

**NORTH CAROLINA DIVISION OF
AIR QUALITY**

Air Permit Review

Permit Issue Date:

Region: Raleigh Regional Office
County: Durham
NC Facility ID: 3200017
Inspector's Name: Steve Hall
Date of Last Inspection: 09/27/2007
Compliance Code: 3/In Compliance - Inspection

Facility Data			Permit Applicability (this application only)
Applicant (Facility's Name): GlaxoSmithKline Facility Address: GlaxoSmithKline Five Moore Drive Research Triangle Park, NC 27709 SIC: 2833 / Medicinals And Botanicals NAICS: 54172 / Research and Development in the Social Sciences and Humanities 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:
Contact Data			Application Data
Facility Contact	Authorized Contact	Technical Contact	Application Number: 3200017.05D Date Received: 12/19/2005 Application Type: Renewal Application Schedule: TV-Renewal Existing Permit Data Existing Permit Number: 04612/T28 Existing Permit Issue Date: 04/23/2008 Existing Permit Expiration Date: 01/31/2012
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Review Engineer: Mike Gordon Review Engineer's Signature: _____ Date: _____		Comments / Recommendations: Issue 04612/T29 Permit Issue Date: Permit Expiration Date:	

1. Purpose of Application

GlaxoSmithKline submitted an application for renewal of their Title V permit on December 19, 2005. Permit application I.D. No. 3200017.08B has been consolidated into this renewal process. Application .08B requests the removal of the dismantled North Campus Incinerator as an emissions source, incorporation of the 15 NCAC 2Q .0501(c)(2) post construction, non-shielded requirements into the Title V permit, and establishment of operating parameters (secondary chamber temperature, lime injection rate, baghouse inlet temperature, etc.) for continuously monitoring the South Campus Incinerator. As part of the process CAM requirements for the South Campus Incinerator have been addressed and the relevant section incorporated into the permit.

2. Application Chronology

Refer to “Comprehensive Application Report” for complete details.

3. Facility Description

This facility is corporate headquarters and a pharmaceutical research and testing location for GlaxoSmithKline. Including contractors, the facility employs between 6000 and 7000 people. Air emission sources include laboratory hoods, boilers (for heating), emergency generators, and incinerators (for disposing of animal carcasses, expired drugs, syringes, etc.). North Campus has 350 hoods, and South Campus has 270 hoods. The facility generally operates 24 hours per day, 7 days per week, and 52 weeks per year.

4. Statement of Compliance

Based on the last inspection performed by RRO (Steve Hall) on September 27, 2007, GlaxoSmithKline appeared to be in compliance with all requirements outlined in the air permit 04612T26.

5. Permit Modifications/Changes

5.1 Removal of the North Campus Incinerator

GlaxoSmithKline has requested that the DAQ remove the North Campus Incinerator from the permit. The emissions source has been deactivated and dismantled according to RCRA requirements for hazardous waste incinerators for several years.

According to Lindsay Walata, EHS Manager for GlaxoSmithKline, in an email

“The North Campus incinerator was inactivated in February 2005, and was closed via NCDENR RCRA requirements on April 27, 2007. No waste has combusted at this unit since February 2005, nor will any waste be combusted in the future. This was reflected in our December 2005 application for Title V permit renewal, which requested removal of this emission source from the Title V permit.”

5.2 CAM Application

The South Campus Incinerator (MWIS-2) is subject to 40 CFR 64 for Particulate Emissions (PM-10) and Sulfur Dioxide for the dry scrubber. As part of this permit renewal, GlaxoSmithKline submitted a Compliance Assurance Monitoring (CAM) plan that utilizes continuous monitoring of the hydrated lime injection rate (minimum of 71 pounds per hour) and fabric filter pressure ranges (leak detection alarm). The parameters submitted were adequate to meet the necessary CAM requirements for the unit.

5.3 Various 15 NCAC 2Q .0501(c)(2) Title V Application No. 08B

Permit application 9600017.08B has been consolidated with the renewal. The Part II requirements and associated references previously indicated in Part I have been removed. All references to the 15A NCAC 2Q .0501(c)(2) have been removed with this permit and the conditions listed are federally enforceable. The DAQ no longer utilizes a two-part permit process therefore references to Part II and I in general have been removed.

