

ALLEGHENY COUNTY HEALTH DEPARTMENT



AIR QUALITY PROGRAM
301 39th Street, Bldg. #7
Pittsburgh, PA 15201-1891

Synthetic Minor Source Operating Permit

<u>Issued To:</u>	TYK America, Inc. - Large Plant	<u>ACHD Permit #:</u>	0312
<u>Facility:</u>	TYK America, Inc. - Large Plant 301 Brickyard Road Clairton, PA 15025	<u>Date of Issuance:</u>	September 9, 2011
		<u>Expiration Date:</u>	September 8, 2016
		<u>Renewal Date:</u>	March 9, 2016

Issued By: 
Sandra L. Etzel
Air Pollution Control Mgr.

Prepared By: David D. Good
Air Quality Engineer

TABLE OF CONTENTS

I. CONTACT INFORMATION.....3

II. FACILITY DESCRIPTION4

III. GENERAL CONDITIONS - MINOR SOURCE7

IV. SITE LEVEL TERMS AND CONDITIONS.....15

V. EMISSION UNIT LEVEL TERMS AND CONDITIONS.....21

A. MATERIALS HANDLING OPERATIONS (WEIGHING (P001), SKIP HOISTS (P002), MIXING (P003), BAGS (P004), FEEDERS (P005), BRICK PRESSES (P006), WEIGHING (P008), MIXING (P009), AND MOLDS/BUCKETS (P010)): 21

B. BRICK CURING OVENS 1 - 8 (P007), BRICK CURING OVEN BURNERS (C001 - C008), AND AFTERBURNERS (C010 - C017):..... 23

VI. MISCELLANEOUS26

A. SPACE HEATERS (H001)..... 26

B. DRYING OVEN BURNER (C009) 26

C. WELDING OPERATIONS (WELD)..... 26

VII. ALTERNATIVE OPERATING SCENARIOS27

VIII. EMISSIONS LIMITATIONS SUMMARY28

AMENDMENTS:

<i>DATE</i>	<i>SECTION(S)</i>
-------------	-------------------

I. CONTACT INFORMATION

Facility Location: **TYK America, Inc. - Large Plant**
301 Brickyard Road
Clairton, PA 15025

Permittee/Owner: **TYK America, Inc. - Large Plant**
301 Brickyard Road
Clairton, PA 15025

Permittee/Operator: **TYK America, Inc. - Large Plant**
(if not Owner)
301 Brickyard Road
Clairton, PA 15025

Responsible Official: **Mr. Tom Nakayama**
Title: Plant Manager
Company: TYK America, Inc. - Large Plant
Address: 301 Brickyard Road
Clairton, PA 15025
Telephone Number: (412) 384-4259
Fax Number: (412) 384-4242
E-mail Address: **t.nakayama@tyk.jp**

Facility Contact: **Barry E. Carr**
Title: Plant Manager
Telephone Number: (412) 384-4262
Fax Number: (412) 384-4242
E-mail Address: **bcarr301@yahoo.com**

AGENCY ADDRESSES:

ACHD Contact: **Chief Engineer**
Allegheny County Health Department
Air Quality Program
301 39th Street, Building #7
Pittsburgh, PA 15201-1891

II. FACILITY DESCRIPTION

[This section is provided for informational purposes only and is not intended to be an applicable requirement.]

TYK America, Inc. - Large Plant engages in the manufacture of non-clay refractory products for the iron and steel industry. Refractories made at the Large plant include resin bonded Magnesia Carbon bricks, resin bonded Alumina Carbon bricks, pre-cast monolithic shapes, and wet mortars. Dry materials arrive onsite sized and in bags. Phenolic resin (5% phenol, 35% ethylene glycol, and 34% VOC) arrives onsite in 55 gallon drums.

In brick production, dry raw materials are weighed and loaded into one of three skip hoists. The hoists discharge the materials into one of three Simpson mixers. Mixers are equipped with dust collection hoods. After dry mixing, the phenolic resin is added and mixing is continued. Completed wet mix is discharged into bulk bags and stored. During storage, the mix is cured and aged. Particulate emissions from the weighing, skip hoists, mixers, and discharge points are controlled with baghouses. After aging, the material is placed on a conveyor feeder, weighed and charged by hand into one of nine (9) dry presses where it is shaped and compacted into bricks. The bricks are loaded into one of eight (8) curing ovens where they are cured for 48 hours at elevated temperatures. Cured bricks are removed from the ovens and stored for shipment. Particulate emissions from the wet material conveyor, weighing, and brick presses are controlled with baghouses. VOC emissions from the curing ovens are controlled with nine (9) natural gas-fired afterburners.

In pre-cast shape and wet mortar production, dry materials are weighed and loaded into a mixer. Water is added and the material is mixed. In pre-cast shape production, the wet mix is poured into molds and cured. The mold is removed; the pre-cast shape is air dried and then placed in a drying oven. Dried shapes are packed and shipped. Alternately, in mortar mix production, the wet mix is weighed and poured into five-gallon buckets, packed and shipped. Particulate emissions from the weighing and mixing are controlled with a baghouse.

Comfort heat is provided by natural gas-fired space heaters with a total heat input capacity of 0.48 MMBtu/hr.

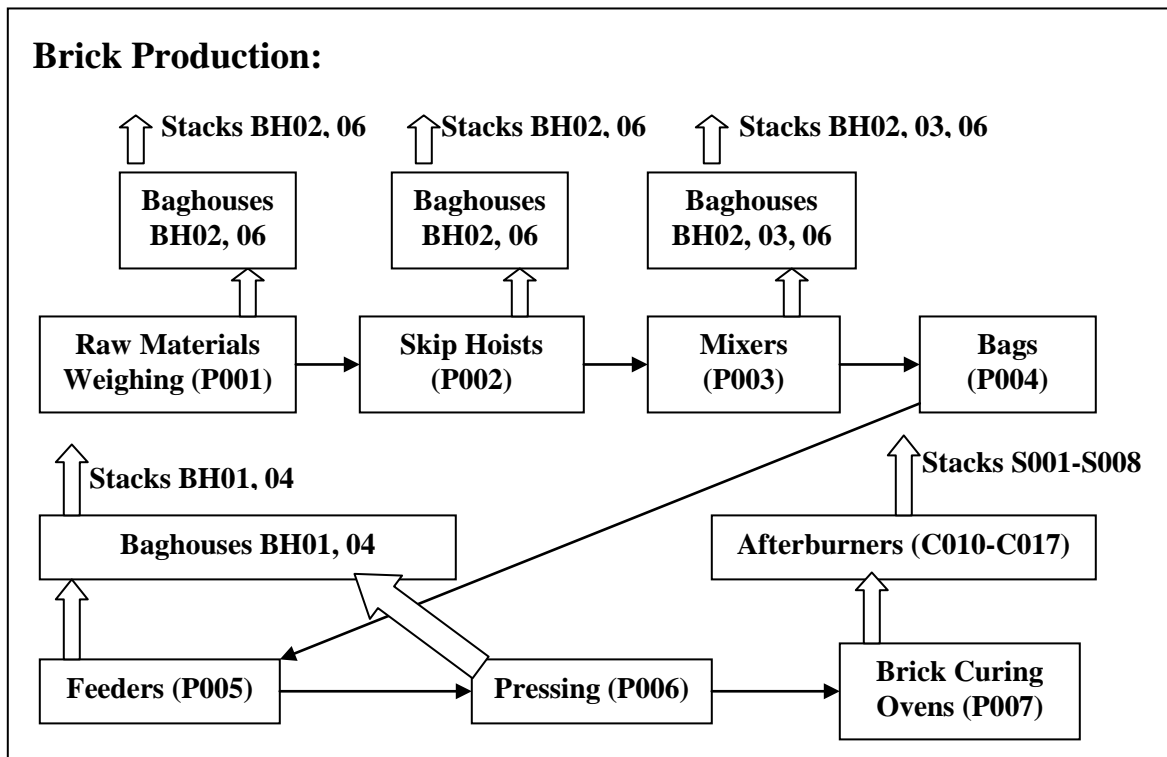
The emission units regulated by this permit are summarized in Table II-1:

