

**NORTH CAROLINA DIVISION OF
AIR QUALITY**

Air Permit Review

Permit Issue Date: TBD

Region: Raleigh Regional Office
County: Nash
NC Facility ID: 6400225
Inspector's Name: Will Wike
Date of Last Inspection: 05/22/2007
Compliance Code: 3/In Compliance - Inspection

Facility Data			Permit Applicability (this application only)
Applicant (Facility's Name): American Rockwool Incorporated Facility Address: American Rockwool Incorporated 820 East Nash Street Spring Hope, NC 27882 SIC: 3296 / Mineral Wool NAICS: 327993 / Mineral Wool Manufacturing Facility Classification: Before: Title V After: Title V Fee Classification: Before: Title V After: Title V			SIP: NSPS: NESHAP: PSD: PSD Avoidance: NC Toxics: 112(r): Other: TV renewal, CAM
Contact Data			Application Data
Facility Contact	Authorized Contact	Technical Contact	Application Number: 6400225.05A Date Received: 10/12/2005 Application Type: Renewal Application Schedule: TV-Renewal Existing Permit Data Existing Permit Number: 03578/T16 Existing Permit Issue Date: 05/19/2006 Existing Permit Expiration Date: 10/31/2006
Don Adkins Production Manager (252) 813-1098 820 East Nash Street Spring Hope NC, 27882	Steve Edris President (260) 563-2111 3711 West Mill Street Extended Wabash IN, 46992+0237	Steve Edris President (260) 563-2111 3711 West Mill Street Extended Wabash IN, 46992+0237	
Review Engineer: Joseph Voelker Review Engineer's Signature: _____ Date: _____		Comments / Recommendations: Issue 03578/T17 Permit Issue Date: TBD Permit Expiration Date: TBD	

I. Introduction and Purpose of Application

American Rockwool Incorporated (ARI) "operates" a mineral wool manufacturing facility in Spring Hope, Nash County, North Carolina. In actuality, the facility has not been in operation since August 2002. ARI however has chosen to keep their air permit in the event of an upturn in mineral wool demand.

The purpose of this application is to renew the air permit that expired on 10/31/2006. The application was submitted in a timely manner and based on a recent compliance inspection is in compliance with all air permit stipulations and applicable air regulations.

II. Chronology

Date	Description
October 12, 2005	A TV permit renewal application was received. The air permit application also contained a request for a name change. The air permit had been subsequently modified (although not renewed) and the name change has been implemented.

October 21, 2005	An acknowledgement/tech add info letter was sent requesting information regarding CAM applicability. A response to this request has never been received.
July 16, 2007	Permit application assigned to Joe Voelker (JMV).
July 17, 2007	<p>JMV had a phone conversation with Steve Edris, president and technical contact regarding process material and air emissions flow and stack tests conducted on one of the wet scrubbers in 2001. Mr. Edris emailed a PDF copy of the test report and process flow diagram. The basis of the conversation was (a) CAM applicability to the sources controlled by the wet scrubbers and (b) the scrubber monitoring requirements that were to be placed into the permit based upon the results of the testing. Permit stipulation 2.1B.1.c in permit T15 required these monitoring requirements (b) to be placed into the permit upon subsequent testing. This was not conducted during the issuance of T16 since the facility was not in operation and was recommended to be conducted by the permit engineer during the upcoming renewal process. In any event, a review of the 2001 test report does not show any concurrent records of scrubber parameters being monitored. As a result, the stipulation cannot be modified at this time until such parameters can be experimentally determined through additional testing. Mr. Edris stated that it is likely that upon restarting the facility the wet scrubbers will be replaced with filtration or a dry scrubber. Mr. Edris stated that placing a condition in the permit requiring further testing to determine these parameters would be acceptable.</p> <p>With respect to CAM applicability, item (a), the PM testing on the scrubber in 2001 suggests that the precontrolled PTE of the operations controlled by the scrubbers would qualify as a PSEU for PM. Based on an understanding of the process, the blowing chambers would be the sources that would be CAM applicable. Similar to the discussion regarding item (b), the lack of known scrubber parameters that were used during previous PM emissions testing as well as the likelihood of the scrubbers being replaced before restarting the facility, Mr. Edris agreed to developing the CAM plan upon the impending restarting of the facility.</p>
July 27, 2007	JMV and Fern Paterson discussed the testing requirement in stipulation 2.1.A.2.c. It was decided to revise the language. See the discussion in Regulatory Review.
July 30, 2007	Emails received from Charles McEachern, permit coordinator in the Raleigh Regional Office and Will Wike, assigned inspector recommending no changes to the draft permit.

