit shall contain the following information and provisions:

"409.10 A schedule of compliance containing the following elements:

10.1 A statement that the facility shall continue to comply with all applicable requirements with which it is currently in compliance;

10.2 A statement that the facility shall meet all applicable requirements on a timely basis as requirements become effective during the permit term; and

10.3 If the facility is out of compliance with an applicable requirement at the time of issuance, revision, or reopening, the schedule of compliance shall contain a plan by which the facility will achieve compliance. The plan shall contain deadlines for each item in the plan. The schedule of compliance shall also contain a requirement for submission of progress reports by the facility at least every six months. The progress reports shall contain the dates by which each item in the plan was achieved and an explanation of why any dates in the schedule of compliance were not or will not be met, and any preventive or corrective measures adopted."

Since the District has not determined that the facility is out of compliance with an applicable requirement, the schedule of compliance for this permit contains only sections 2-6-409.10.1 and 2-6-409.10.2.

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

Changes to permit:
The schedule of compliance now states that the permit holder shall also comply with applicable requirements "cited in" this permit that become effective during the term of the permit "on a timely basis" to follow the regulation more closely.

VI. Permit Conditions

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

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

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

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

When applicable, conditions that are obsolete or that have no regulatory basis have been deleted from the permit.

When applicable, BAAQMD Regulation 6 standards have been updated to Regulation 6-1 to reflect current BAAQMD Rules.

When applicable, conditions have also been deleted due to the following:

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

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

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

Additional monitoring has been added, where appropriate, to assure compliance with the applicable requirements.

Changes to permit:
The permit conditions have been re-written so that they are in an active, not passive, voice and specify the owner/operator as the responsible party to improve enforceability.

Condition #708, that applied to S-14 Gasoline Dispensing Facility, has been deleted because S-14 is permanently out of service.

Condition #2051, part 1, that applies to S-13 Alkylation Acid Storage tank, has been modified per application #3157 to allow abatement by A-4 Acid Storage Tanks Back-up Vent Activated Carbon Canisters and A-5 Acid Storage Tanks Back-up Vent Packed Tower Caustic Scrubber when the S-1 decomposition furnaces are unavailable.

Condition #7606, part 3, that applies to S-15 Startup Air Heater, has been modified to require that S-15 comply with the applicable NOx emission limit in BAAQMD Regulation 9-7 in addition to complying with the NOx emission limit specified in this condition part.

Condition #7606, part 4, that applies to S-15 Startup Air Heater, has been modified to require that S-15 comply with the applicable CO emission limit in BAAQMD Regulation 9-7 in addition to complying with the CO emission limit specified in this condition part.

In Condition #7934, Refinery Make Gas (RMG) has been removed because the facility no longer burns Refinery Make Gas at S-9.

Condition #12051, part 2, that applies to S-17 Railcar Loading/Unloading Station (Sulfuric/Alkylation Acid), has been corrected to state that it applies to S-17 (and not S-3, S-10, and S-13), and has been modified per application #3157 to allow abatement 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 when the S-1 decomposition furnaces are unavailable.

Condition #12052, part 2, that applies to S-18 Truck Unloading Station (Alkylation Acid), has been corrected to state that it applies to S-18 (and not S-3, S-10, and S-13), and has been modified per application #3157 to allow abatement 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 when the S-1 decomposition furnaces are unavailable.

Condition #13215, part 2, that applies to S-16 Alkylation Acid Storage tank, has been modified per application #3157 to allow abatement by A-4 Acid Storage Tanks Back-up Vent Activated Carbon Canisters and A-5 Acid Storage Tanks Back-up Vent Packed Tower Caustic Scrubber when the S-1 decomposition furnaces are unavailable.

Condition #13889, part 1, that applies to S-32 Acid Storage tank, has been modified to allow abatement by A-4 Acid Storage Tanks Back-up Vent Activated Carbon Canisters and A-5 Acid Storage Tanks Back-up Vent Packed Tower Caustic Scrubber when the S-1 decomposition furnaces are unavailable and the tank contains spent alkylation acid.

Condition #14980, part 1, has been modified to clarify that annual source testing is required at the exhaust at A-1 to comply with BAAQMD Regulation 12-6-301 and 40 CFR 60.31d.

Condition #14980, part 2, has been added per application #21593.

Condition #19267 that applies to A-4 Activated Carbon Beds, A-5 Packed Tower Caustic Scrubber, S-3 Acid Storage Tank, and S-10 Acid Storage Tank has been added per application # 3157 and 8786.

Condition #20509 that applies to S-36 Natural Gas Generator has been added per application #6994.

Condition #20580 that applies to A-6 Emergency Caustic Scrubber System has been added per application #5782.