TABLE II-1: Emission Unit Identification

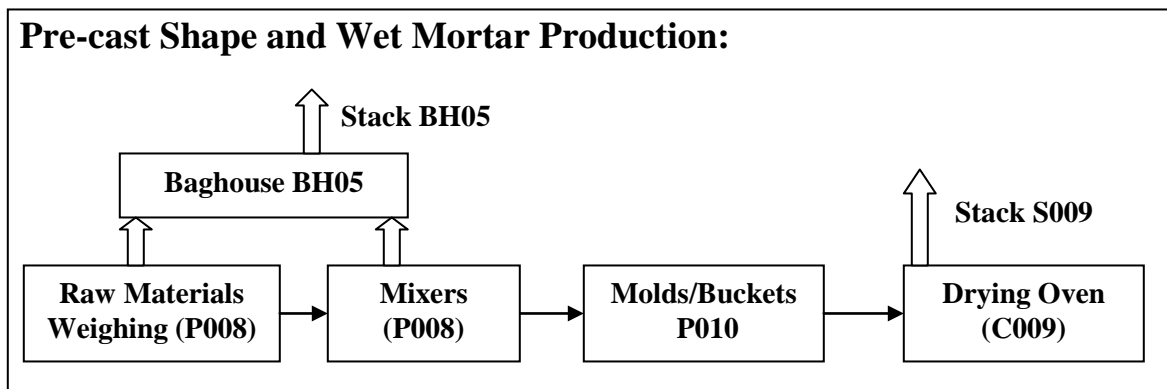
ID	SOURCE DESCRIPTION	CONTROL DEVICE	MAXIMUM CAPACITY	FUEL/RAW MATERIAL	STACK ID
P001	Materials Weighing (P001)	Baghouses #2 and #6	15,573 tons per year of refractory materials and phenolic resin	bauxite, graphite, silicon carbide, metallic silicon, glass frit, magnesium oxide, calcined or fused magnesite and graphite, metallic aluminum, metallic magnesium, mono-aluminum phosphate, phenolic resin, water	BH02, 06
P002	Materials Transfer - Skip Hoists (P002)	Baghouses #2 and #6			BH02, 06
P003	Materials Mixing (P003)	Baghouses #2, #3, and #6			BH02, 03, 06
P004	Materials Transfer - Bags (P004)	None			-
P005	Materials Transfer - Feeders (P005)	Baghouses #1 and #4			BH01, 04
P006	Brick Presses (P006)	Baghouses #1 and #4			BH01, 04
P007	Brick Curing Ovens 1 - 8 (P007)	Afterburners			S001 - S008
P008	Materials Weighing (P008)	Baghouse #5	467 tons per year of refractory materials	BH05	
P009	Materials Mixing (P009)	Baghouse #5		BH05	
P010	Materials Transfer to Molds/Buckets (P010)	None		-	
C001 - C008	Brick Curing Oven Burners	None	2.0 MMBtu/hr each	Natural gas	S001 - S008
C009	Drying Oven Burner	None	2.0 MMBtu/hr	Natural gas	S009
C010 - C017	Afterburners	-	1.5 MMBtu/hr each	Natural gas	S001 - S008
H001	Space Heaters	None	Total 0.48 MMBtu/hr	Natural gas	H001
Weld	Welding Operations	None	0.13 pounds per hour	Welding rod	-

Process Flow Diagrams

Brick Production:



Pre-cast Shape and Wet Mortar Production:



DECLARATION OF POLICY

Pollution prevention is recognized as the preferred strategy (over pollution control) for reducing risk to air resources. Accordingly, pollution prevention measures should be integrated into air pollution control programs wherever possible, and the adoption by sources of cost-effective compliance strategies, incorporating pollution prevention, is encouraged. The Department will give expedited consideration to any permit modification request based on pollution prevention principles.

The permittee is subject to the terms and conditions set forth below. These terms and conditions constitute provisions of Allegheny County Health Department Rules and Regulations, Article XXI Air Pollution Control. The subject equipment has been conditionally approved for operation. The equipment shall be operated in conformity with the plans, specifications, conditions, and instructions which are part of your application, and may be periodically inspected for compliance by the Department. In the event that the terms and conditions of this permit or the applicable provisions of Article XXI conflict with the application for this permit, these terms and conditions and the applicable provisions of Article XXI shall prevail. Additionally, nothing in this permit relieves the permittee from the obligation to comply with all applicable Federal, State and Local laws and regulations.

III. GENERAL CONDITIONS - Minor Source

1. Prohibition of Air Pollution (§2101.11)

It shall be a violation of this permit to fail to comply with, or to cause or assist in the violation of, any requirement of this permit, or any order or permit issued pursuant to authority granted by Article XXI. The permittee shall not willfully, negligently, or through the failure to provide and operate necessary control equipment or to take necessary precautions, operate any source of air contaminants in such manner that emissions from such source:

- a. Exceed the amounts permitted by this permit or by any order or permit issued pursuant to Article XXI;
- b. Cause an exceedance of the ambient air quality standards established by Article XXI §2101.10; or
- c. May reasonably be anticipated to endanger the public health, safety, or welfare.

2. Definitions (§2101.20)

- a. Except as specifically provided in this permit, terms used retain the meaning accorded them under the applicable provisions and requirements of Article XXI or the applicable federal or state regulation. Whenever used in this permit, or in any action taken pursuant to this permit, the words and phrases shall have the meanings stated, unless the context clearly indicates otherwise.
- b. Unless specified otherwise in this permit or in the applicable regulation, the term “year” shall mean any twelve (12) consecutive months.

3. Conditions (§2102.03.c)

It shall be a violation of this permit giving rise to the remedies provided by Article XXI §2109.02, for any person to fail to comply with any terms or conditions set forth in this permit.

