

**NORTH CAROLINA DIVISION OF
AIR QUALITY**

Air Permit Review

Permit Issue Date: XX

Region: Raleigh Regional Office
County: Vance
NC Facility ID: 9100082
Inspector's Name: Brian Bland
Date of Last Inspection: 04/10/2006
Compliance Code: 3/In Compliance - Inspection

Facility Data			Permit Applicability (this application only)
Applicant (Facility's Name): Kennametal Incorporated Facility Address: Kennametal Incorporated 139 Warehouse Road Henderson, NC 27536 SIC: 3399 / Primary Metal Products, Nec NAICS: 331492 / Secondary Smelting, Refining, and Alloying of Nonferrous Metal (except Copper and Aluminum) Facility Classification: Before: Title V After: Title V Fee Classification: Before: Title V After: Title V			SIP: X NSPS: NESHAP: PSD: PSD Avoidance: NC Toxics: 2D .1100 (ammonia emissions) 112(r): Other:
Contact Data			Application Data
Facility Contact	Authorized Contact	Technical Contact	Application Number: 9100082.05A Date Received: 08/08/2005 Application Type: Renewal Application Schedule: TV-Renewal Existing Permit Data Existing Permit Number: 04328/T09 Existing Permit Issue Date: 06/29/2006 Existing Permit Expiration Date: 07/31/2006
Robert McGhee Environmental Health and Safety Admin (252) 492-4163 P O Box 159 Henderson NC, 27536	John Lazar Plant Manager (252) 492-4163 P O Box 159 Henderson NC, 27536	Robert McGhee Environmental Health and Safety Admin (252) 492-4163 P O Box 159 Henderson NC, 27536	
Review Engineer: Kevin Godwin Review Engineer's Signature: _____ Date: _____		Comments / Recommendations: Issue 04328/T10 Permit Issue Date: Permit Expiration Date:	

1. Introduction

Kennametal, Inc. manufactures various blends of tungsten carbide powder at this Vance County site. The existing air permit includes the following emission sources: a powder milling operation, an ammonium paratungstate electric conversion furnace, vacuum dryers equipped with integral condensers, spray dryers with integral wet scrubbers, a central vacuum system and a solvent recycling unit. Kennametal is subject to Title V permitting procedures due to potential volatile organic compounds (VOC) emissions exceeding Title V major source threshold.

2. Purpose of Application

This revision is a renewal of existing Title V permit 04328T09 pursuant to 15A NCAC 2Q .0513. The Title V permit is set to expire on July 31, 2006. The renewal application was received on June 19, 2005 or at least nine months prior to the expiration date. Therefore, the existing permit shall not expire until the renewed permit has been either issued or denied. All terms and conditions of the existing permit shall remain in effect until the renewed permit has been issued or denied.

3. Permit Modification/Changes

Kennametal Inc. was issued its initial Title V permit (**04328T07**) on August 29, 2001 (effective October 13, 2001).

On July 29, 2003, a permit revision (**04328T08**) was issued for a 502(b)(10) change under 15A NCAC 2Q .0523 to install exhaust condensers (ID Nos. VCS-2, 3, and 4) on each pair of vacuum dryers. The exhaust condensers were included in Part II.

On June 29, 2006, a permit revision (**04328T09**) was issued for a significant modification under 15A NCAC 2Q .0501(c)(2) for the addition of a new chilled loop scrubber and a new spray dryer (ID No. SD-4). The new equipment was included in Part II.

No other permit changes have taken place since the initial Title V was issued.

4. Application Chronology

June 19, 2005	Renewal application received and deemed complete
August 15, 2006	Draft to Title V Coordinator
August 17, 2006	Draft to Raleigh Regional Office (RRO) and applicant
XX, 2006	Draft to Public Notice and EPA

5. Regulatory Review

Kennametal Inc. is subject to the following regulations:

15A NCAC 2D .0515 "Particulates from Miscellaneous Industrial Processes"
15A NCAC 2D .0521 "Control of Visible Emissions"
15A NCAC 2D .0535 "Excess Emissions Reporting and Malfunctions"
15A NCAC 2D .0958 "Work Practices for Sources of Volatile Organic Compounds" (facility-wide emission sources)
15A NCAC 2D .1100 "Control of Toxic Air Pollutants"
15A NCAC 2D .1806 "Control and Prohibition of Odorous Emissions" (facility-wide emission sources)
15A NCAC 2Q .0317 "Avoidance Conditions" for avoidance of 15A NCAC 2D .0530
15A NCAC 2Q .0711 "Permit Requirements for Toxic Air Pollutants" (facility-wide emission sources)

Section 7. below includes a discussion of the changes in facility-wide toxic air pollutant (TAP) emissions. Since no other changes are being made to existing operations, a regulatory review is not necessary.

Below is a summary of actual facility-wide criteria pollutant emissions based on 2004 emissions inventory information.

Pollutant	Emission Rate (tpy)
Carbon monoxide	0.42
Nitrogen oxides	0.51
Particulate matter less than 10 microns	0.07
Sulfur dioxide	N/A
Volatile organic compounds	169.1

The following table summarizes the changes to the existing permit:

Page	Section	Description of Change
Cover letter	Cover letter	Modified to reflect current permit number, issue and effective date, and associated application information.
16	2.2 B.3.	Included TAP condition pursuant to 2D .1100 limiting facility-wide ammonia emissions to 16.27 lb/hr.
16	Section 3	Updated with most recent General Conditions and List of Acronyms
	Part II	Removed Part II

6. NSPS, NESHAPS, PSD, Attainment Status, 112(r), and CAM

NSPS

The emission sources at this facility are not NSPS affected.

NESHAPS

Kennametal is classified as minor with regard to NESHAPS/MACT. This permit renewal will not effect the classification.