Condition #22820 that applies to S-34 Caustic Pump Diesel Engine, has been added per Stationary Diesel Engine ATCM (CCR, Title 17, Section 93115).

VII. Applicable Limits and Compliance Monitoring Requirements

This section of the permit is a summary of numerical limits and related monitoring requirements for each source. The summary includes a citation for each monitoring requirement, frequency of monitoring, and type of monitoring. The applicable requirements for monitoring are completely contained in Sections IV, Source-Specific Applicable Requirements, and VI, Permit Conditions, of the permit.

Changes to permit:

The standard language at the beginning of the section has been updated.

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

The following changes have been made to the tables where applicable:

- The headings at the top of the tables have been updated. "Pollutant" has been changed to "Type of Limit" since not every limit is a pollutant limit. "Emission Limit Citation" has been changed to "Citation of Limit" since not every limit is an emission limit. "Emission Limit" has been changed to "Limit" since not every limit is an emission limit.
- "Regulation" has been deleted from citations of a section of a regulation. For example, "BAAQMD Regulation 9-1-301" is now "BAAQMD 9-1-301."
- BAAQMD Regulation 6 standards have been updated to Regulation 6-1 to reflect current BAAQMD Rules.
- The "type of limit" has been changed to "Opacity" for BAAQMD Regulation 6-1-301, since it is an opacity standard.
- The "type of limit" has been changed to "FP" for BAAQMD Regulation 6-1-310 and 6-1-311, since it is a filterable particulate standard.
- SIP Regulation 9-1-301 has been deleted because BAAQMD Regulation 9-1-301 is now in the SIP.
- The federal enforceability for BAAQMD Regulation 9-1 has been changed from "N" to "Y" because the regulation is now in the SIP.

The following tables have been renumbered:

- Table VII-D renumbered to Table VII-C
- Table VII-E renumbered to Table VII-D
- Table VII-F renumbered to Table VII-E
- Table VII-G renumbered to Table VII-F
- Table VII-H renumbered to Table VII-G
- Table VII-I renumbered to Table VII-H

The following changes were made to Table VII-A, S-1 Sulfuric Acid Manufacturing Process:

- Clarified that compliance with the SO_2 emission limit in BAAQMD Regulation 9-1-309 ensures compliance with the SO_2 standard in BAAQMD Regulation 9-1-301
- "Acid mist" changed to "Sulfuric Acid mist" for clarification
- "BAAQMD Cond #14980" changed to "BAAQMD Condition #14980, part 1" because the annual source testing requirement for sulfuric acid mist is found in this condition part, and because this condition now has more than one part
- Added BAAQMD Regulation 12-6-301 to table
- Added NSPS 40 CFR 60.31d
- Added BAAQMD Condition #14980, part 1 to Monitoring Requirement Citation column for SO_3 and H_2SO_4 because it was previously omitted

The following changes were made to Table VII-B, S-9 Process Air Heater:

- The federal enforceability for BAAQMD Regulation 9-7 has been changed from "N" to "Y" because the regulation is now in the SIP
- Added BAAQMD Regulation 9-7-307.3 to table to include 1/1/12 emission limits for NOx and CO
- Added SIP Regulation 9-7-301.1 to table to include emission limits for NOx because it was previously omitted
- Added SIP Regulation 9-7-301.2 to table to include emission limits for CO because it was previously omitted
- Moved BAAQMD Condition #7934, parts 2 and 3 to the end of the table for consistency

The following changes were made to Table VII-C, S-14 Gasoline Dispensing Facility:

- Deleted Table VII-C because S-14 is permanently out of service

The following changes were made to Table VII-C (renumbered from Table VII-D), S-15 Startup Air Heater:

- Deleted BAAQMD Regulation 9-7-301.1 because S-15 is exempt per BAAQMD Regulation 9-7-111
- Added BAAQMD Regulation 9-7-307.3 to table to include 1/1/12 emission limits for NOx and CO
- Deleted BAAQMD Condition #7606, part 4 for CO because it was listed twice in the table

The following tables have been added:

- Table VII-G for 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
- Table VII-H for S-3 Alkylation Acid StorageTank, S-10 Alkylation Acid Storage Tank
- Table VII-I for S-8 New Sulfur Melting Pit
- Table VII-J for S-13 Alkylation Acid Storage Tank #16
- Table VII-K for S-17 Railcar Loading/Unloading Station (Sulfuric/Alkylation Acid)
- Table VII-L for S-18 Truck Unloading Station (Alkylation Acid)
- Table VII-M for S-20 Truck Loading/Unloading Station, S-22 Sulfur Unloading Station
- Table VII-N for S-34 Caustic Pump Diesel Engine
- Table VII-O for S-36 Natural Gas Fired IC Engine

The District has reviewed all monitoring and has determined the existing monitoring is adequate with the following exceptions.