4. Certification (§2102.01)

Any report, or compliance certification submitted under this permit shall contain written certification by a responsible official as to truth, accuracy, and completeness. This certification and any other certification required under this permit shall be signed by a responsible official of the source, and shall state that, based on information and belief formed after reasonable inquiry, the statements and information in the document are true, accurate, and complete.

5. Transfers (§2102.03.e)

This permit shall not be transferable from one person to another, except in accordance with Article XXI §2102.03.e and in cases of change-in-ownership which are documented to the satisfaction of the Department, and shall be valid only for the specific sources and equipment for which this permit was issued. The transfer of permits in the case of change-in-ownership may be made consistent with the administrative permit amendment procedure of Article XXI §2103.14.b The required documentation and fee must be received by the Department at least 30 days before the intended transfer date.

6. Term (§2103.12.e, §2103.13.a)

- a. This permit shall remain valid for five (5) years from the date of issuance, or such other shorter period if required by the Clean Air Act, unless revoked. The terms and conditions of an expired permit shall automatically continue pending issuance of a new operating permit provided the permittee has submitted a timely and complete application and paid applicable fees required under Article XXI Part C, and the Department through no fault of the permittee is unable to issue or deny a new permit before the expiration of the previous permit.
- b. Expiration. Permit expiration terminates the source's right to operate unless a timely and complete renewal application has been submitted consistent with the requirements of Article XXI Part C.

7. Need to Halt or Reduce Activity Not a Defense (§2103.12.f.2)

It shall not be a defense for a permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this permit.

8. Property Rights (§2103.12.f.4)

This permit does not convey any property rights of any sort, or any exclusive privilege.

9. Duty to Provide Information (§2103.12.f.5)

- a. The permittee shall furnish to the Department in writing within a reasonable time, any information that the Department may request to determine whether cause exists for modifying, revoking and reissuing, or terminating the permit or to determine compliance with the permit. Upon request, the permittee shall also furnish to the Department copies of any records required to be kept by the permit.
- b. Upon cause shown by the permittee the records, reports, or information, or a particular portion thereof, claimed by the permittee to be confidential shall be submitted to the Department in accordance with the requirements of Article XXI, §2101.07.d.4. Information submitted to the

Department under a claim of confidentiality, shall be available to the US EPA and the PADEP upon request and without restriction. Upon request of the permittee the confidential information may be submitted to the USEPA and PADEP directly. Emission data or any portions of any draft, proposed, or issued permits shall not be considered confidential.

10. Modification of Section 112(b) Pollutants which are VOCs or PM₁₀ (§2103.12.f.7)

Except where precluded under the Clean Air Act or federal regulations promulgated under the Clean Air Act, if this permit limits the emissions of VOCs or PM₁₀ but does not limit the emissions of any hazardous air pollutants, the mixture of hazardous air pollutants which are VOCs or PM₁₀ can be modified so long as no permit emission limitations are violated. A log of all mixtures and changes shall be kept and reported to the Department with the next report required after each change.

11. Right to Access (§2103.12.h.2)

Upon presentation of credentials and other documents as may be required by law, the permittee shall allow authorized Department and other federal, state, county, and local government representatives to:

- a. Enter upon the permittee's premises where a permitted source is located or an emissions-related activity is conducted, or where records are or should be kept under the conditions of the permit;
- b. Have access to, copy and remove, at reasonable times, any records that must be kept under the conditions of the permit;
- c. Inspect at reasonable times any facilities, equipment (including monitoring and air pollution control equipment), practices, or operations regulated or required under the permit; and
- d. As authorized by either Article XXI or the Clean Air Act, sample or monitor at reasonable times substances or parameters for the purpose of assuring compliance with the permit or other applicable requirements.

12. Certification of Compliance (§2103.12.h.5,)

- a. The permittee shall submit on an annual basis, certification of compliance with all terms and conditions contained in this permit, including emission limitations, standards, or work practices. The certification of compliance shall be made consistent with General Condition III.4 above and shall include the following information at a minimum:
 - 1) The identification of each term or condition of the permit that is the basis of the certification;
 - 2) The compliance status;
 - 3) Whether any noncompliance was continuous or intermittent;
 - 4) The method(s) used for determining the compliance status of the source, currently and over the reporting period consistent with the provisions of this permit; and
 - 5) Such other facts as the Department may require to determine the compliance status of the source.
- b. All certifications of compliance must be submitted to the Department by August 31 of each year for the time period beginning July 1 of the previous year and ending June 30 of the same year. The first report shall be due August 31, 2012 for the time period beginning on the issuance date of this permit through June 30, 2012.

13. Record Keeping Requirements (§2103.12.j.1)

- a. The permittee shall maintain records of required monitoring information that include the following:
 - 1) The date, place as defined in the permit, and time of sampling or measurements;
 - 2) The date(s) analyses were performed;
 - 3) The company or entity that performed the analyses;
 - 4) The analytical techniques or methods used;
 - 5) The results of such analyses; and
 - 6) The operating parameters existing at the time of sampling or measurement.
- b. The permittee shall maintain and make available to the Department, upon request, records including computerized records that may be necessary to comply with the reporting and emission statements in Article XXI §2108.01.e. Such records may include records of production, fuel usage, maintenance of production or pollution control equipment or other information determined by the Department to be necessary for identification and quantification of potential and actual air contaminant emissions.

14. Retention of Records (§2103.12.j.2)

The permittee shall retain records of all required monitoring data and support information for a period of at least five (5) years from the date of the monitoring sample, measurement, report, or application. Support information includes all calibration and maintenance records and all original strip-chart recordings for continuous monitoring instrumentation, and copies of all reports required by this permit.

15. Reporting Requirements (§2103.12.k)

- a. The permittee shall submit reports of any required monitoring at least every six (6) months. All instances of deviations from permit requirements must be clearly identified in such reports. All required reports must be certified by the Responsible Official.
- b. Prompt reporting of deviations from permit requirements is required, including those attributable to upset conditions as defined in this permit and Article XXI §2108.01.c, the probable cause of such deviations, and any corrective actions or preventive measures taken.
- c. All reports submitted to the Department shall comply with the certification requirements of General Condition III.4 above.
- d. Semiannual reports required by this permit shall be submitted to the Department as follows:
 - 1) One semiannual report is due by July 31 of each year for the time period beginning January 1 and ending June 30 of the same year.
 - 2) One semiannual report is due by January 31 of each year for the time period beginning July 1 and ending December 31 of the previous year.
 - 3) The first semiannual report shall be due January 31, 2012 for the time period beginning on the issuance date of this permit through December 31, 2011.

16. Severability Requirement (§2103.12.l)

The provisions of this permit are severable, and if any provision of this permit is determined by a court of competent jurisdiction to be invalid or unenforceable, such a determination will not affect the remaining provisions of this permit.

