

Air Permit Review

Region: Winston-Salem Regional Office
County: Allegheny
NC Facility ID: 0300074
Inspector's Name: Robert Barker
Date of Last Inspection: 07/29/2009
Compliance Code: 3 / Compliance - inspection

Permit Issue Date:

Facility Data			Permit Applicability (this application only)
<p>Applicant (Facility's Name): Martin Marietta Composites Inc.</p> <p>Facility Address: Martin Marietta Composites Inc. 114 Industrial Park Drive Sparta, NC 28675</p> <p>SIC: 3089 / Plastics Products, Nec NAICS: 326199 / All Other Plastics Product Manufacturing</p> <p>Facility Classification: Before: Title V After: Title V Fee Classification: Before: Title V After: Title V</p>			<p>SIP: N/A NSPS: N/A NESHAP: N/A PSD: N/A PSD Avoidance: N/A NC Toxics: N/A 112(r): N/A Other: 15A NCAC 2D .1109 <i>[112(j) – Part 2 MACT Hammer for Boilers & Process Heaters]</i></p>
Contact Data			Application Data
Facility Contact	Authorized Contact	Technical Contact	<p>Application Number: 0300074.09A Date Received: 09/09/2009 Application Type: 112(j) Part II Application Schedule: TV-Significant Existing Permit Data Existing Permit Number: 09355/T04 Existing Permit Issue Date: 01/28/2009 Existing Permit Expiration Date: 12/31/2013</p>
<p>Scott Moncrief Plant Manager (336) 372-6311 114 Industrial Drive Sparta, NC 28675</p>	<p>Philip Sipling Executive Vice President (919) 781-4550 PO Box 30013 Raleigh, NC 27622</p>	<p>Steve Whitt Director, Environmental Services (919) 783-4630 PO Box 30013 Raleigh, NC 27622+0013</p>	
<p>Review Engineer: Fern Paterson, P.E.</p> <p>Review Engineer's Signature: _____ Date: _____</p>		<p style="text-align: center;">Comments / Recommendations:</p> <p>Issue 09355/T05 Permit Issue Date: _____ Permit Expiration Date: 12/31/2013</p>	

I. Purpose of Application

Martin Marietta Composites Inc. is located in Sparta, Allegheny County, North Carolina. Application No. 0300074.09A, received September 9, 2009, is a Part 2 MACT "Hammer" application for one liquefied petroleum (LP) gas-fired boiler, rated at 6.3 million British thermal units per hour (MMBtu/hr).

II. Permit Modifications/Changes

The following table describes the modifications to the current permit.

Page(s)	Section	Description of Change(s)
Insignificant Activity List	Attachment	Remove the affected boiler (ID Nos. I5) from the insignificant activity list.
1	Permit Cover Page	Amend permit revision numbers and issuance/effective dates.
3	Section 1, Table	Add 112(j) designations to affected boiler (ID No. ES5).
8-9	Section 2.1.E.	Add Section to include applicable requirements for the affected boiler (ID No. ES5).
33-41	Section 3	Update General Provisions with the most recent revision (v. 3.0)

III. Regulatory Review

1. **15A NCAC 2D .0503 – Particulates from Fuel Burning Indirect Heat Exchangers** – This regulation limits particulate matter (PM) emissions from the firing of fuel in indirect heat exchangers (in lb/mmBtu) based on the facility-wide heat input. For facilities with a total heat input of up to 10 MMBth/hr, PM emissions from the combustion sources are limited to not greater than 0.60 lb/MMBtu. Using AP-42 emission factors, PM emissions from small gas-fired boilers (using natural gas emission factors) are estimated to be less than 0.60 lb/MMBtu, as follows:

$$\frac{\left(7.6 \frac{\text{lbPM}_{total}}{\text{mmscf}}\right)}{1,020 \frac{\text{MMBtu}}{\text{mmscf}}} = 0.007 \frac{\text{lbPM}_{total}}{\text{mmBtu}}$$

Because worst-case PM emission rates are estimated to be less than the allowable PM emission rate, no monitoring, recordkeeping, or reporting shall be required to demonstrate compliance with this limitation.