The tables below contain only the limits for which there is no monitoring or inadequate monitoring in the applicable requirements. The District has examined the monitoring for other limits and has determined that monitoring is adequate to provide a reasonable assurance of compliance. Calculations for potential to emit will be provided in the discussion when no monitoring is proposed due to the size of a source.

Monitoring decisions are typically the result of a balancing of several different factors including: 1) the likelihood of a violation given the characteristics of normal operation, 2) degree of variability in the operation and in the control device, if there is one, 3) the potential severity of impact of an undetected violation, 4) the technical feasibility and probative value of indicator monitoring, 5) the economic feasibility of indicator monitoring, and 6) whether there is some other factor, such as a different regulatory restriction applicable to the same operation, that also provides some assurance of compliance with the limit in question.

These factors are the same as those historically applied by the District in developing monitoring for applicable requirements**.** It follows that, although Title V calls for a re-examination of all monitoring**,** there is a presumption that these factors have been appropriately balanced and incorporated in the District's prior rule development and/or permit issuance. It is possible that, where a rule or permit requirement has historically had no monitoring associated with it, no monitoring may still be appropriate in the Title V permit if, for instance, there is little likelihood of a violation**.** Compliance behavior and associated costs of compliance are determined in part by the frequency and nature of associated monitoring requirements. As a result, the District will generally revise the nature or frequency of monitoring only when it can support a conclusion that existing monitoring is inadequate**.**

NOx Sources

S# & Description	Emission Limit Citation	Federally Enforceable Emission Limit	Monitoring
S-9 Process Air Heater	BAAQMD Regulation 9-7-301.1	30 ppmv, dry @ 3% O_2	None
S-15 Startup Air Heater	BAAQMD Condition #7606, part 3	66 ppmv, dry @ 3% O_2	None

NOx Discussion:

S-9 Process Air Heater was source tested on June 12, 1998 to determine compliance with the NOx emission standard of Regulation 9-7-301.1 that became effective on January 1, 1996. The results of the test showed that S-9 was in compliance with those standards. S-9 emitted 18.9 ppm NOx @ 3% O_2 which complies with the 9-7-301.1 limit of 30 ppm NOx.

The potential to emit for S-9 is not significant based upon 8,760 hours of operation per year and the maximum allowable emission rate of 30 ppm as shown below:

(0.037 lb/MM BTU)(15 MM BTU/hr)(8,760 hr/yr) = 4,862 lb/yr

Therefore, additional monitoring is not necessary to insure ongoing compliance with this standard for S-9.

S-15 Startup Air Heater was source tested on May 10, 1994 to determine compliance with the NOx emission standard of BAAQMD condition #7606, part 3. The results of the test showed that S-15 was in compliance with those standards. S-15 emitted 22.4 ppm NOx @ 3% O_2 which complies with the permit condition limit of 66 ppm NOx.

The potential to emit for S-15 is not significant based upon the annual natural gas usage limit of 5,000,000 cubic feet per year established under condition #7606, part 2 and the maximum allowable NOx emission rate of 66 ppm (equivalent to 0.082 lb/MM BTU) as shown below:

(0.082 lb/MM BTU)(5,000,000 ft3/yr)(1050 BTU/ft3) = 431 lb/yr

Therefore, additional monitoring is not necessary to insure ongoing compliance with this standard for S-15.

CO Sources

S# & Description	Emission Limit Citation	Federally Enforceable Emission Limit	Monitoring
S-9 Process Air Heater	BAAQMD Regulation 9-7-301.2	400 ppmv, dry @ 3% O_2	None
S-15 Startup Air Heater	BAAQMD Condition #7606, part 4	50 ppmv, dry @ 3% O_2	None

CO Discussion:

S-9 Process Air Heater was source tested on June 12, 1998 to determine compliance with the CO emission standard of Regulation 9-7-301.1 that became effective on January 1, 1996. The results of the test showed that S-9 was in compliance with those standards. S-9 emitted 167.1 ppm CO @ 3% O_2 which complies with the 9-7-301.1 limit of 400 ppm CO.

The potential to emit for S-9 is not significant based upon 8,760 hours of operation per year and the maximum allowable emission rate of 400 ppm as shown below:

(0.3 lb/MM BTU)(15 MM BTU/hr)(8,760 hr/yr) = 39,420 lb/yr

Therefore, additional monitoring is not necessary to insure ongoing compliance with this standard for S-9.