17. Existing Source Reactivations (§2103.13.d)

The permittee shall not reactivate any source that has been out of operation or production for a period of one year or more unless the permittee has submitted a reactivation plan request to, and received a written reactivation plan approval from, the Department. Existing source reactivations shall meet all requirements of Article XXI §2103.13.d.

18. Administrative Permit Amendment Procedures (§2103.14.b)

An administrative permit amendment may be made consistent with the procedures of Article XXI §2103.14.b and §2103.24.b. Administrative permit amendments are not authorized for any amendment precluded by the Clean Air Act or the regulations there under.

19. Revisions and Minor Permit Modification Procedures (§2103.14.c)

Sources may apply for revisions and minor permit modifications on an expedited basis in accordance with Article XXI §2103.14.c and §2103.24.a.

20. Significant Permit Modifications (§2103.14.d)

Significant permit modifications shall meet all requirements of the applicable subparts of Article XXI, Part C, including those for applications, fees, public participation, review by affected States, and review by EPA, as they apply to permit issuance and permit renewal. The approval of a significant permit modification, if the entire permit has been reopened for review, shall commence a new full five (5) year permit term. The Department shall take final action on all such permits within nine (9) months following receipt of a complete application.

21. Duty to Comply (§2103.12.f.1)

The permittee shall comply with all permit conditions and all other applicable requirements at all times. Any permit noncompliance constitutes a violation of the Clean Air Act, the Air Pollution Control Act, and Article XXI and is grounds for any and all enforcement action, including, but not limited to, permit termination, revocation and reissuance, or modification, and denial of a permit renewal application.

22. Renewals (§2103.13.b.)

Renewal of this permit is subject to the same fees and procedural requirements, including those for public participation and affected State and EPA review, that apply to initial permit issuance. The application for renewal shall be submitted at least six (6) months but not more than eighteen (18) months prior to expiration of this permit. The application shall also include submission of a supplemental compliance review as required by Article XXI §2102.01.

23. Reopenings for Cause (§2103.15, §2103.12.f.3)

- a. This permit shall be reopened and reissued under any of the following circumstances:

- 1) Additional requirements under the Clean Air Act become applicable to a major source with a remaining permit term of three (3) or more years. No such reopening is required if the effective date of the requirement is later than the date on which the permit is due to expire, unless the original permit or any of its terms and conditions has been extended solely due to the failure of the Department to act on a permit renewal application in a timely fashion.
 - 2) Additional requirements, including excess emissions requirements, become applicable to an affected source under the acid rain program. Upon approval by the Administrator, excess emissions offset plans shall be deemed to be incorporated into this permit.
 - 3) The Department or EPA determines that this permit contains a material mistake or that inaccurate statements were made in establishing the emissions standards or other terms or conditions of this permit.
 - 4) The Administrator or the Department determines that this permit must be reissued or revoked to assure compliance with the applicable requirements.
- b. This permit may be modified; revoked, reopened, and reissued; or terminated for cause. The filing of a request by the permittee for a permit modification, revocation and reissuance, or termination, or of a notification of planned changes or anticipated noncompliance does not stay any permit condition. No permit revision shall be required, under any approved economic incentives, marketable permits, emissions trading, and other similar programs or processes, for changes that are provided for in this permit.

24. Annual Operating Permit Administration Fee (§2103.40)

In each year during the term of this permit, on or before the last day of the month in which the application for this permit was submitted, the permittee shall submit to the Department, in addition to any other applicable administration fees, an Annual Operating Permit Administration Fee in accordance with §2103.40. by check or money order payable to the "Allegheny County Air Pollution Control Fund" in the amount specified in the fee schedule applicable at that time.

25. Other Requirements not Affected (§2104.08, §2105.02)

Compliance with the requirements of this permit shall not in any manner relieve any person from the duty to fully comply with any other applicable Federal, State, or County statute, rule, regulation, or the like, including but not limited to the odor emission standards under Article XXI §2104.04, any applicable NSPSs, NESHAPs, MACTs, or Generally Achievable Control Technology (GACT) standards now or hereafter established by the EPA, and any applicable requirements of BACT or LAER as provided by Article XXI, any condition contained in any applicable Installation or Operating Permit and/or any additional or more stringent requirements contained in an order issued to such person pursuant to Article XXI Part I.

26. Termination of Operation (§2108.01.a)

In the event that operation of any source of air contaminants is permanently terminated, the person responsible for such source shall so report, in writing, to the Department within 60 days of such termination.

27. Tests by the Department (§2108.02.d)

Notwithstanding any tests conducted pursuant to Article XXI §2108.02, the Department or another entity designated by the Department may conduct emissions testing on any source or air pollution control equipment. At the request of the Department, the person responsible for such source or equipment shall provide adequate sampling ports, safe sampling platforms and adequate utilities for the performance of such tests.

28. Other Rights and Remedies Preserved (§2109.02.b)

Nothing in this permit shall be construed as impairing any right or remedy now existing or hereafter created in equity, common law or statutory law with respect to air pollution, nor shall any court be deprived of such jurisdiction for the reason that such air pollution constitutes a violation of this permit.

29. Enforcement and Emergency Orders (§2109.03, §2109.05)

- a. The person responsible for this source shall be subject to any and all enforcement and emergency orders issued to it by the Department in accordance with Article XXI §2109.03, §2109.04 and §2109.05.
- b. Upon request, any person aggrieved by an Enforcement Order or Emergency Order shall be granted a hearing as provided by Article XXI §2109.03.d; provided however, that an Emergency Order shall continue in full force and effect notwithstanding the pendency of any such appeal.
- c. Failure to comply with an Enforcement Order or immediately comply with an Emergency Order shall be a violation of this permit thus giving rise to the remedies provided by Article XXI §2109.02.

30. Penalties, Fines, and Interest (§2109.07.a)

A source that fails to pay any fee required under this permit when due shall pay a civil penalty of 50% of the fee amount, plus interest on the fee amount computed in accordance with Article XXI §2109.06.a.4 from the date the fee was required to be paid. In addition, the source may have this permit revoked for failure to pay any fee required.

31. Appeals (§2109.10)

In accordance with State Law and County regulations and ordinances, any person aggrieved by an order or other final action of the Department issued pursuant to Article XXI or any unsuccessful petitioner to the Administrator under Article XXI Part C, Subpart 2, shall have the right to appeal the action to the Director in accordance with the applicable County regulations and ordinances.

32. Risk Management (§2104.08, 40 CFR Part 68)

Should this stationary source, as defined in 40 CFR Part 68.3, become subject to Part 68, then the owner or operator shall submit a risk management plan (RMP) by the date specified in Part 68.10 and shall certify compliance with the requirements of Part 68 as part of the annual compliance certification as required by *General Condition III.12* above.