III. Regulatory Review

A discussion of the applicable regulations with respect to any changes made since the initial TV permit will be presented below for each emission source. Note many of the changes occurred during permit revision T16 that was a state-only modification.

A. Two coke-fired mineral wool cupolas (ID Nos. CUP1 and CUP2) with two associated bagfilters (16,000 square feet of filter area each, ID Nos. BF1 and BF2) followed by a common stack (109 feet in height)

The applicable regulations are as follows:

Regulated Pollutant	Limits/Standards	Applicable Regulation
particulate matter	$E=4.10P^{0.67}$ where E = allowable emission rate in pounds per hour P = process weight in tons per hour	15A NCAC 2D .0515
sulfur dioxide	2.3 pounds per million Btu	15A NCAC 2D .0516
visible emissions	20 percent opacity	15A NCAC 2D .0521
odorous emissions	See Section 2.2 B.	15A NCAC 2D .1806
toxic air pollutants	See Section 2.2 B.2	15A NCAC 2Q .0705
hazardous air	See Section 2.2 A.	40 CFR 63 Subpart DDD

pollutants		
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1. 15A NCAC 2D .0515: PARTICULATES FROM MISCELLANEOUS INDUSTRIAL PROCESSES

The following language will be added for consistency with the current shell stipulation language.

”The Permittee shall be deemed in noncompliance with 15A NCAC 2D .0515 if these records are not maintained”

Other than the above change, no changes have been made to this regulation or to this source that requires any changes to the language in the permit as it currently exists.

2. 15A NCAC 2D .0516: SULFUR DIOXIDE EMISSIONS FROM COMBUSTION SOURCES

During the permit revision T16, the following change was made (as presented in the T16 review):

- Updated permit language to require two tests on the coke-fired mineral wool cupolas (ID Nos. CUP1 and CUP2) to demonstrate compliance with 2D .0516 within a year after recommencing operation. The previous permit required similar testing to be conducted within a year of issuance of the initial Title V permit. The first test was conducted in December 2001. The facility failed to conduct the second test before being idled in August 2002.

In addition the following changes will be made in T17.

Revision to section c. testing

Upon review of the testing stipulation it was decided to add some clarification language.

The existing stipulation reads as follows:

Under the provisions of NCGS 143-215.108, the Permittee shall demonstrate compliance with the emission limit(s) above by testing one of the mineral wool cupolas (**ID No. CUP1 or CUP2**) for sulfur dioxide in accordance with a testing protocol approved by the DAQ. Details of the emissions testing and reporting requirements can be found in Section 3 - General Condition JJ. Testing shall be conducted on either mineral wool cupola (ID No. CUP1 or CUP2), once every six months, such that two tests are conducted during the first year period after the facility recommences operation. The first testing shall be completed and the results submitted within 180 days of recommencing operation, unless an alternate date is approved by the DAQ. A stack test protocol shall be submitted to DAQ at least 45 days prior to testing. Testing shall be conducted while running “representative worst case” raw materials/ products (i.e. highest sulfur content raw materials). If both tests indicate that the emission rate was less than 80% of the limit given in Section 2.1 A. 2. a. above, testing shall be reduced to annual. If the results of this test are above the limit given in Section 2.1 A. 2. a. above, the Permittee shall be deemed in noncompliance with 15A NCAC 2D .0516.