S-15 Startup Air Heater was source tested on May 10, 1994 to determine compliance with the CO emission standard of BAAQMD condition #7606, part 4. The results of the test showed that S-15 was in compliance with that standard. S-15 emitted 2.2 ppm NOx @ 3% O_2 which complies with the permit condition limit of 50 ppm CO.

The potential to emit for S-15 is not significant based upon the annual natural gas usage limit of 5,000,000 cubic feet per year established under condition #7606, part 2 and the maximum allowable CO emission rate of 50 ppm (equivalent to 0.0375 lb/MM BTU) as shown below:

(0.0375 lb/MM BTU)(5,000,000 ft3/yr)(1050 BTU/ft3) = 197 lb/yr

Therefore, additional monitoring is not necessary to insure ongoing compliance with this standard for S-15.

SO_2 Sources

S# & Description	Emission Limit Citation	Federally Enforceable Emission Limit	Monitoring
S-1 Sulfuric Acid Manufacturing Plant, S-9 Process Air Heater, S-15 Startup Air Heater, S-24 Electronic Grade Sulfuric Acid Manufacturing Process	BAAQMD 9-1-301	Ground level concentrations of SO_2 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	None
S-9 Process Air Heater, S-15 Startup Air Heater	BAAQMD 9-1-302	300 ppm (dry)	None
S-34 Caustic Pump Diesel Engines	BAAQMD 9-1-304	Sulfur content of liquid fuel < 0.5% by weight	Fuel Certification

SO_2 Discussion:

BAAQMD Regulation 9-1-301

Because both S-1 Sulfuric Acid Plant and S-24 Electronic Grade Sulfuric Acid Plant are abated by A-1 Sulfur Dioxide Abatement System they achieve SO_2 emission rates of less than 300 ppmvd, @ 12% O_2 (monitored continuously by CEM) in compliance with BAAQMD Regulation 9-1-309. Therefore, normal operation of S-1 and S-24 are not expected to result in violations of the ground level concentration limits of Regulation 9-1-301 and additional monitoring is not necessary.

All facility combustion sources are subject to the SO_2 emission limitations in District Regulation 9, Rule 1 (ground-level concentration and emission point concentration). In EPA's June 24, 1999 agreement with CAPCOA and ARB, "Periodic Monitoring Recommendations for Generally Applicable Requirements in SIP", EPA has agreed that natural-gas-fired combustion sources do not need additional monitoring to verify compliance with Regulation 9, Rule 1, since violations of the regulation are unlikely. S-9 Process Air Heater and S-15 Start-up Air Heater are fired exclusively with natural gas. Therefore, no monitoring is necessary for this requirement.

BAAQMD Regulation 9-1-302

All facility combustion sources are subject to the SO_2 emission limitations in District Regulation 9, Rule 1 (ground-level concentration and emission point concentration). In EPA's June 24, 1999 agreement with CAPCOA and ARB, "Periodic Monitoring Recommendations for Generally Applicable Requirements in SIP", EPA has agreed that natural-gas-fired combustion sources do not need additional monitoring to verify compliance with Regulation 9, Rule 1, since violations of the regulation are unlikely. S-9 Process Air Heater and S-15 Start-up Air Heater are fired exclusively with natural gas. Therefore, no monitoring is necessary for this requirement.

BAAQMD Regulation 9-1-304

Because S-34 Caustic Pump Diesel Engine will be fired exclusively on "California diesel Fuel" that has a maximum sulfur content of 500 ppmw (0.05% by weight) compliance with Regulation 6-304 is expected. Per the CAPCOA/ARB/EPA agreement of 6/24/99 entitled "Periodic Monitoring Recommendations for Generally Applicable Requirements in SIP", compliance with liquid fuel sulfur limits in BAAQMD Regulation 9-1-304 will be assured by certification of the sulfur content by the fuel supplier for each fuel delivery. Therefore, no additional monitoring is necessary for this source.

H_2SO_4 Sources

S# & Description	Emission Limit Citation	Federally Enforceable Emission Limit	Monitoring
S-1 Sulfuric Acid Manufacturing Plant, S-24 Electronic Grade Sulfuric Acid Manufacturing Process	BAAQMD 12-6-301	0.15 g/kg (0.3 lb/ton) of acid produced	Annual source test

H_2SO_4 Discussion:

BAAQMD Regulation 12-6-301

An annual source test is required for the above sources to comply with BAAQMD Regulation 12-6-301.