33. Circumvention (§2101.14)

For purposes of determining compliance with the provisions of this permit and Article XXI, no credit

shall be given to any person for any device or technique, including but not limited to the operation of any source with unnecessary amounts of air, the combining of separate sources except as specifically permitted by Article XXI and the Department, the use of stacks exceeding Good Engineering Practice height as defined by regulations promulgated by the US EPA at 40 CFR §§51.100 and 51.110 and Subpart I, and other dispersion techniques, which without reducing the amount of air contaminants emitted, conceals or dilutes an emission of air contaminants which would otherwise violate the provisions of this Article; except that, for purposes of determining compliance with Article §2104.04 concerning odors, credit for such devices or techniques, except for the use of a masking agent, may be given.

34. Duty to Supplement and Correct Relevant Facts (§2103.12.d.2)

- a. The permittee shall provide additional information as necessary to address requirements that become applicable to the source after the date it files a complete application but prior to the Department taking action on the permit application.
- b. The permittee shall provide supplementary fact or corrected information upon becoming aware that incorrect information has been submitted or relevant facts were not submitted.
- c. Except as otherwise required by this permit and Article XXI, the Clean Air Act, or the regulations thereunder, the permittee shall submit additional information as necessary to address changes occurring at the source after the date it files a complete application but prior to the Department taking action on the permit application.
- d. The applicant shall submit information requested by the Department which is reasonably necessary to evaluate the permit application.

35. Effect (§2102.03.g.)

- a. Except as specifically otherwise provided under Article XXI, Part C, issuance of a permit pursuant to Article XXI Part B or Part C shall not in any manner relieve any person of the duty to fully comply with the requirements of this permit, Article XXI or any other provision of law, nor shall it in any manner preclude or affect the right of the Department to initiate any enforcement action whatsoever for violations of this permit or Article XXI, whether occurring before or after the issuance of such permit. Further, except as specifically otherwise provided under Article XXI Part C the issuance of a permit shall not be a defense to any nuisance action, nor shall such permit be construed as a certificate of compliance with the requirements of this permit or Article XXI.

36. Installation Permits (§2102.04.a.1.)

It shall be a violation of this permit giving rise to the remedies set forth in Article XXI Part I for any person to install, modify, replace, reconstruct, or reactivate any source or air pollution control equipment which would require an installation permit or permit modification in accordance with Article XXI Part B or Part C.

IV. SITE LEVEL TERMS AND CONDITIONS

1. Reporting of Upset Conditions (§2103.12.k.2)

The permittee shall promptly report all deviations from permit requirements, including those attributable to upset conditions as defined in Article XXI §2108.01.c, the probable cause of such deviations, and any corrective actions or preventive measures taken.

2. Visible Emissions (§2104.01.a)

Except as provided for by Article XXI §2108.01.d pertaining to a cold start, no person shall operate, or allow to be operated, any source in such manner that the opacity of visible emissions from a flue or process fugitive emissions from such source, excluding uncombined water:

- a. Equal or exceed an opacity of 20% for a period or periods aggregating more than three (3) minutes in any sixty (60) minute period; or,
- b. Equal or exceed an opacity of 60% at any time.

3. Odor Emissions (§2104.04) (County-only enforceable)

No person shall operate, or allow to be operated, any source in such manner that emissions of malodorous matter from such source are perceptible beyond the property line.

4. Materials Handling (§2104.05)

The permittee shall not conduct, or allow to be conducted, any materials handling operation in such manner that emissions from such operation are visible at or beyond the property line.

5. Operation and Maintenance (§2105.03)

All air pollution control equipment required by this permit or any order under Article XXI, and all equivalent compliance techniques approved by the Department, shall be properly installed, maintained, and operated consistently with good air pollution control practice.

6. Open Burning (§2105.50)

No person shall conduct, or allow to be conducted, the open burning of any material, except where the Department has issued an Open Burning Permit to such person in accordance with Article XXI §2105.50 or where the open burning is conducted solely for the purpose of non-commercial preparation of food for human consumption, recreation, light, ornament, or provision of warmth for outside workers, and in a manner which contributes a negligible amount of air contaminants.

7. Shutdown of Control Equipment (§2108.01.b)

- a. In the event any air pollution control equipment is shut down for reasons other than a breakdown, the person responsible for such equipment shall report, in writing, to the Department the intent to shut down such equipment at least 24 hours prior to the planned shutdown. Notwithstanding the submission of such report, the equipment shall not be shut down until the approval of the Department is obtained; provided, however, that no such report shall be required if the source(s)

served by such air pollution control equipment is also shut down at all times that such equipment is shut down.

- b. The Department shall act on all requested shutdowns as promptly as possible. If the Department does not take action on such requests within ten (10) calendar days of receipt of the notice, the request shall be deemed denied, and upon request, the owner or operator of the affected source shall have a right to appeal in accordance with the provisions of Article XI.
- c. The prior report required by Site Level Condition IV.7.a above shall include:
 - 1) Identification of the specific equipment to be shut down, its location and permit number (if permitted), together with an identification of the source(s) affected;
 - 2) The reasons for the shutdown;
 - 3) The expected length of time that the equipment will be out of service;
 - 4) Identification of the nature and quantity of emissions likely to occur during the shutdown;
 - 5) Measures, including extra labor and equipment, which will be taken to minimize the length of the shutdown, the amount of air contaminants emitted, or the ambient effects of the emissions;
 - 6) Measures which will be taken to shut down or curtail the affected source(s) or the reasons why it is impossible or impracticable to shut down or curtail the affected source(s) during the shutdown; and
 - 7) Such other information as may be required by the Department.

8. Breakdowns (§2108.01.c)

- a. In the event that any air pollution control equipment, process equipment, or other source of air contaminants breaks down in such manner as to have a substantial likelihood of causing the emission of air contaminants in violation of this permit, or of causing the emission into the open air of potentially toxic or hazardous materials, the person responsible for such equipment or source shall immediately, but in no event later than sixty (60) minutes after the commencement of the breakdown, notify the Department of such breakdown and shall, as expeditiously as possible but in no event later than seven (7) days after the original notification, provide written notice to the Department.
- b. To the maximum extent possible, all oral and written notices required shall include all pertinent facts, including:
 - 1) Identification of the specific equipment which has broken down, its location and permit number (if permitted), together with an identification of all related devices, equipment, and other sources which will be affected.
 - 2) The nature and probable cause of the breakdown.
 - 3) The expected length of time that the equipment will be inoperable or that the emissions will continue.
 - 4) Identification of the specific material(s) which are being, or are likely to be emitted, together with a statement concerning its toxic qualities, including its qualities as an irritant, and its potential for causing illness, disability, or mortality.
 - 5) The estimated quantity of each material being or likely to be emitted.
 - 6) Measures, including extra labor and equipment, taken or to be taken to minimize the length of the breakdown, the amount of air contaminants emitted, or the ambient effects of the emissions, together with an implementation schedule.

