

Facility Name: **Huber Engineered Materials – Macon Facility**

City: Macon

County: Twiggs

AIRS #: 04-13-289-00001

Application #: TV-17939

Date SIP Application Received: N/A

Date Title V Application Received: January 31, 2008

Permit No: 1455-289-0001-V-02-2

<b>Program</b>	<b>Review Engineers</b>	<b>Review Managers</b>
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<b>TOXICS</b>	N/A	N/A

## **Introduction**

This narrative is being provided to assist the reader in understanding the content of the referenced SIP permit to construct and draft operating permit amendment. Complex issues and unusual items are explained in simpler terms and/or greater detail than is sometimes possible in the actual permit. This permit is being issued pursuant to: (1) Sections 391-3-1-.03(1) and 391-3-1-.03(10) of the Georgia Rules for Air Quality Control, (2) Part 70 of Chapter I of Title 40 of the Code of Federal Regulations, and (3) Title V of the Clean Air Act Amendments of 1990. The following narrative is designed to accompany the draft permit and is presented in the same general order as the permit. This narrative is intended only as an adjunct for the reviewer and has no legal standing. Any revisions made to the permit in response to comments received during the public comment period and EPA review process will be described in an addendum to this narrative.

**I. Facility Description**

A. Existing Permits

Table 1: Current Title V Permit and Amendments

Permit/Amendment Number	Date of Issuance	Comments	
		Yes	No
1455-289-0001-V-02-0	March 27, 2006	✓	
1455-289-0001-V-02-1	December 28, 2007	✓	

Table 2: Comments on Specific Permits

Permit Number	Comments
1455-289-0001-V-02-0	Title V renewal permit.
Letter dated July 6, 2007 (Off permit change)	Treated clays production trial.
Letter dated April 28 (Off permit change)	Replacement of Calcine Bagger #5 (S-795) with a similar unit.
1455-289-0001-V-02-1	Permit amendment allowing Huber Engineered Materials to increase chemically treated kaolin production while leaving the total facility-wide production of processed kaolin unchanged.

B. Regulatory Status

1. PSD/NSR/RACT

Although the facility has a Macon address, it is located in Twiggs County which is designated as an attainment area for all criteria pollutants and is presently classified as a non-major under PSD/NSR regulations as defined by federal 40 CFR 52.21, *Prevention of Significant Air Quality Deterioration (PSD)*.

2. Title V Major Source Status by Pollutant

Table 3: Title V Major Source Status

Pollutant	Is the Pollutant Emitted?	If emitted, what is the facility's Title V status for the Pollutant?		
		Major Source Status	Major Source Requesting SM Status	Non-Major Source Status
PM	Yes	Yes	No	No
PM <sub>10</sub>	Yes	Yes	No	No
SO <sub>2</sub>	Yes	Yes	No	No
VOC	Yes	No	No	Yes
NO <sub>x</sub>	Yes	Yes	No	No
CO	Yes	No	No	Yes
TRS	Yes	No	No	Yes

TITLE V SIGNIFICANT MODIFICATION (WITHOUT CONSTRUCTION) APPLICATION REVIEW

H <sub>2</sub> S	Yes	No	No	Yes
Individual HAP	Yes	No	No	Yes
Total HAPs	Yes	No	No	Yes

**II. Proposed Modification**

A. Description of Modification

J. M. Huber Corporation – Macon Plant changed its name to Huber Engineered Materials – Macon Facility and is requesting making the following changes to its Title V permit:

Condition(s) No.	Requested changes
2.1.1	1. Update condition to restrict the operating hours of Generator #1 (S-695), Generator #2 (S-696) to allow the facility to stay below the PSD limit. Add: <i>“Permittee shall not use Generator #1 and Generator #2 for more than 1,200 hours per 12 consecutive months each”</i> to Condition 2.1.1.  2. Allow propane firing, as the Raymond Mill furnace and Ink Clay Boiler have the capacity to burn propane. Update to: Burn only natural gas, No. 1 and No. 2 fuel oils and propane.
3.1	Update Table 3.1 as S-622 Boiler #2, S-698 #2 Turbine Generator, S-699 #3 Turbine Generator are all out of service. Equipment IDs of several units and control devices are to be updated as well.
5.2.7	Update fuel oil consumption recordkeeping from daily to monthly as compliance can be adequately verified by keeping fuel usage records on a monthly basis
5.2.8	Update to record hours of operation on natural gas internal combustion engines as both natural gas and fuel oil burning equipment are referred to in this permit condition.
5.2.9	Delete current condition. Update to: <i>“The Permittee shall once every twelve calendar months determine the nitrogen oxides emissions from each of the emission units listed in Tables A and B in Conditions 6.2.5 &amp; 6.2.6 of this permit or any NOx emission unit added using AP-42 emission factors or other acceptable factors.”</i> Justification: The Macon facility is not a major PSD source for NOx emissions. Additionally it is located in an ozone attainment county (Twiggs). Compliance testing is not necessary and AP-42 emission factors can be used to calculate nitrogen oxide emissions.
5.2.10	Remove reference to gas turbines. Update recordkeeping from daily to monthly. Justification: Compliance can be adequately verified by keeping fuel usage records on a monthly basis
5.2.11 & 5.2.13	Update to remove sources not subject to CAM. Justification: Several emission sources are not subject to CAM as their pre-controlled emissions are less than 100 tpy. Please refer to Appendix B of the report for the CAM analysis.
6.2.2	Update to remove reference to #2 Turbine Generator (S-698), #3 Turbine Generator (S-699) as they have been decommissioned.
6.2.7	Update emission factor for SO <sub>2</sub> to 0.6 based on AP-42.

B. Emissions Change

Huber Engineered Materials – Macon Facility mentioned in Application No. TV-17939 that: *“Following the removal of two natural gas-fired turbine generators and a boiler, Huber recalculated the worst case NOX emissions from fuel burning equipment. Huber proposes to limit diesel-fired Generators #1 (S-695) and #2 (S-696) to individual annual limits of 1,200 hours of operation. Based on the revised emissions calculations including the generator limit, the facility is a synthetic minor PSD source at 237 tpy of NOX. Detailed calculations can be found in Appendix A, and a summary is shown in Table 2-3. Furthermore, it cites: Prior to the removal of Boiler #2, #2 Turbine Generator, and #3 Turbine Generator and without limits on Generators #1 and #2, the unlimited facility wide NOX emissions were*

551.5 tpy. The facility is currently limited to 250 tons during any 12 consecutive months by permit condition 2.1.1.c.”

**Table 4: Emissions Change Due to Modification**

<b>Pollutant</b>	<b>Is the Pollutant Emitted?</b>	<b>Net Actual Emissions Increase (Decrease) (tpy)</b>	<b>Net Potential Emissions Increase (Decrease) (tpy)</b>
PM	Yes		
PM <sub>10</sub>	Yes		
SO <sub>2</sub>	Yes		
VOC	Yes		
NO <sub>x</sub>	Yes		-12.87
CO	Yes		
TRS	Yes		
H <sub>2</sub> S	Yes		
Individual HAP	Yes		
Total HAPs	Yes		

C. PSD/NSR Applicability

The proposed changes will not affect PSD/NSR Applicability.

**III. Facility Wide Requirements**

A. Emission and Operating Caps:

Huber Engineered Materials – Macon Facility is requesting capping the operating hours of Generator #1(S-695), Generator #2 (S-696) to no more than 1,200 hours per 12 consecutive months.

B. Applicable Rules and Regulations

None associated with the enclosed permit amendment.

C. Compliance Status

The facility is in compliance with all applicable rules.

D. Operational Flexibility

None associated with the enclosed permit amendment.

E. Permit Conditions

Condition 2.2.1 has been updated to grant the request to restrict the operating hours of Generator #1(S-695), Generator #2 (S-696) to no more than 1,200 hours per 12 consecutive months. Also, use of propane as a permitted fuel has been reintroduced.

**IV. Regulated Equipment Requirements**

A. Brief Process Description

No process changes are associated with the enclosed permit amendment.

B. Equipment List for the Process

Table 3.1 has been updated as requested in Application No. TV-17939 (Please see the enclosed permit amendment).

C. Equipment & Rule Applicability

**Emission and Operating Caps –**

In Application No. TV-17939, Huber Engineered Materials – Macon Facility has requested updating permit condition 2.1.1 *“to restrict the operating hours on these generators to allow the facility to stay below the PSD limit. Add 2.1.1d: Permittee shall not use Generator #1 and Generator #2 for more than 1,200 hours per 12 consecutive months each.”* However, this facility is presently classified as a non-major under PSD/NSR regulations as defined by federal 40 CFR 52.21, *Prevention of Significant Air Quality Deterioration (PSD)*.

**Applicable Rules and Regulations –**

No new rules (or rule changes) are being triggered by the enclosed permit amendment.

D. Compliance Status

The facility is in compliance with all applicable rules.

E. Operational Flexibility

None associated with the enclosed permit amendment.