PM Sources

S# & Description	Emission Limit Citation	Federally Enforceable Emission Limit	Monitoring
S-1 Sulfuric Acid Manufacturing Plant, S-9 Process Air Heater, S-15 Start-up Air Heater, S-24 Electronic Grade Sulfuric Acid Manufacturing Process	BAAQMD Regulation 6-301	Ringelmann 1.0	None
S-34 Caustic Pump Diesel Engines	BAAQMD Regulation 6-303.1	Ringelmann 2.0	None
S-1 Sulfuric Acid Manufacturing Plant, S-24 Electronic Grade Sulfuric Acid Manufacturing Process	BAAQMD Regulation 6-310	0.15 gr/dscf	None
S-9 Process Air Heater, S-15 Start-up Air Heater, and S-34 Caustic Pump Diesel Engines	BAAQMD Regulation 6-310.3	0.15 gr/dscf at 6% O_2	None
S-1 Sulfuric Acid Manufacturing Plant, S-24 Electronic Grade Sulfuric Acid Manufacturing Process	BAAQMD Regulation 6-311	$4.10P^{0.67}$ lb/hr, where P is process weight, ton/hr	None

PM Discussion:

BAAQMD Regulation 6 "Particulate Matter and Visible Emissions"

Visible Emissions

Because both S-1 Sulfuric Acid Plant and S-24 Electronic Grade Sulfuric Acid Plant are abated by A-1 Sulfur Dioxide Abatement System, they achieve SO_2 emission rates of less than 300 ppmvd, @ 12% O_2 (monitored continuously by CEM) in compliance with BAAQMD Regulation 9-1-309. Therefore, normal operation of S-1 and S-24 are not expected to result in violations of the visible emissions standard of Regulation 6-1-301 and additional monitoring is not necessary.

BAAQMD Regulation 6-301 limits visible emissions to no darker than 1.0 on the Ringelmann Chart (except for periods or aggregate periods less than 3 minutes in any hour). Visible emissions are normally not associated with combustion of gaseous fuels, such as natural gas. Sources S-9 Process Air Heater and S-15 Start-up Air Heater burn natural gas exclusively, therefore, per the EPA's June 24, 1999 agreement with CAPCOA

and ARB titled "Summary of Periodic Monitoring Recommendations for Generally Applicable Requirements in SIP", no monitoring is required to assure compliance with this limit for these sources.

BAAQMD Regulation 6-303.1 limits visible emissions to no darker than 2.0 on the Ringelmann Chart (except for periods or aggregate periods less than 3 minutes in any hour) for engines of less than 1500 cubic inch displacement. No monitoring has been required for S-34 Caustic Pump Diesel Engine since visible emissions violations are not expected for properly tuned engines.

Particulate Weight Limitation

BAAQMD Regulation 6-310 limits filterable particulate (FP) emissions from any source to 0.15 grains per dry standard cubic foot (gr/dscf) of exhaust volume. Section 310.3 limits filterable particulate emissions from "heat transfer operations" to 0.15 gr/dscf @ 6% O_2. These are the "grain loading" standards.

Because both S-1 Sulfuric Acid Plant and S-24 Electronic Grade Sulfuric Acid Plant are abated by A-1 Sulfur Dioxide Abatement System, they achieve sulfuric acid mist emission rates of less than 0.15 g/kg of acid produced in compliance with BAAQMD Regulation 12-6-301. Therefore, normal operation of S-1 and S-24 are not expected to result in violations of the grain loading limit of Regulation 6-310 and additional monitoring is not necessary.

Exceedances of the grain loading standards are normally not associated with combustion of gaseous fuels, such as natural gas. Sources S-9 Process Air Heater and S-15 Start-up Air Heater burn natural gas exclusively, therefore, per the EPA's July 2001 agreement with CAPCOA and ARB entitled "CAPCOA/CARB/EPA Region IX Recommended Periodic Monitoring for Generally Applicable Grain Loading Standards in the SIP: Combustion Sources: Summary of Periodic Monitoring Recommendations for Generally Applicable Requirements in SIP", no monitoring is required to assure compliance with Regulation 6-310.3 for these sources.

Allowable Rate of Emissions Based on Process Weight Rate

Because both S-1 Sulfuric Acid Plant and S-24 Electronic Grade Sulfuric Acid Plant are abated by A-1 Sulfur Dioxide Abatement System, they achieve sulfuric acid mist emission rates of less than 0.15 g/kg of acid produced in compliance with BAAQMD Regulation 12-6-301. Therefore, normal operation of S-1 and S-24 are not expected to result in violations of the process weight based mass emission limits of Regulation 6-311 and additional monitoring is not necessary.

VIII. Test Methods

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

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

Changes to permit:

BAAQMD Regulation 6 standards have been updated to Regulation 6-1 to reflect current BAAQMD Rules.

An alternate method was added for Regulation 6-1-301, 6-1-310 and 6-1-311.

The test methods for Regulation 6-1-303, 9-1-304, 9-1-302, 9-1-304, and 9-7-307.3 were added.