- 7) Measures being taken to shut down or curtail the affected source(s) or the reasons why it is impossible or impractical to shut down the source(s), or any part thereof, during the breakdown.
- c. Notices required shall be updated, in writing, as needed to advise the Department of changes in the information contained therein. In addition, any changes concerning potentially toxic or hazardous emissions shall be reported immediately. All additional information requested by the Department shall be submitted as expeditiously as practicable.
- d. Unless otherwise directed by the Department, the Department shall be notified whenever the condition causing the breakdown is corrected or the equipment or other source is placed back in operation by no later than 9:00 AM on the next County business day. Within seven (7) days thereafter, written notice shall be submitted pursuant to Paragraphs a and b above.
- e. Breakdown reporting shall not apply to breakdowns of air pollution control equipment which occur during the initial startup of said equipment, provided that emissions resulting from the breakdown are of the same nature and quantity as the emissions occurring prior to startup of the air pollution control equipment.
- f. In no case shall the reporting of a breakdown prevent prosecution for any violation of this permit or Article XXI.

9. Cold Start (§2108.01.d)

In the event of a cold start on any fuel-burning or combustion equipment, except stationary internal combustion engines and combustion turbines used by utilities to meet peak load demands, the person responsible for such equipment shall report in writing to the Department the intent to perform such cold start at least 24 hours prior to the planned cold start. Such report shall identify the equipment and fuel(s) involved and shall include the expected time and duration of the startup. Upon written application from the person responsible for fuel-burning or combustion equipment which is routinely used to meet peak load demands and which is shown by experience not to be excessively emissive during a cold start, the Department may waive these requirements and may instead require periodic reports listing all cold starts which occurred during the report period. The Department shall make such waiver in writing, specifying such terms and conditions as are appropriate to achieve the purposes of Article XXI. Such waiver may be terminated by the Department at any time by written notice to the applicant.

10. Monitoring of Malodorous Matter Beyond Facility Boundaries (§2104.04)

The permittee shall take all reasonable action as may be necessary to prevent malodorous matter from becoming perceptible beyond facility boundaries. Further, the permittee shall perform such observations as may be deemed necessary along facility boundaries to insure that malodorous matter beyond the facility boundary in accordance with Article XXI §2107.13 is not perceptible and record all findings and corrective action measures taken.

11. Emissions Inventory Statements (§2108.01.e)

- a. Emissions inventory statements in accordance with §2108.01.e shall be submitted to the Department by March 15 of each year for the preceding calendar year. The Department may require more frequent submittals if the Department determines that more frequent submissions are required by the EPA or that analysis of the data on a more frequent basis is necessary to

implement the requirements of Article XXI or the Clean Air Act.

- b. The failure to submit any report or update within the time specified, the knowing submission of false information, or the willful failure to submit a complete report shall be a violation of this permit giving rise to the remedies provided by Article XXI §2109.02.

12. Orders (§2108.01.f)

In addition to meeting the requirements of General Condition III.26 and Site Level Conditions IV.7 through IV.11, inclusive, the person responsible for any source shall, upon order by the Department, report to the Department such information as the Department may require in order to assess the actual and potential contribution of the source to air quality. The order shall specify a reasonable time in which to make such a report.

13. Violations (§2108.01.g)

The failure to submit any report or update thereof required by General Condition III.26 and Site Level Conditions IV.7 through IV.12 above, inclusive, within the time specified, the knowing submission of false information, or the willful failure to submit a complete report shall be a violation of this permit giving rise to the remedies provided by Article XXI §2109.02.

14. Emissions Testing (§2108.02)

- a. **Orders.** The person responsible for any source shall, upon order by the Department, conduct, or cause to be conducted, such emissions tests as specified by the Department within such reasonable time as is specified by the Department. Test results shall be submitted in writing to the Department within 20 days after completion of the tests, unless a different period is specified in the Department's order. Emissions testing shall comply with all applicable requirements of Article XXI §2108.02.e.
- b. **Tests by the Department :** Notwithstanding any tests conducted pursuant to this permit, the Department or another entity designated by the Department may conduct emissions testing on any source or air pollution control equipment. At the request of the Department, the permittee shall provide adequate sampling ports, safe sampling platforms and adequate utilities for the performance of such tests.
- c. **Testing Requirements.** No later than 45 days prior to conducting any tests required by this permit, the person responsible for the affected source shall submit for the Department's approval a written test protocol explaining the intended testing plan, including any deviations from standard testing procedures, the proposed operating conditions of the source during the test, calibration data for specific test equipment and a demonstration that the tests will be conducted under the direct supervision of persons qualified by training and experience satisfactory to the Department to conduct such tests. In addition, at least 30 days prior to conducting such tests, the person responsible shall notify the Department in writing of the time(s) and date(s) on which the tests will be conducted and shall allow Department personnel to observe such tests, record data, provide pre-weighed filters, analyze samples in a County laboratory and to take samples for independent analysis. Test results shall be comprehensively and accurately reported in the units of measurement specified by the applicable emission limitations of this permit.
- d. Test methods and procedures shall conform to the applicable reference method set forth in this

permit or Article XXI Part G, or where those methods are not applicable, to an alternative sampling and testing procedure approved by the Department consistent with Article XXI §2108.02.e.2.

- e. **Violations:** The failure to perform tests as required by this permit or an order of the Department, the failure to submit test results within the time specified, the knowing submission of false information, the willful failure to submit complete results, or the refusal to allow the Department, upon presentation of a search warrant, to conduct tests, shall be a violation of this permit giving rise to the remedies provided by Article XXI §2109.02.

15. Abrasive Blasting (§2105.51)

- a. Except where such blasting is a part of a process requiring an operating permit, no person shall conduct or allow to be conducted, abrasive blasting or power tool cleaning of any surface, structure, or part thereof, which has a total area greater than 1,000 square feet unless such abrasive blasting complies with all applicable requirements of Article XXI §2105.51.
- b. In addition to complying with all applicable provisions of §2105.51, no person shall conduct, or allow to be conducted, abrasive blasting of any surface unless such abrasive blasting also complies with all other applicable requirements of Article XXI unless such requirements are specifically addressed by §2105.51.

16. Asbestos Abatement (§2105.62, §2105.63)

In the event of removal, encasement, or encapsulation of Asbestos-Containing Material (ACM) at a facility or in the event of the demolition of any facility, the permittee shall comply with all applicable provisions of Article XXI §2105.62 and §2105.63.

17. Fugitive Emissions (§2105.49)

The person responsible for a source of fugitive emissions, in addition to complying with all other applicable provisions of this permit shall take all reasonable actions to prevent fugitive air contaminants from becoming airborne. Such actions may include, but are not limited to:

- a. The use of asphalt, oil, water, or suitable chemicals for dust control;
- b. The paving and maintenance of roadways, parking lots and the like;
- c. The prompt removal of earth or other material which has been deposited by leaks from transport, erosion or other means;
- d. The adoption of work or other practices to minimize emissions;
- e. Enclosure of the source; and
- f. The proper hooding, venting, and collection of fugitive emissions.