The revised stipulation will read as follows (the changed language is indicated by bold/underlining):

Under the provisions of NCGS 143-215.108, the Permittee shall demonstrate compliance with the emission limit(s) above by testing either of the mineral wool cupolas (**ID No. CUP1 or CUP2**) for sulfur dioxide in accordance with a testing protocol approved by the DAQ. Details of the emissions testing and reporting requirements can be found in Section 3 - General Condition JJ. Testing shall be conducted on either mineral wool cupola (ID No. CUP1 or CUP2), once every six months, such that two tests are conducted during the first **12-month** period after the facility recommences operation. The first testing shall be completed and the results submitted within 180 days of recommencing operation, unless an alternate date is approved by the DAQ. A stack test protocol shall be submitted to DAQ at least 45 days prior to testing. Testing shall be conducted while running “representative worst case” raw materials/ products (i.e. highest sulfur content raw materials). If both tests indicate that the emission rate was less than 80% of the limit given in Section 2.1 A. 2. a. above, testing shall be reduced to **once every 12-months**. **If either test indicates an emission rate of 80% of the limit or greater, the Permittee shall continue to test either cupola at least once every 6-**

months. If the results of this test are above the limit given in Section 2.1 A. 2. a. above, the Permittee shall be deemed in noncompliance with 15A NCAC 2D .0516.

Revision to section d. monitoring/recordkeeping

In the current permit (T16) the stipulation reads as follows:

- f. The Permittee shall monitor the emission rate of sulfur dioxide using the procedure given below to demonstrate compliance with the emissions limit for sulfur dioxide in Section 2.1 A.2.a. above.

The sulfur dioxide emission rate for the two cupolas (ID Nos. CUP1 and CUP2) shall be calculated on a daily basis using the following equation:

$$M = [(40 * S_c * C) + (2 * R * S_r * 0.4)] / [(C * H_c * 2000) + (R * H_r)]$$

Where M = uncontrolled sulfur dioxide emission rate (pounds per million Btu heat input)
 S_c = coke sulfur content (percent by weight)
 C = coke feed rate (tons per hour)
 R = rock feed rate (pounds per hour)
 S_r = sulfur content in rock feed (percent by weight)
 H_c = heating value of coke (million Btu per pound)
 H_r = heating value of rock (million Btu per pound)

If M is greater than 2.3 (limit given in Section 2.1 A.2.a. above), the Permittee shall be deemed in noncompliance with 15A NCAC 2D .0516.

The derivation of the equation was not presented in the review of the permit in which it was introduced (T15). The following is presented to clarify the assumptions in the equation.

- To determine SO₂ emissions from the combustion of coke, it is assumed that 100% of the sulfur contained in the coke is converted to SO₂. Therefore 1 pound of sulfur yields 2 pounds of SO₂ (1 mol S yields 1 mol SO₂, MW sulfur, 32 lb/lbmole, MW SO₂, 64 lb/lbmole)
- To determine SO₂ emissions from the melting of the rock, it is assumed that only 40% of the sulfur contained in the rock is converted to SO₂. Therefore 1 pound of sulfur yields 0.8 pounds of SO₂ (1 mol S yields 1 mol SO₂, MW sulfur, 32 lb/lbmole, MW SO₂, 64 lb/lbmole). This was represented in the current equation as the two constants 2 and 0.4.
- The derivation of the denominator is simply a straight unit conversion and self-explanatory.

A review of the equation yielded the following:

- A check of the calculations show that the term S_r, although defined as “sulfur content in rock feed (percent by weight)” actually should be “sulfur content in rock feed (fraction by weight)” to yield correct answers given the constants used in the equation.
- The equation utilizes pounds per hour of rock feed and tons per hour of coke feed. In practice, the facility will utilize larger amounts of rock than coke so this particular choice of units is rather arbitrary, which introduces an unnecessarily complicated equation.