The test methods for SIP Regulation 9-1-301, 9-1-308, and 9-1-309 have been removed.

Method 19B has been removed from the test methods for Regulations 9-1-302 and 9-1-304 because it is obsolete.

IX. Permit Shield:

The District rules allow two types of permit shields. The permit shield types are defined as follows: (1) A provision in a major facility review permit explaining that specific federally enforceable regulations and standards do not apply to a source or group of sources, or (2) A provision in a major facility review permit explaining that specific federally enforceable applicable requirements for monitoring, recordkeeping and/or reporting are subsumed because other applicable requirements for monitoring, recordkeeping, and reporting in the permit will assure compliance with all emission limits.

The second type of permit shield is allowed by EPA's White Paper 2 for Improved Implementation of the Part 70 Operating Permits Program. The District uses the second type of permit shield for all streamlining of monitoring, recordkeeping, and reporting requirements in Title V permits. The District's program does not allow other types of streamlining in Title V permits.

This facility has the first type of 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)
SIP 9-1-302	General Emission Limitation (Source is subject to Section 9-1-309)
SIP 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)
SIP 9-1-302	General Emission Limitation (Source is subject to Section 9-1-309)
SIP 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)
SIP 6-302	Opacity Limitation (SIP regulations do not require opacity monitoring for these sources)

D. Alternate Operating Scenarios:

No alternate operating scenario has been requested for this facility.

E. Compliance Status:

A 5/25/11 office memorandum from the Director of Enforcement, to the Director of Engineering, presents a review of the compliance record of General Chemical (Site #: A0023). The Compliance and Enforcement Division staff has reviewed the records for General Chemical for the period from September 1, 1998 through April 30, 2011. This review was initiated as part of the District evaluation of an application by General Chemical for a Title V permit renewal. During the period subject to review, activities known to the District include:

- There were 15 Notices of Violation (NOV) issued during this review period.
- The District received 11 alleged complaints.
- The facility is not operating under a Variance or an Order of Abatement from the District Board.
- There were 1 breakdown request, 4 indicated monitor excesses, 0 pressure relief device releases, and 7 inoperative monitor reports.

Of the 15 NOVs, 10 were emissions related violations and 5 were administrative violations. There were 15 violations associated with the 15 NOVs. In 93% of the violations, compliance was achieved within 1 day of occurrence. The one violation that took 15 days to correct was for missing records that were eventually made available. The violations did not indicate recurrent patterns of violation because investigations into the cause of the violations revealed unrelated causes.

Based on this review and analysis of the violations for the 11.8-year period, the District has concluded that no schedule of compliance or change in permit terms is necessary beyond what is already contained in the current Title V permit for this facility, as the record showed that the violations returned to compliance, were intermittent or did not evidence on-going non-compliance, there are no patterns of recurring violation, and the facility was in compliance at the time of this review.

District staff has conducted a compliance review for General Chemical and 1 Notice to Comply (NTC) was issued to General Chemical from September 1, 1998 to April 30, 2011. This NTC was issued for Regulation 1, Rule 522.7 for three days of missing records. The District uses the NTC to achieve compliance by using enforcement action appropriate to the severity of the violation.

During the period from September 1, 1998 to April 30, 2011, the District received 11 air pollution complaints alleging General Chemical as the source. The complaints were not confirmed.

The District received 1 notification for a Reportable Compliance Activity (RCA): 1 breakdown request, 4 indicated monitor excesses, 0 pressure relief device releases, and 7 inoperative monitor reports. Of the RCAs, 4 resulted in NOVs.

The Compliance and Enforcement Division had made a determination that for the review period, General Chemical was in intermittent compliance. There is no evidence of on-going non-compliance and no recurring pattern of violations that would warrant consideration of a Title V permit compliance schedule or additional permit terms.

F. Differences between the Application and the Proposed Permit:

The Title V permit renewal application was originally submitted on December 18, 2001. This version is the basis for constructing the proposed Title V renewal permit. Revisions were made to application 3907 as a result of changes at the facility that were made pursuant to permit applications 5782, 3157, and 8786. Changes to the permit conditions, application, sources, etc. include the following:

An Authority to Construct was issued for A-6 Packed Bed Scrubber and S-34 Caustic Pump Diesel Engine on 6/5/02 under application 5782.

An Authority to Construct was issued for A-4 Back-Up Vent Activated Carbon Beds and A-5 Back- up Vent Packed Tower Caustic Scrubber on 5/7/03 under application 3157. The permit conditions were modified and a revised Permit to Operate was issued on February 6, 2004 under application 8786.

A Permit to Operate was issued for S-36 Natural Gas Generator and A-33 Non-Selective Catalytic Reduction System on 1/9/04.

