

# South Coast Air Quality Management District

## Statement of Basis

### Proposed Title V Permit Renewal

**Facility Name:** PQ Corporation  
**Facility ID:** 11435  
**SIC Code:** 2819  
**Equipment Location:** 8401 Quartz Avenue  
South Gate, CA 90280

**Application #(s):** 545149

**Application Submittal Date(s):** 11/28/2012

**AQMD Contact Person:** Stephen Jiang  
**Phone Number:** (909) 396-3134  
**E-Mail Address:** sjiang@aqmd.gov

---

#### 1. Introduction and Scope of Permit

Title V is a national operating permit program for air pollution sources. Facilities subject to Title V must obtain a Title V permit and comply with specific Title V procedures to modify the permit. This permit replaces the facility's other existing permits. Title V does not necessarily include any new requirements for reducing emissions. It does, however, include new permitting, noticing, recordkeeping, and reporting requirements.

Pursuant to Title V of the federal Clean Air Act and AQMD Rule 3004(f), a Title V permit shall expire five years from the date of issuance unless such permit has been renewed. Accordingly, each facility is required to submit a Title V renewal application and requested the AQMD to renew their Title V permit. The proposed permit incorporates updates to the facility information provided in the facility's Title V renewal application and all rules and regulations that are currently applicable to the facility.

The AQMD implements Title V through Regulation XXX – Title V Permits, adopted by the AQMD Governing Board in order to comply with EPA's requirement that local air permitting authorities develop a Title V program. Regulation XXX was developed with the participation of the public and affected facilities through a series of public workshops, working group meetings, public hearings and other meetings.

The Title V major source threshold for a particular pollutant depends on the attainment status of the pollutant. NO<sub>2</sub>, SO<sub>2</sub>, CO, and lead are in attainment with federal standards. The status for PM-10 is serious nonattainment. The status for ozone is currently extreme nonattainment.

A Title V renewal permit is proposed to be issued to cover the operations of PQ Corporation, 8401 Quartz Avenue, South Gate, CA 90280. This facility is subject to Title V requirements because it is a major source.

## **2. Facility Description**

The PQ Corporation South Gate facility is a Title V facility that manufactures solid form and aqueous solution sodium silicates. This facility operates an open hearth furnace, a boiler, a sodium silicate dissolving system, and associated storage silos, conveyers, and other supporting equipment. The furnace and the boiler are natural gas fired. PM emissions from the storage silos and conveyers are controlled by six dust collectors. NO<sub>x</sub> emissions from the boiler are controlled by a flue gas recirculation system. In addition, the facility has recently modified the open hearth furnace with a dual-stage firing system, which has successfully reduced NO<sub>x</sub> emissions from the furnace by 15%.

## **3. Construction and Permitting History**

The facility has been in operation with a Title V permit at this location since 2000. The Title V permit was last renewed on June 11, 2008. There are two permit revisions were issued since June 2008. One reflects the approval of modification of the firing system of the open hearth furnace to reduce NO<sub>x</sub> emissions and the other is for the addition of an existing aluminum trihydrate (ATH) feeder. Since the operation of the new firing system of the open hearth furnace, the NO<sub>x</sub> emissions were reduced by 15%.

## **4. Regulatory Applicability Determinations**

Applicable legal requirements for which this facility is required to comply are required to be identified in the Title V permit (for example, Sections D, E, and H of the proposed Title V permit). Applicability determinations (i.e., determinations made by the District with respect to what legal requirements apply to a specific piece of equipment, process, or operation) can be found in the Engineering Evaluations. This facility is not subject to any NSPS or NESHAP requirements.

## **5. Monitoring and Operational Requirements**

Applicable monitoring and operational requirements for which the facility is required to comply are identified in the Title V permit (for example, Sections D, F, and J and Appendix B of the proposed Title V permit). Discussion of any applicable operational requirements can be found in the Engineering Evaluations. All periodic monitoring requirements were developed using strict adherence to the following applicable guidance documents: SCAQMD Periodic Monitoring Guidelines for Title V Facilities (November 1997); CAPCOA/CARB/EPA Region IX Periodic Monitoring Recommendations for Generally Applicable Requirements in SIP (June 1999); and

CAPCOA/CARB/EPA Region IX Recommended Periodic Monitoring for Generally Applicable Grain Loading Standards in the SIP: Combustion Sources (July 2001).

The PM emissions from the storage silos and conveyers are being controlled by six dust collectors. Since the pre-control potential to emit of PM to each of these PM emission control equipment is less than 70 tons per year, the Compliance Assurance Monitoring (CAM) requirements of 40 CFR Part 64 are not applicable to the six dust collectors.

The NOX emissions from the boiler are being controlled by a flue gas recirculation. Since the pre-control potential to emit of NOX to the NOX emission control equipment is less than 10 tons per year, the Compliance Assurance Monitoring (CAM) requirements of 40 CFR Part 64 are not applicable to the flue gas recirculation system.

In addition, the new dual-stage firing system of the furnace is able to reduce the NOx emissions; however, since the new firing system is not emission control equipment, CAM requirements of 40 Part 64 are also not applicable.

## **6. Permit Features**

### **Permit Shield**

A permit shield is an optional part of a Title V permit that gives the facility an explicit protection from requirements that do not apply to the facility. A permit shield is a provision in a permit that states that compliance with the conditions of the permit shall be deemed compliance with all identified regulatory requirements. To incorporate a permit shield into the Title V permit involves submission of applications for change of conditions for each piece of equipment affected by the permit shield. Permit shields are addressed in Rule 3004 (c). This facility has not applied for a permit shield.

### **Streamlining Requirements**

Some emission units may be subject to multiple requirements which are closely related or redundant. The conditions may be streamlined to simplify the permit conditions and compliance.

Emission limits, work practice standards, and monitoring, recordkeeping, and reporting requirements may be streamlined. Compliance with a streamlined condition will be deemed compliance with the underlying requirements whether or not the emission unit is actually in compliance with the specific underlying requirement. This facility has not applied for any streamlined conditions.

**7. Summary of Emissions and Health Risks**

**Criteria Pollutant Emissions (tons/year)  
Annual Reported Emissions for Reporting Period 2012**

Pollutant	Emissions (tons/year)
NO <sub>x</sub>	37.395
CO	3.610
VOC	0.573
PM	11.201
SO <sub>x</sub>	0.050

**Toxic Air Contaminants Emissions (TAC)  
Annual Reported Emissions for Reporting Period 2012**

Pollutant	Emissions (lbs/yr)
Ammonia	3,050.280
Benzene	1.040
Formaldehyde	2.208
Naphthalene	0.050
PAHs	0.016

**Health Risk from Toxic Air Contaminants**

The facility is subject to review by the Air Toxics Information and Assessment Act (AB2588). The facility was determined to be exempt from AB2588 requirements.

**8. Compliance History**

As noted, the facility has been in constant operation with a Title V permit since 2000. The facility has been subject to both self-reporting requirements and AQMD inspections. The facility has had no citizen complaints filed, Notices to Comply or Notices of Violation issued in the last two years. The facility is currently operating in compliance with all applicable rules and regulations.

**9. Compliance Certification**

By virtue of the Title V permit application and issuance of this permit, the reporting frequency for compliance certification for the facility shall be annual.