As a result of the above shortcomings, the equation will be rearranged and corrected to incorporate:

- The use of the units tons per hour for all process rates
- Material sulfur contents in units of percent by weight
- Elaboration of the definition of terms for clarity.
- Reduction in the number of constants for computational simplicity

Below is the derivation:

$$M \frac{\text{lbsSO}_2}{\text{mmBtu}} = \frac{\left[\left(\frac{2 \text{ lb SO}_2}{1 \text{ lb S}} * C \frac{\text{tons coke}}{\text{hr}} * S_C \frac{\text{lb S}}{100 \text{ lb coke}} * \frac{2000 \text{ lb}}{1 \text{ ton}} \right) + \left(\frac{2 \text{ lb SO}_2}{1 \text{ lb S}} * 0.4 \frac{\text{lb S released}}{\text{lb S contained in rock}} * R \frac{\text{tons rock}}{\text{hr}} * S_r \frac{\text{lb S}}{100 \text{ lb rock}} * \frac{2000 \text{ lb}}{1 \text{ ton}} \right) \right]}{\left(C \frac{\text{tons}}{\text{hr}} * H_C \frac{\text{mmBtu}}{\text{lb coke}} * \frac{2000 \text{ lb}}{1 \text{ ton}} \right) + \left(R \frac{\text{tons}}{\text{hr}} * H_r \frac{\text{mmBtu}}{\text{lb rock}} * \frac{2000 \text{ lb}}{1 \text{ ton}} \right)}$$

This simplifies to:

$$M = 0.02 \left[\frac{(C * S_c) + (SRR * R * S_r)}{(C * H_c) + (R * H_r)} \right]$$

- Where M = uncontrolled sulfur dioxide emission rate (pounds per million Btu heat input)
 C = coke feed rate (tons per hour)
 S_c = coke sulfur content (percent by weight)
 SRR = sulfur release rate from molten rock, defined as 0.4 pound sulfur released per pound sulfur content in rock
 R = rock feed rate (tons per hour)
 S_r = sulfur content in rock feed (percent by weight)
 H_c = heating value of coke (million Btu per pound)
 H_r = heating value of rock (million Btu per pound)

The following will be placed into the revised air permit stipulation (including some clarification language in bold/underline).

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- f. The Permittee shall monitor the emission rate of sulfur dioxide using the procedure given below to demonstrate compliance with the emissions limit for sulfur dioxide in Section 2.1 A.2.a. above. The sulfur dioxide emission rate for the two cupolas (**ID Nos. CUP1 and CUP2**) shall be calculated on a daily basis using the following equation:

$$M = 0.02 \left[\frac{\left(C * S_c \right) + \left(SRR * R * S_r \right)}{\left(C * H_c \right) + \left(R * H_r \right)} \right]$$

- Where M = uncontrolled sulfur dioxide emission rate (pounds per million Btu heat input)
 C = coke feed rate (tons per hour)
 S_c = coke sulfur content (percent by weight)
 SRR = sulfur release rate from molten rock, defined as 0.4 pounds sulfur released per pound sulfur content in rock
 R = rock feed rate (tons per hour)
 S_r = sulfur content in rock feed (percent by weight)
 H_c = heating value of coke (million Btu per pound)
 H_r = heating value of rock (million Btu per pound)

If **the above calculations are not performed and recorded**, or if M is greater than 2.3 (limit given in Section 2.1 A.2.a. above), the Permittee shall be deemed in noncompliance with 15A NCAC 2D .0516.

Revision to section g. reporting

Upon review of the testing stipulation it was decided to add some clarification language.

The existing stipulation reads as follows:

Reporting [15A NCAC 2Q .0508(f)]

g. The Permittee shall submit a summary report of the coke supplier certifications and the sulfur content analysis of the raw materials by January 30 of each calendar year for the preceding six-month period between July and December and July 30 of each calendar year for the preceding six-month period between January and June. All instances of deviations from the requirements of this permit must be clearly identified.