APPENDIX A

BAAQMD COMPLIANCE REPORT

COMPLIANCE & ENFORCEMENT DIVISION

Inter-Office Memorandum

May 25, 2011 6/16

TO: BRIAN BATEMAN – DIRECTOR OF ENGINEERING

FROM: KELLY WEE – DIRECTOR OF ENFORCEMENT

SUBJECT: REVIEW OF COMPLIANCE RECORD OF:

GENERAL CHEMICAL - SITE # A0023

Background

This review was initiated as part of the District evaluation of an application by General Chemical for a Title V Permit Renewal. It is standard practice of the Compliance and Enforcement Division to undertake a compliance review in advance of a renewal of a Title V Permit to Operate. The purpose of this review is to assure that any non-compliance problems identified during the prior permit term have been adequately addressed by returning the facility to compliance, or, if non-compliance persists, that a schedule of compliance is properly incorporated into the Title V permit compliance schedule. In addition, the review checks for patterns of recurring violation that may be addressed by additional permit terms. Finally, the review is intended to recommend, if necessary, any additional permit conditions and limitations to improve compliance.

Compliance Review

District staff reviewed General Chemical Annual Compliance Certifications for September 1, 1998 to April 30, 2011 and found no ongoing non-compliance and no recurring pattern of violations, which have not already been corrected.

The District has conducted a compliance review of 15 Notices of Violation (NOVs) issued to General Chemical from September 1, 1998 to April 30, 2011. It is important to note that all violations associated with the NOVs were in compliance at the time of this review. The District's analysis of the NOVs for the 12.8-year period indicated that there are no ongoing violations or pattern of recurring violations that would currently require a compliance schedule.

Understanding how the District handles the violations associated with the NOVs is important to understanding how the District evaluated the facility's compliance status. Whenever the District discovers a violation, it begins a two-step process. The first step is to end the violation and bring the alleged violator back into compliance. Once compliance is achieved, the second step is to proceed with penalty assessment. It is

District policy to not proceed with penalty assessment until compliance has been achieved. If a facility has not achieved compliance in a timely fashion, the District proceeds with additional enforcement action. The vast majority of Notice of Violation penalties are resolved through settlement negotiations.

The results of the District's compliance review are shown in Table I. As stated above, the 15 violations associated with the 15 NOVs were in compliance at the time of this review. In 93% of the violations, compliance was achieved within 1 day of occurrence. The one violation that took 15 days to correct was for missing records that were eventually made available. The violations did not indicate recurrent patterns of violation because investigations into the cause of the violations revealed unrelated causes.

Based on this review and analysis of all the violations for the 11.8-year period, the District has concluded that no schedule of compliance or change in permit terms is necessary beyond what is already contained in General Chemical's Title V permit, as the record showed that the violations returned to compliance, were intermittent or did not evidence on-going non-compliance, there are no patterns of recurring violation, and the facility was in compliance at the time of this review.

The violation details associated with the 15 Notices of Violation (15 violations) are summarized below and detailed in Table 1.

Violation Category	TOTAL
Emissions Related	10
Administrative	5
Permit-to-Operate	0
TOTAL	**15**

District Staff has conducted a compliance review for General Chemical and one (1) Notice to Comply (NTC's) was issued for regulation 1, rule 522.7 for three days of missing records. The District uses the NTC to achieve compliance by using enforcement action appropriate to the severity of the violation. In most cases, these minor violations involve procedural, administrative, or recordkeeping omissions that did not conceal a violation or were de minimis emissions.

District staff also reviewed additional District compliance records for General Chemical for September 1, 1998 to April 30, 2011. During this period General Chemical activities known to the District include:

The District received eleven (11) air pollution complaints alleging General Chemical as the source: investigations into the complaints were unconfirmed.

The District received one (1) notification for a Reportable Compliance Activity (RCA)[1])[2] : one (1) breakdown request, four (4) indicated monitor excesses, zero (0) pressure relief device releases, and seven (7) in-operative monitor reports. Four (4) of the RCAs resulted in NOVs.

The District processed no dockets for a variance before the District's Hearing Board.

Conclusion

The Compliance and Enforcement Division has made a determination that for the review period General Chemical was in intermittent compliance. There is no evidence of on-going non-compliance and no recurring pattern of violations that would warrant consideration of a Title V permit compliance schedule or additional permit terms. The Division does not have any recommendations for any additional permit conditions and limitations to improve compliance beyond what is already contained in the Title V Permit under consideration.