F. Permit Conditions

Revisions have been made to Section 3.1 and Conditions No. 2.1.1, 5.2.7, 5.2.8, 5.2.9, 5.2.10, 5.2.11, 5.2.13, 6.2.2, 6.2.5, 6.2.6 and 6.2.7.

**V. Testing Requirements (with Associated Record Keeping and Reporting)**

A. Individual Equipment:

None associated with the enclosed permit amendment.

- B. Equipment Groups (all subject to the same test requirements):

None associated with the enclosed permit amendment.

**VI. Monitoring Requirements (with Associated Record Keeping and Reporting)**

- A. Individual Equipment:

None associated with the enclosed permit amendment.

- B. Equipment Groups (all subject to the same monitoring requirements):

Condition 5.2.7 has been rewritten to eliminate reference to Tables A and B and changing the word daily to monthly. The following justification, given by the company in Application No. TV-17939, appears to be reasonable: *“Several fuel burning units are equipped with individual meters to record natural gas or fuel oil consumption. Permit Conditions 5.2.7 and 5.2.10 require the facility to record fuel consumption data on these units daily. Huber requests the approval to record all fuel consumption monthly. Though these units are not New Source Performance Standards (NSPS) sources, this request is consistent with those approved by Environmental Protection Agency (EPA) on NSPS Subpart Dc sources,<sup>3</sup> where approval was based on the fact that compliance can be adequately verified by keeping fuel usage records on a monthly basis.”* Furthermore, a new requirement to update fuel oil consumption records by the 15<sup>th</sup> day of each month has been added to Condition 5.2.7.

Condition 5.2.8 has been updated by adding “natural gas and propane” and to eliminate reference to Tables A and B.

Condition 5.2.9 has been changed in response to Huber’s request to *“replace the compliance testing specified in Permit Condition No. 5.2.9 with the use of AP-42 emission factors, manufacturer guarantee rates, or recent test data to calculate monthly and annual NOX emissions. This change affects: Generator #1 exhaust (S-695), Generator #2 exhaust (S-696), Boiler #1 exhaust (S-621), #2 Spray Dryer exhaust (S-730), #4 Spray Dryer exhaust (S-687), Calciner #1 exhaust (S-760), #5 Raymond Mill Furnace (S-629), Ink Clay Boiler (S-850), Insignificant engines. Huber performed NOX testing in August 2006, March 2007, and September 2007 and proposes to use the highest emission factor of the three tests for each unit plus 15% factor of safety for future emission calculations. A comparison of the three tests’ emission factors is included in Appendix A. As shown in Appendix A, the tests are in agreement.”* Condition 5.2.9 now uses the emission factors established during the testing carried out in accordance with Condition 4.2.4

Condition 5.2.10 has been updated by adding propane and changing the word daily to monthly. Also, a new requirement to update fuel oil consumption records by the 15<sup>th</sup> day of each month has been added.

Conditions 5.2.11 and 5.2.13 have been updated to reflect CAM applicability based on the Company's most recent calculations. Per Huber Engineered Materials March 19, 2008 letter: *"the purpose for [Application No. TV-17939 is] to correct issues identified after a thorough review of the renewed Macon Title V permit and the application related to it. As a result of this review, we determined that there were several issues that needed to be corrected including the CAM determinations. We conducted an extensive and detailed review of the information submitted and came across several areas where the information included in the renewal application was in error. Any discrepancies between the information submitted in the renewal application and the information submitted in the modification are due to the original information being corrected to reflect the actual conditions. We feel that the information submitted in the modification application is correct and accurate."*

## **VII. Other Record Keeping and Reporting Requirements**

Conditions 6.2.2, 6.2.5, 6.2.6 and 6.2.7 have been updated by removing gas powered turbine generators and to grant the Company's request to use AP-42 emission factors and recent test data to calculate monthly and annual NOx and SO2 emissions.

## **VIII. Specific Requirements**

### **A. Operational Flexibility**

Not applicable.

### **B. Alternative Requirements**

Not applicable.

### **C. Insignificant Activities**

Not applicable.

### **D. Temporary Sources**

Not applicable.

### **E. Short-Term Activities**

Not applicable.

### **F. Compliance Schedule/Progress Reports**

Not applicable.

### **G. Emissions Trading**

Not applicable.

H. Acid Rain Requirements

Not applicable.

I. Prevention of Accidental Releases

Not applicable.

J. Stratospheric Ozone Protection Requirements

Not applicable.

K. Pollution Prevention

Not applicable.

L. Specific Conditions

Not applicable.