The revised stipulation will read as follows (the changed language is indicated by bold/underlining)

Reporting [15A NCAC 2Q .0508(f)]

g. The Permittee shall submit a summary report of the coke supplier certifications, sulfur content analysis of the raw materials **and sulfur dioxide emissions** estimations by January 30 of each calendar year for the preceding six-month period between July and December and July 30 of each calendar year for the preceding six-month period between January and June. All instances of deviations from the requirements of this permit must be clearly identified.

3. 15A NCAC 2D .0521: CONTROL OF VISIBLE EMISSIONS

During the permit revision T16, the following changes were made (as presented in the T16 review):

- Updated permit language for monitoring visible emissions from the two coke-fired mineral wool cupolas (ID Nos. CUP1 and CUP2) with two associated bagfilters (16,000 square feet of filter area each, ID Nos. BF1 and BF2). The change represents the current permit shell language for 15A NCAC 2D .0521.
- Updated permit language for recordkeeping of visible emissions from the two coke-fired mineral wool cupolas (ID Nos. CUP1 and CUP2) with two associated bagfilters (16,000 square feet of filter area each, ID Nos. BF1 and BF2). The change represents the current permit shell language for 15A NCAC 2D .0521.

The following language was added to paragraph c. to reflect the fact that the plant is not in operation.

The Permittee shall establish Anormal≅ for the source within 30 days of re-commencing operation.

B. Two gravity spray scrubbers (ID Nos. SC1 and SC2, 120 gallons per minute minimum liquid injection each) installed one each on:

- two mineral wool blow chambers (ID Nos. MWBC1 and MWBC2),
- two mineral wool cleaning processes (product tumblers) (ID Nos. MWC1 and MWC2) with two associated transfer cyclones (96 inches in diameter each, ID Nos. TC1 and TC2), and
- two mineral wool bagging processes (ID Nos. MWB1 and MWB2) with two associated transfer cyclones (96 inches in diameter each, ID Nos. TC3 and TC4)

Regulated Pollutant	Limits/Standards	Applicable Regulation
particulate matter	$E=4.10P^{0.67}$ where E = allowable emission rate in pounds per hour P = process weight in tons per hour	15A NCAC 2D .0515
visible emissions	20 percent opacity	15A NCAC 2D .0521
odorous emissions	See Section 2.2 B.	15A NCAC 2D .1806
toxic air pollutants	See Section 2.2 B.2	15A NCAC 2Q .0705

1. 15A NCAC 2D .0515: PARTICULATES FROM MISCELLANEOUS INDUSTRIAL PROCESSES

During the permit revision T16, the following change was made (as presented in the T16 review):

- Removed permit language requiring testing of the gravity spray scrubbers (ID Nos. SC1 and SC2, 120 gallons per minute minimum liquid injection each) to demonstrate compliance with 2D .0515 within a year after permit issuance. Compliance with 15A NCAC 2D .0515. was demonstrated during testing in December 2001.

The following language will be added for consistency with the current shell stipulation language.

”The Permittee shall be deemed in noncompliance with 15A NCAC 2D .0515 if these records are not maintained”

Other than the above changes, no changes have been made to this regulation or to this source that requires any changes to the language as it currently exists in the permit.

2. 15A NCAC 2D .0521: CONTROL OF VISIBLE EMISSIONS

During the permit revision T16, the following changes were made (as presented in the T16 review):

- Updated permit language for monitoring visible emissions from the gravity spray scrubbers (ID Nos. SC1 and SC2, 120 gallons per minute minimum liquid injection each). The change represents the current permit shell language for 15A NCAC 2D .0521.
- Updated permit language for recordkeeping of visible emissions gravity spray scrubbers (ID Nos. SC1 and SC2, 120 gallons per minute minimum liquid injection each). The change represents the current permit shell language for 15A NCAC 2D .0521.

The following language was added to paragraph c. to reflect the fact that the plant is not in operation.