[1] Reportable Compliance Activity (RCA), also known as "Episode" reporting, is the reporting of compliance activities involving a facility as outlined in District Regulations and State Law. Reporting covers breakdown requests, indicated monitor excesses, pressure relief device releases, and inoperative monitor reports.
[2] Reportable Compliance Activity (RCA), also known as "Episode" reporting, is the reporting of compliance activities involving a facility as outlined in District Regulations and State Law. Reporting covers breakdown requests, indicated monitor excesses, pressure relief device releases, and inoperative monitor reports.

BAAQMD Notices of Violation | General Chemical (Site# A0023) | September 1,1998 - April 30, 2011

TABLE 1

V#	S#	Occur	Issue	Reg	Violation Comments	Compliance Achieved	Basis for No Compliance Schedule
A03713	1	08/15/99	10/14/99	9-1-309	Exceed stack limit	08/15/99	This violation was corrected within 4 days by repairing the leaks.
A03639	15	05/01/01	05/17/01	1-301	SO2 release	05/01/01	This violation was corrected by shutting down the plant.
A11277	na	09/01/01	09/18/01	2-6-307	Inaccruate Title V Compliance Certification report	09/01/01	This administrative violation was corrected by submitting an amended report to the District.
A11283	na	11/29/01	12/03/01	1-301	SO3 release	11/29/01	This violation was corrected by shutting down the plant.
A12978	24	11/29/01	04/02/02	6-320	Excess SO3 emission	11/29/01	This violation was corrected by shutting down the plant.
A12979	24	11/29/01	04/02/02	12-6-301	Acid Mist >0.3 lbs / ton of acid produced	11/29/01	This violation was corrected by shutting down the plant.
A12981	24	11/29/01	04/03/02	40CFR 60.31d	Acid Mist >0.5 lbs / ton of acid produced	11/29/01	This violation was corrected by shutting down the plant.
A12980	na	01/16/02	04/02/02	2-6-307	Inaccurate Semi-Annual Monitoring Report	01/16/02	This administrative violation was corrected by submitting an amended report to the District.
A12988	1	04/02/02	08/26/02	1-522.9	Missing records on the SO2 continuous emission monitor (CEM)	04/17/02	This administrative violation was corrected when the CEM data were made available.
A45208	3	11/15/02	11/20/03	2-1-307	Failed to submit source test results to District	11/15/02	This administrative violation was corrected when the test results were submitted to the District.

BAAQMD Notices of Violation | General Chemical (Site# A0023) | September 1,1998 - April 30, 2011

TABLE 1

V#	S#	Occur	Issue	Reg	Violation Comments	Compliance Achieved	Basis for No Compliance Schedule
A45201	1	01/28/03	05/02/03	2-6-307	Failure to submit annual source test results to the District	01/28/03	This administrative violation was corrected by submitting the test results to the District.
A45212	34	01/30/04	04/26/04	2-1-307	Failed source test for PM-10	01/30/04	This violation was corrected by modifying the permit condition.
A47620	na	06/23/06	11/02/06	1-301	SO2 / SO3 release	06/23/06	This violation was corrected by shutting down the plant.
A48628	1	04/05/07	06/04/07	9-1-309	SO2 Excess	04/05/07	This violation was corrected by shutting down the source.
A49500	1	01/19/10	04/20/10	9-1-309	SO2 Excess	01/19/10	This violation was corrected by shutting down the plant.

APPENDIX B

GLOSSARY

ACT
Federal Clean Air Act

APCO
Air Pollution Control Officer

ARB
Air Resources Board

BAAQMD
Bay Area Air Quality Management District

BACT
Best Available Control Technology

Basis
The underlying authority which allows the District to impose requirements.

CAA
The federal Clean Air Act

CAAQS
California Ambient Air Quality Standards

CAPCOA
California Air Pollution Control Officers Association

CEQA
California Environmental Quality Act

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

CO
Carbon Monoxide

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

District
The Bay Area Air Quality Management District

dscf
Dry Standard Cubic Feet

EPA
The federal Environmental Protection Agency.

Excluded
Not subject to any District regulations.

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

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

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

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

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

MOP
The District's Manual of Procedures.

NAAQS
National Ambient Air Quality Standards

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

NMHC
Non-methane Hydrocarbons (Same as NMOC)

NMOC
Non-methane Organic Compounds (Same as NMHC)

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 Federal Clean Air Act, and implemented by 40 CFR Part 60 and District Regulation 10.

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

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

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

POC
Precursor Organic Compounds

PM
Particulate Matter

PM10
Particulate matter with aerodynamic equivalent diameter of less than or equal to 10 microns

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

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

SO_2
Sulfur dioxide

THC
Total Hydrocarbons (NMHC + Methane)

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

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

TPH
Total Petroleum Hydrocarbons

TRMP
Toxic Risk Management Plan

TSP
Total Suspended Particulate

VOC
Volatile Organic Compounds

Units of Measure:

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