18. Episode Plans (§2106.02)

The permittee shall upon written request of the Department, submit a source curtailment plan, consistent with good industrial practice and safe operating procedures, designed to reduce emissions of air contaminants during air pollution episodes. Such plans shall meet the requirements of Article XXI §2106.02.

19. New Source Performance Standards (§2105.05)

- a. It shall be a violation of this permit giving rise to the remedies provided by §2109.02 of Article XXI for any person to operate, or allow to be operated, any source in a manner that does not comply with all requirements of any applicable NSPS now or hereafter established by the EPA, except if such person has obtained from EPA a waiver pursuant to Section 111 or Section 129 of the Clean Air Act or is otherwise lawfully temporarily relieved of the duty to comply with such requirements.
- b. Any person who operates, or allows to be operated, any source subject to any NSPS shall conduct, or cause to be conducted, such tests, measurements, monitoring and the like as is required by such standard. All notices, reports, test results and the like as are required by such standard shall be submitted to the Department in the manner and time specified by such standard. All information, data and the like which is required to be maintained by such standard shall be made available to the Department upon request for inspection and copying.

V. EMISSION UNIT LEVEL TERMS AND CONDITIONS

A. Materials Handling Operations (Weighing (P001), Skip Hoists (P002), Mixing (P003), Bags (P004), Feeders (P005), Brick Presses (P006), Weighing (P008), Mixing (P009), and Molds/Buckets (P010)):

ID	SOURCE DESCRIPTION	CONTROL DEVICE	MAXIMUM CAPACITY	FUEL/RAW MATERIAL	STACK ID
P001	Materials Weighing (P001)	Baghouses #2 and #6	15,573 tons per year of refractory materials and phenolic resin	bauxite, graphite, silicon carbide, metallic silicon, glass frit, magnesium oxide, calcined or fused magnesite and graphite, metallic aluminum, metallic magnesium, mono-aluminum phosphate, phenolic resin, water	BH02, 06
P002	Materials Transfer - Skip Hoists (P002)	Baghouses #2 and #6			BH02, 06
P003	Materials Mixing (P003)	Baghouses #2, #3, and #6			BH02, 03, 06
P004	Materials Transfer - Bags (P004)	none			-
P005	Materials Transfer - Feeders (P005)	Baghouses #1 and #4			BH01, 04
P006	Brick Presses (P006)	Baghouses #1 and #4			BH01, 04
P008	Materials Weighing (P008)	Baghouse #5	467 tons per year of refractory materials	BH05	
P009	Materials Mixing (P009)	Baghouse #5		BH05	
P010	Materials Transfer to Molds/Buckets (P010)	none		-	

1. Restrictions:

- a. The Permittee shall not operate or allow to be operated the materials handling, weighing, transferring, mixing, and pressing operations (P001 - P003, P005 - P006, and P008 - P009) unless the baghouses are controlling all particulate matter. (§2103.12.a.2.B; §2104.02.b)
- b. The materials handling, weighing, transferring, mixing, and pressing operations (P001 - P006 and P008 - P010) and baghouses (BH01 - BH06) shall be properly maintained and operated in accordance with manufacturer’s specifications and good engineering practices. (§2103.12.a.2.B; §2104.02.b)

2. Testing Requirements:

The Department reserves the right to require emissions testing sufficient to assure compliance with the terms and conditions of this permit. Such testing shall be performed in accordance with Site Level Condition IV.14 (§2103.12.h.1)

3. Monitoring Requirements:

- a. The Permittee shall perform weekly visible emissions observations on the stacks to the baghouses in order to determine compliance with conditions V.A.1.a and V.A.1.b above (§2102.04.e)
- b. The Permittee shall inspect all processes weekly in order to determine compliance with conditions V.A.1.a and V.A.1.b above when the equipment is in operation. (§2102.04.e)
- c. The Permittee shall monitor and record the pressure drop across each baghouse weekly. (§2102.04.e)

4. Record Keeping Requirements:

- a. The permittee shall record the results of the inspections performed under condition V.A.3.b above. (§2103.12.j)
- b. The permittee shall keep records of the visible emissions notations of the baghouses in order to demonstrate compliance with Condition V.A.3.a above. (§2103.12.j)
- c. The permittee shall keep records of the weekly pressure drop readings. (§2103.12.j)
- d. The permittee shall keep records of episodes of non-compliance with Conditions V.A.1.a and V.A.1.b above and conditions V.A.3.a through V.A.3.b above and corrective actions taken shall be recorded upon occurrence. (§2103.12.j)

5. Reporting Requirements:

- a. Weekly pressure drop readings for each baghouse shall be reported to the Department on a semi-annual basis in accordance with Condition III.15 above. (§2103.12.k; §2103.12.a.2.B)
- b. The permittee shall report instances of non-compliance with the conditions of this permit to the Department on a semi-annual basis. (§2103.12.k)
- c. Reporting instances of non-compliance, does not relieve the Permittee of the requirement to report breakdowns in accordance with Site Level Condition IV.8, if appropriate. (§2103.12.k)

6. Work Practice Standards:

- a. The Permittee shall maintain the materials handling, weighing, transferring, mixing, and pressing operations (P001 - P006 and P008 - P010) in accordance with manufacturer's recommendations and good engineering practices. (§2103.12.a.2.B)
- b. Material removed from baghouses and filter materials shall be disposed of in a manner preventing entrainment into the atmosphere. (§2101.11.c)

B. Brick Curing Ovens 1 - 8 (P007), Brick Curing Oven Burners (C001 - C008), and Afterburners (C010 - C017):

ID	SOURCE DESCRIPTION	CONTROL DEVICE	MAXIMUM CAPACITY	FUEL/RAW MATERIAL	STACK ID
P007	Brick Curing Ovens 1 - 8 (P007)	Afterburners	15,573 tons per year of refractory materials and phenolic resin	Refractory brick, natural gas	S001 - S008
C001 - C008	Brick Curing Oven Burners	None	2.0 MMBtu/hr each	Natural gas	S001 - S008
C010 - C017	Afterburners	-	1.5 MMBtu/hr each	Natural gas	S001 - S008

1. Restrictions:

- a. For the brick curing ovens (P007), brick curing oven burners (C001-C008) and afterburners (C010-C017), the permittee shall: (§2103.12.a.2.B; §2104.03.a.1)
 - 1) Burn natural gas only;
 - 2) Operate the brick curing ovens (P007) in a manner such that all oven emissions are exhausted through the afterburner;
 - 3) Operate and maintain the brick curing oven burners and afterburners in accordance with manufacturer’s specifications and good engineering practices.