The Permittee shall establish Anormal≅ for the source within 30 days of re-commencing operation.

2.2- Multiple Emission Source(s) Specific Limitations and Conditions

A. Affected Source - All facilities subject to 40 CFR Part 63, Subpart DDD: NATIONAL EMISSIONS STANDARDS FOR HAZARDOUS AIR POLLUTANTS FOR MINERAL WOOL PRODUCTION

As excerpted from Will Wike’s June 2, 2002 inspection report:

As noted above, the one-year extension to the June 2, 2002 deadline for compliance with requirements of NESHAP Subpart DDD for Mineral Wool Production was denied May 15, 2002, two weeks before the deadline. The leak detection system installation was completed May 31, 2002 as indicated in the Compliance Status report on that date. The performance test, as described above, was performed June 11-17, 2002. I observed one of the test runs on June 17, 2002. It is noted that the facility had been idled from May 31, 2002 to June 10, 2002. The plant was restarted solely for performance of the required stack test. Thus, the plant did not run for production purposes after the MACT compliance date. Also, the compliance test was performed late because of the relatively late denial of the MACT compliance date extension and because two sensors failed that could not be repaired until June 5, 2002. The results of the stack test demonstrated compliance with the MACT. No corrective actions were required and a compliance assurance monitoring plan was submitted June 4, 2002. The facility has not restarted operations, but intends to maintain their permit in the event that economic conditions improve in the near future. The facility is current in submitting their required semiannual reports and the reports contain all the required elements.

During the permit revision T16, the following changes were made (as presented in the T16 review):

2.2.A.6 (T15 numbering)	Removed permit condition requiring facility to conduct emission testing to demonstrate compliance with particulate emission limit under the MACT DDD. The facility conducted the required testing in June 2002.
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2.2.A.7.b (T15 numbering)	Removed permit condition requiring facility to conduct emission testing to demonstrate compliance with particulate emission limit under the MACT DDD. The facility conducted the required testing in June 2002.
2.2.A.11 (T15 numbering)	Removed permit condition detailing requirements for performance testing. The facility conducted the required testing in June 2002 and demonstrated compliance with particulate emission limit under MACT DDD.
2.2.A.12.a (T15 numbering)	Removed the permit condition requiring notification of compliance test. The facility conducted the required testing in June 2002 and demonstrated compliance with particulate emission limit under MACT DDD.
2.2.A.14.a	Removed the permit condition requiring facility to submit compliance test report/results. Testing was conducted in June 2002, and results were submitted.

In conclusion, the stipulation has been updated during revision T16 and still adequately represents the facility's current status. This stipulation does not require any additional changes to the language as it currently exists in the permit.

STATE-ONLY REQUIREMENTS

B. Facility-wide affected sources

Regulated Pollutant	Limits/Standards	Applicable Regulation
odors	odorous emissions must be controlled; State-enforceable only	15A NCAC 2D .1806
toxic air pollutants	State enforceable only	15A NCAC 2Q .0705

1. 15A NCAC 2D .1806: CONTROL AND PROHIBITION OF ODOROUS EMISSIONS

Removed paragraphs b. and c. from the stipulation to be consistent with current stipulation language.

2. 15A NCAC 2Q .0705: "EXISTING FACILITIES AND SIC CALLS"

This stipulation was added during revision T16 and adequately represents the current facility's status. The facility will comply with this regulation upon restarting of the facility. This stipulation does not require any additional changes to the language as it currently exists in the permit.

IV. Compliance Assurance Monitoring (CAM) Applicability

The CAM rule (40 CFR 64) applies to each Pollutant Specific Emissions Unit (PSEU) when it is located at major source that is required to obtain a Title V, Part 70 or 71 permit and it meets all of the following criteria:

The PSEU must: a. be subject to an emission limitation or standard, and b. use a control device to achieve compliance, and c. have potential pre-control emissions that exceed or are equivalent to the major source threshold.