PSD

Kennametal has taken a limit of less than 250 tpy VOC to be classified as a minor source with regard to PSD. In order to ensure this limit is not exceeded, Kennametal will track material usage and report VOC emissions on a semi-annual basis.

Attainment Status

Vance County is in attainment with the 8-hour ozone and fine particulate standards.

112(r)

According to the renewal application, this facility does not store any chemicals regulated under 112(r) above the applicable thresholds.

CAM

Pursuant to 15A NCAC 2D .0614, a compliance assurance monitoring (CAM) applicability determination is required for this renewal because: (1) the facility is a Title V source with potential emissions that exceed the Title V major source thresholds without considering controls; and (2) there are sources subject to an emission standard that require controls in order to comply with that standard.

The sources that could potentially be subject to CAM are a central vacuum system controlled by a cyclone in series with a bagfilter and the vacuum dryers controlled by condensers. On July 19, 2006, the applicant provided documentation regarding CAM applicability as follows:

A. Central Vacuum System (ID No. CV-1)

PM₁₀ emissions

3,851 kg entering system - 3,813 kg recovered from the cyclone/bagfilter in 2005 = 38.1 kg emitted
(84 pounds PM₁₀)

- B. Vacuum Dryers (ID Nos. VD-1 through VD-6) controlled by Condensers (ID Nos. VCS-2, 3, and 4)
According to the applicant, each of the dryers is equipped with an individual condenser for product recovery then vented to a main condenser for VOC emissions control prior to exhausting to the atmosphere.

VCS-2, 3, and 4 are the main condensers used for VOC control. Emissions from vacuum dryers VD-1 and VD-5 are routed to main condenser VCS-2. Pre-control emissions from the two dryers are reported to be 19.03 lb/hr or 83.4 tpy based on 8,760 hours of operation.

Emissions from vacuum dryers VD-2 and VD-3 are routed to main condenser VCS-3. Pre-control emissions from the two dryers are reported to be 19.03 lb/hr or 83.4 tpy based on 8,760 hour of operation.

Emissions from vacuum dryers VD-4 and VD-6 are routed to main condenser VCS-4. Pre-control emissions from the two dryers are reported to be 19.03 lb/hr or 83.4 tpy based on 8,760 hours of operation.

Since after control emissions are less than 100 tpy, these sources and associated control devices are exempt from CAM.

7. Facility-wide North Carolina Air Toxics

Kennametal is currently permitted to operate an ammonium paratungstate electric conversion furnace at a process rate of 98.4 kg/hr (216.5 lb/hr) of ammonium paratungstate. In June 2006, Kennametal submitted a request to increase the process rate to 141.6 kg/hr (311.5 lb/hr). As a result, the ammonia emission rate will increase from 8.5 lb/hr to 16.27 lb/hr. This increase triggered a modeling analysis for facility-wide ammonia emissions pursuant to 2D .1100. According to the application, the furnace is the only source of ammonia emissions. The modeling analysis has been reviewed by the DAQ - Air Quality Analysis Branch (AQAB). According to Ms. Jamie Sellman's July 31, 2006 memo, the modeling analysis indicated the maximum impact was 75% of the 1-hour acceptable ambient level for ammonia. Therefore compliance with 2D .1100 is indicated. A condition is placed in the permit limiting ammonia emissions to 16.27 lb/hr.

8. Facility Compliance Status

The DAQ has reviewed the compliance status of this facility. Kennametal was last inspected on April 11, 2006 by Mr. Brian Bland (RRO). At the time of inspection, Kennametal was found to be in compliance with the requirements of the permit.

The applicant has certified that the facility will be in compliance with all applicable requirements at the time of permit issuance and will continue to comply with these requirements. The applicant also certified that the facility will be in compliance with any applicable requirements taking effect during the term of the permit and will meet such requirements on a timely basis.

9. Stipulation Review

New stipulations are as follows:

Section 2.2 B. 3., included TAP condition pursuant to 2D .1100 limiting ammonia emissions to 16.27 pounds per hour. Restrictions used to ensure compliance with the limit are: 266.8 lb/hr tungsten oxide output rate, 141.6 kg/hr (311.5 lb/hr) furnace process rate.

No other stipulations are modified.

10. Public Notice/EPA and Affected States Review

Pursuant to 15A NCAC 2Q .0521, a notice of the draft Title V permit shall be placed in a newspaper of general circulation in the area where the facility is located. The notice will provide for a 30-day comment period, with an opportunity for a public hearing. Copies of the public notice shall be sent to persons on the Title V mailing

list and EPA. Pursuant to 15A NCAC 2Q .0522, a copy of each permit application, each proposed permit and each final permit shall be provided to EPA. Also pursuant to 2Q .0522, a notice of the draft Title V permit shall be provided to each affected State at or before the time notice provided to the public under 2Q .0521 above.

Public notice of the DRAFT Title V permit was published in the XX on XX and the public comment period ran from XX through XX.

11. Conclusions, Recommendations, and Comments

The renewal Title V application for Kennametal Inc. has been reviewed by the DAQ to determine compliance with all procedures and requirements under 15A NCAC 2Q .0500 and 40 CFR Part 70. Upon completion of public notice and EPA review periods, the DAQ proposes to issue the Title V permit renewal.

12. Miscellaneous Requirements

PE Seal

Pursuant to 2Q .0112, no PE Seal was required because the permit renewal does not involve the determination of applicability and appropriateness or performance of air pollution capture and control systems [15A NCAC 2Q .0112(b)(2) and (3)].

Zoning

A request for zoning consistency determination is not required for this permit renewal.

Fee Classification

Based on potential to emit, Kennametal Inc. has been classified as **Title V Major**. The facility's current IBEAM status is **Title V Major**. This renewal **will not** change the fee classification.