2. **15A NCAC 2D .0516– Sulfur Dioxide Emissions From Combustion Sources** – This regulation limits sulfur dioxide (SO₂) emissions to no greater than 2.3 lb/mmBtu of heat input for combustion sources. Using AP-42 emission factors, SO₂ emissions from LP gas (using natural gas emission factors) are estimated to be less than 2.3 lb/MMBtu, as follows:

$$\frac{\left(0.6 \frac{\text{lbSO}_2}{\text{mmscf}}\right)}{1,020 \frac{\text{MMBtu}}{\text{mmscf}}} = 0.0006 \frac{\text{lbSO}_2}{\text{mmBtu}}$$

Because worst-case SO₂ emission rates are estimated to be less than the allowable SO₂ emission rate, no monitoring, recordkeeping, or reporting shall be required to demonstrate compliance with this limitation.

3. **15A NCAC 2D .0521 – Control of Visible Emissions** – Visible emission (VE) standards provided in this regulation are applicable to potential VE emissions from any stack, vent, or outlet. This regulation limits visible emissions to no more than 20 percent opacity when averaged over a 6-minute period, except that 6-minute periods averaging more than 87 percent opacity may occur not more than once in any hour not more than four times in any 24-hour period. Because LP gas firing is associated with inherently low visible emissions, no monitoring, recordkeeping, or reporting shall be required to demonstrate compliance with this limitation.
4. **15A NCAC 2D .1109 – CAA § 112(j); Case-by-Case MACT for Boilers & Process Heaters** – On July 20, 2007, the D.C. Circuit Court vacated the National Emission Standard for Hazardous Air Pollutants (NESHAP) for Industrial, Commercial, and Institutional Boilers and Process Heaters, which had been promulgated under 40 CFR 63, Subpart DDDDD. The North Carolina Attorney General’s office has determined that the NESHAP vacatur equates to the failure of the U.S. EPA to promulgate a standard as required under Section 112(d) of the Clean Air Act (CAA). As a result, the site-specific Maximum Achievable Control Technology (MACT) standards required under CAA §112(j), commonly referred to as the MACT “hammer” provisions, have been triggered. North Carolina regulations implementing the MACT hammer are found at 15A NCAC 2D .1109.

On August 21, 2009, the NC DAQ received a Part 2 MACT “Hammer” application from this facility asking that the NC DAQ establish 112(j) emissions limitations in accordance with NC DAQ’s recommendations.

No control technologies for the control of CO, metals, Hg, or HCl were identified for LP gas fired boilers in the state of North Carolina, nor were any such technologies identified in a North Carolina query using U.S. EPA's AirControlNet software (v4.1). The NC DAQ has determined that MACT is the use of best work practice standards for LP gas combustion sources of this size, consistent with the provisions in CAA § 112(d)(2)(D). Best work practice standards in this case shall include the annual inspection and maintenance of the boiler as follows:

To assure compliance, the Permittee shall perform an annual boiler inspection and maintenance as recommended by the manufacturer, or as a minimum, the inspection and maintenance requirement shall include the following:

- i. Inspect the burner, and clean or replace any components of the burner as necessary;*
- ii. Inspect the flame pattern and make any adjustments to the burner necessary to optimize the flame pattern; and,*
- iii. Inspect the system controlling the air-to-fuel ratio, and ensure that it is correctly calibrated and functioning properly.*

The Permittee shall conduct at least one tune-up per calendar year to demonstrate compliance with this requirement. The Permittee shall be deemed in noncompliance with 15A NCAC 2D .1109 if the affected boilers are not inspected and maintained as required above.

In addition, the Permittee will be required to record the results of the annual inspection in a logbook (written or electronic format), which shall be retained on-site and made available to an authorized representative upon request.

IV. Draft Permit Review Summary

Robert Barker and Jalal Adouli of the Winston-Salem Regional Office was provided a draft permit and draft permit review document on December 9, 2009.

Steve Whitt of Martin Marietta Inc. was provided a draft permit for review on December 9, 2009. No December 14, 2009, Mr. Whitt indicated that he had not substantive comments on the draft documents.

Ms. Katy Forney and Ms. Gracy DeNois (U.S. EPA, Region IV) were provided a draft permit for review on **<DATE>**. **<SUMMARY OF COMMENTS>**.

V. Recommendations

This permit modification application for the Martin Marietta Composites Inc. facility located in Sparta, Allegheny County, North Carolina has been reviewed by NC DAQ to determine compliance with all procedures and requirements. NC DAQ has determined that this facility appears to be complying with all applicable requirements.

Issue Permit No. 009355T05