The following emission limitations or standards are exempted from the CAM rule: a. post – 11/15/90 NSPS or NESHAP standards, since those standards and will be designed with monitoring that provides a reasonable assurance of compliance; b. stratospheric ozone protection requirements under Title VI of the act; c. acid rain program requirements; d. emission limitations or standards or other requirements that apply solely approved emissions trading program; e. emissions cap that meets requirements of 70.4(b)(12) or 71.6(a)(13); f. emission limitations or standards for which a part 70 or 71 permit specifies continuous compliance determination method, as defined in 40 CFR 64.1; g. certain municipally-owned utility units, as defined in 40 CFR 72.2.

With respect to the subject facility's sources, the following determinations are made:

Emission Source ID No.	Emission Source Description	CAM applicability
CUP1 and CUP2	two coke-fired mineral wool cupolas	CAM exempt- These sources are subject to MACT DDDD- thus meet exemptions in a. above.
MWBC1 and MWBC2	two mineral wool blow chambers	CAM applicable – The source tests of 12/2001 indicate post-control PM emissions of 8.35 lb/hr or 84 tpy after control. This implies for a source with a scrubber of typical efficiency that the potential pre-control emissions are over 100 tpy. The control is required to comply with 2D .0515. Without any additional data the assumption is that the PM10 emissions are equal to the PM emissions. Thus, the source is a PSEU and CAM applies. However, as presented in the Chronology, the facility will submit an application to incorporate a source-specific CAM plan prior to restarting the facility (source).
MWC1 and MWC2	two mineral wool cleaning processes (product tumblers)	CAM applicable -The applicability of CAM to these sources is unclear. Since emissions testing has never occurred for the sources individually, only operate when the blow chambers operate, and all the emissions are routed to the scrubbers, their applicability is academic. It is expected most of the PM emissions are generated by the blow chambers but is not confirmed.
MWB1 and MWB2	two mineral wool bagging processes	

Based on the conversation with Steve Edris as documented in the **Chronology** section, the following language will be placed into the cover letter (this language is based on language contained in the Claremont NA Cable LLC air permit 07334T21 issued 03/16/2006).

The Permittee shall not begin operation of any air emission source affected by the Continuous Assurance Monitoring (CAM) requirements pursuant to 40 CFR Part 64 (ID Nos. MWBC-1, MWC-1, MWB-1 and MWBC-2, MWC-2, MWB-2) until a Title V Air Quality Permit Application is filed and an operation permit is obtained to include a source-specific CAM plan.

The following language will be placed into a permit stipulation:

40 CFR Part 64: COMPLIANCE ASSURANCE MONITORING (CAM)

- a. The two mineral wool blow chambers (**ID Nos. MWBC1 and MWBC2**) and two cleaning processes (**ID Nos. MWC1 and MWC2**) and the bagging processes (**ID Nos. MWB1 and MWB2**) are affected by the Compliance Assurance Monitoring (CAM) provisions provided in 40 CFR Part 64. **The Permittee shall apply for and obtain a Title V permit revision to include a source-specific CAM Plan prior to operating these emissions sources.** The Permittee shall comply with all requirements of 40 CFR Part 64, including but not limited to the following:
- i. The CAM Plan shall satisfy the requirements identified in 40 CFR §64.3.
 - ii. The application for a permit modification to incorporate the CAM Plan shall include all elements identified in 40 CFR §64.4.
 - iii. The Permittee shall operate in accordance with the CAM Plan as provided in 40 CFR §64.7.
 - iv. The Permittee shall comply with recordkeeping and reporting requirements pursuant to 40 CFR §64.9.

If the Permittee fails to apply for, obtain, and operate in accordance with an approved CAM plan prior to operating the affected emission sources as identified above, the Permittee shall be deemed in non-compliance with 40 CFR Part 64.

V. PSD Applicability

As stated in the initial TV application:

The facility according to its initial Title V application has an operation date of 1979. The facility is not one of the 26 source categories that may have applicability dates prior to 1980. Since the facility pre-dates the PSD applicability date of August 7, 1980, it is not subject to PSD.