- b. The permittee shall operate and maintain the afterburners (C010-C017) as follows: (§2105.30.b)
 - 1) The afterburners controlling brick curing ovens 1-8 (P007) shall be in operation at all times that the ovens are in operation; (§2105.30.b)
 - 2) The afterburners shall be operated at a temperature of at least 1,569 degrees Fahrenheit or at the minimum temperature required to maintain at least a 95% control efficiency of VOC, phenol and ethylene glycol, whichever is greater; (§2103.12.a.2.D, §2105.30.b)
 - 3) The afterburners shall have a residence time of at least 0.50 seconds; and (§2105.30.b)
 - 4) The opacity of visible emissions from the afterburners, excluding uncombined water, shall not equal or exceed an opacity of 20% at any time. (§2105.30.d)

- c. The emissions of VOC and HAP-containing materials from the brick curing ovens shall be limited as follows: (§2103.20.b.4)
 - 1) Input of resin shall be limited to 467.2 tons per twelve consecutive month period; (§2103.20.b.4)
 - 2) The VOC, phenol and ethylene glycol content of resin shall be limited as follows:(§2103.20.b.4)
 - a) VOC content of 34.0% or less, by weight;
 - b) Phenol content of 5.0% or less, by weight; and
 - c) Ethylene glycol content of 35% or less, by weight.

- d. Emissions of VOC, ethylene glycol, phenol, and total HAPs shall be limited as shown in Table V-B-1. These limits include VOC and HAP emissions from brick curing ovens 1-8 (P007), brick curing oven burners (C001-C008), and the afterburners (C010-C017). (§2103.20.b.4)

TABLE V-B-1: Emission Limitations

POLLUTANT	HOURLY EMISSION LIMIT (lb/hr)	ANNUAL EMISSION LIMIT (tons/year)¹
VOC	1.81	7.94
Phenol	0.27	1.17
Ethylene Glycol	1.87	8.18
Other HAPs	0.064	0.28
Total HAPs	2.13	9.34

¹ A year is defined as any consecutive 12-month period.

2. Testing Requirements:

- a. Emissions testing on the afterburners (C010 - C017) controlling VOC and HAP emissions from the brick curing ovens (P007) shall be performed every five years to determine the afterburner destruction efficiency for VOC, phenol and ethylene glycol and to assure compliance with the synthetic minor source limits in Condition V.B.1.d above. The first test shall be performed no later than 180 days after the issuance of this permit. (§2103.12.h.1, §2108.02)
- b. The Department reserves the right to require emissions testing sufficient to assure compliance with the terms and conditions of this permit. Such testing shall be performed in accordance with Site Level Condition IV.14 (§2103.12.h.1)

3. Monitoring Requirements:

The permittee shall: (§2102.04.e; §2103.20.b.4; §2103.12.a.2.B)

- a. Inspect all processes weekly in order to determine compliance with conditions V.B.1.a through V.B.1.d above when the equipment is in operation.
- b. Continuously monitor and record the temperature of each afterburner in order to determine compliance with condition V.B.1.b above.
- c. Calculate emissions of VOC and HAP on a monthly basis using the following formula:

$$\text{VOC/HAP Emissions}_{\text{material } i} \text{ (ton/yr)} = \text{Usage}_{\text{material } i} \text{ (ton/yr)} \times \text{VOC/HAP content}_{\text{material } i} \times (1 - \text{Control Efficiency})$$

4. Record Keeping Requirements:

The permittee shall: (§2103.12.j; §2103.20.b.4; §2103.12.a.2.B)

- a. Record the results of the inspections performed under condition V.B.3.a.

- b. Keep records of all temperature readings and other necessary operating parameters of the afterburners (C001 - C008) in order to demonstrate compliance with condition V.B.3.b above.
- c. Keep records of episodes of non-compliance with conditions V.B.1.a through V.B.1.d above and corrective actions taken shall be recorded upon occurrence.
- d. Record the following data on a monthly basis for the brick curing ovens (P007):
 - 1) The usage of each refractory material input;
 - 2) The usage of raw material inputs (phenolic resins, etc.);
 - 3) The percent by weight or weight-to-volume ratio (lbs/gal) VOC and HAP content of all raw materials, as applied;
 - 4) An estimate of the VOC and HAP emissions from these materials; and
 - 5) The monthly production of finished refractory material.

5. Reporting Requirements:

- a. Monthly materials usage, and monthly VOC and HAP emissions shall be reported to the Department on a semi-annual basis in accordance with Condition III.15 above. (§2103.12.k; §2103.20.b.4; §2103.12.a.2.B)
- b. The permittee shall report instances of non-compliance with the conditions of this permit to the Department on a semi-annual basis. (§2103.12.k)
- c. Reporting instances of non-compliance, does not relieve the Permittee of the requirement to report breakdowns in accordance with Site Level Condition IV.8, if appropriate. (§2103.12.k)

6. Work Practice Standards:

The Permittee shall maintain the brick curing ovens 1 - 8 (P007), brick curing oven burners (C001-C008), and afterburners (C010-C017), in accordance with manufacturer's recommendations and good engineering practices. (§2103.12.a.2.B)

VI. MISCELLANEOUS

A. Space Heaters (H001)

ID	SOURCE DESCRIPTION	CONTROL DEVICE(S)	MAXIMUM CAPACITY	FUEL/RAW MATERIAL	STACK ID
H001	Space Heaters	None	Total 0.48 MMBtu/hr	Natural gas	H001

1. Restrictions:

- a. The space heaters shall burn natural gas only. (§2103.12.a.2.B)
- b. The permittee shall operate and maintain the space heaters in accordance with the manufacturers' specification and good engineering practices. (§2103.12.a.2.B)

B. Drying Oven Burner (C009)

ID	SOURCE DESCRIPTION	CONTROL DEVICE(S)	MAXIMUM CAPACITY	FUEL/RAW MATERIAL	STACK ID
C009	Drying Oven Burner	None	2.0 MMBtu/hr	Natural gas	S009

1. Restrictions:

- a. The drying oven burner shall burn natural gas only. (§2103.12.a.2.B, §2104.03.a.1)
- b. The permittee shall operate and maintain the drying oven burner in accordance with the manufacturers' specification and good engineering practices. (§2103.12.a.2.B)

C. Welding Operations (Weld)

ID	SOURCE DESCRIPTION	CONTROL DEVICE(S)	MAXIMUM CAPACITY	FUEL/RAW MATERIAL	STACK ID
Weld	Welding Operations	None	0.13 pounds /hr	Welding rod	-

1. Restrictions:

The permittee shall operate and maintain the welding operations in accordance with the manufacturers' specification and good engineering practices. (§2103.12.a.2.B)

VII. ALTERNATIVE OPERATING SCENARIOS

There are no alternative operating scenarios.

VIII. EMISSIONS LIMITATIONS SUMMARY

[This section is provided for informational purposes only and is not intended to be an applicable requirement.]

The annual emission limitations for the TYK America, Inc. - Large Plant facilities are summarized in the following table:

TABLE VIII-1 - Emission Limitations Summary

POLLUTANT	ANNUAL EMISSION LIMIT (tons/year) ¹
PM	8.50
PM ₁₀	7.29
SO ₂	0.09
NO _x	15.1
VOC	8.80
CO	12.6
Single HAP (Ethylene Glycol)	8.18
Total HAPs	9.62

¹ A year is defined as any consecutive 12-month period.