VI. Summary of Changes made to Revision T16

The following summary of changes only applies to those changes made to revision T16. This table will be included as an appendix in the revised air permit.

Pages	Section	Description of Changes
Cover Letter	NA	<ul style="list-style-type: none"> Changed permit revision numbers and all associated dates Revised language to current shell language
Cover	NA	<ul style="list-style-type: none"> Changed permit revision numbers and all associated dates
All	Header	<ul style="list-style-type: none"> Changed permit revision number
3	Section 1 Equipment List	Added the term CAM to the emission sources to indicate CAM applicability
3	Section 1 Equipment List	Edited the control device description for the wet scrubbers SC1 and SC2 for the sources MWB1 and 2 to be consistent with the control device descriptions elsewhere in the Equipment List
4	2.1.A.1.d. (2D.0515 monitoring/recordkeeping stipulation)	The language. <i>"The Permittee shall be deemed in noncompliance with 15A NCAC 2D .0515 if these records are not maintained"</i> was added for consistency with the current stipulation language.
5	2.1A.2.c.	Revised the 2D .0516 testing requirements for clarification.
5	2.1A.2.f.	The equation as presented in the current permit is dimensionally inconsistent in that the term Sr needed to be in units of weight fraction and not percent by weight as listed. In addition, the equation requested inputs of pound per hour for the rock materials and tons per hour for the coke, introducing unnecessary usage of conversion constants. The equation was revised and corrected. See Regulatory Review for derivation and full details.
6	2.1.A.3.c. and c.i.	Added the language "The Permittee shall establish "normal" within 30 days of recommencing operation" to paragraph c. and "as soon as practicable" to paragraph c.i. of the 2D .0521 monitoring requirement.
8	2.1.B.1.d.	The language. <i>"The Permittee shall be deemed in noncompliance with 15A NCAC 2D .0515 if these records are not maintained"</i> was added for consistency with the current stipulation language.
8	2.1.B.2.c. and c.i.	Added the language "The Permittee shall establish "normal" within 30 days of recommencing operation" to paragraph c. and "as soon as practicable" to paragraph c.i. of the 2D .0521 monitoring requirement.
12	2.2.B.1.b. and c.	Removed section b. and c. from the stipulation to be consistent with current stipulation language
9	2.2B.3.	Added a CAM stipulation. See CAM Applicability and Chronology discussions.
All	General Conditions	Copied general conditions from current permit shell document (2.19) into revised permit

VII. Compliance History

During the last inspection conducted by Will Wike on 05/22/2007, ARI appeared to be operating in compliance with all applicable air regulations and permit stipulations. The facility has been inactive since August 2002, almost 5 years. However, ARI has met all its reporting requirements in a timely manner and has had no violations during that time.

VIII. Permit History

Permit No.	Issuance Date	Description
T16	05/19/2006	Facilities subject to MACT/GACT standards must meet the requirements of the Last MACT/Toxics regulations as specified by 2Q.0705(b). American Rockwool, Incorporated is such a facility because it is subject to the Mineral Wool Production MACT, Subpart DDD, and the DAQ had no evidence that the facility had complied with NC air toxics. On November 17, 2005, the facility replied to the October 24, 2005 letter, and the reply served as a permit application (6400225.05B) as required under 2Q .0705(b).
T15	01/02/2002	Initial TV permit revised for a change in fee payment schedule
T14	11/06/2001	Initial TV permit

IX. General Conditions

The general conditions from the current permit shell document (2.19) into the revised permit in their entirety.

X. Insignificant Activities

No changes since initial TV permit issuance.

XI. Emission Source Module (IBEAM)

The emission source module was reviewed to ensure consistency with the permitted equipment list and the insignificant activities list. Only a few minor typographical changes were made.

XII. Public Notice

To be determined.

XIII. Comments and Conclusions

To be determined.

XIV. Recommendations

To be determined