5.4 Table of Changes

Old Page No.	New Page No.	Part, Section, or Condition No.	Change
-	-	Throughout	Updated Section lettering and referencing to correspond with the removal of the North Campus Incinerator
-	-	Throughout	Corrected EPA Test Method rule citations in various sections from 15A NCAC 2D .0501 to the new 15A NCAC 2D .2600 rules.
-	-	General Conditions	Updated conditions to the latest revision
3-7	3-7	Permitted Source Table	Modified Table to incorporate sources and control devices (TempGen1 & 2, TempBoil1 & 2, CD-M-EG-1 & 2, and CD-EG8.1 to 8.5) into the Title V Permit that were previously permitted under 15A NCAC 2Q .0501(c)(2) two-part requirements. Changed lime injection rate for MWI-2 to a minimum of 71 pounds per hour from the previously listed 25 pounds per hour.
7-16	-	Section B	Removed the North Campus Incinerator from the permit. GlaxoSmithKline has dismantled the unit and associated pollution control equipment according to RCRA standards.
8	9	Section 2.1.A.2	Removed "State Enforceable Only" label due to incorporation of associated rules into the North Carolina State Implementation Plan (SIP)
9	9	Section 2.1.A.2.n	Modified definition of shutdown to coincide with Commercial And Industrial Solid Waste Incinerators.
9	10	Section 2.1.A.2.p	Incorporated table of operating parameters for compliance with 15A NCAC 2D .1210 that were established by initial performance testing.
-	13	Section 2.1.A.3	Incorporated CAM requirements for the South Campus Incinerator (MWIS-2) into permit
47	46	Section 2.2.C	Removed reference to North Campus Incinerator
73	-	Part II	Removed Part II of the permit and consolidated all sources under the permit shield

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

NSPS

This facility is subject to:

40 CFR 60 NSPS Subpart Dc - Subpart Dc--standards of performance for small industrial-commercial-institutional steam generating units.

40 CFR 60 NSPS Subpart IIII - Standards of Performance for Stationary Compression Ignition Internal Combustion Engines.

NESHAPS

This facility is subject to:

40 CFR Part 63, Subpart ZZZZ—National Emissions Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines (RICE)

Attainment Status and NSR

This facility is located in Durham County that is currently in attainment for all pollutants. No increase in emissions is expected during the renewal process. GlaxoSmithKline is a major stationary source for HAP's.

112(r)

This facility is not subject to Section 112(r) of the Clean Air Act requirements.

PSD

GlaxoSmithKline is considered to be minor for PSD purposes. The Facility has PSD avoidance conditions for VOC, SO₂, PM, and NO_x, of less than 250 tons per consecutive twelve month period for each pollutant from each of the North and South Campuses

Last MACT

The Permittee has demonstrated, on a facility-wide basis (excluding those sources exempt under 15A NCAC 2Q .0702 "Exemptions"), that each of the toxic air pollutants (TAPs) emitted from all sources at the facility are either below its respective toxic permit emission rates (TPER) listed in 15A NCAC 2Q .0711 - "Emission Rates Requiring a Permit" or the TAPS are in compliance with 15A NCAC 2D .1100 "Control of Toxic Air Pollutants" as described elsewhere in this permit. Last MACT analysis in response to justification provided by GlaxoSmithKline on November 16, 2005, indicated that the facility has demonstrated compliance with NC Air Toxics pursuant to 15A NCAC 2Q .0705(b).

CAM

The South Campus Incinerator is subject to CAM for SO₂ and PM emissions from dry scrubber and fabric filter.

7. Permit History

Permit No.	Issuance Date	Description of Revision
04612T17	December 15, 2001	Initial TV Permit
04612T18	April 14, 2002	Administrative changes to the initial Title V permit to include removal of general monitoring requirement errors, I&M Plan requirement errors, and fuel monitoring errors.
04612T19	November 14, 2003	502(b)(10) changes to permit including insignificant activities list modifications and generator related changes
04612T20	August 27, 2004	Installation a new 1400 kW generator, three new boilers, and relocation of existing emergency/peak generator
04612T21	October 12, 2004	Addition of two catalytic oxidizers (ID Nos. CD-RCII-EG-3a and CD-RCII-EG-3b) on the newly permitted emergency generator (ID No. ES-RCII-EG-3) as voluntary odor control devices and are not required by the DAQ. The South Campus incinerator (ID No. MWI-2) was changed from Other Incinerators (15A NCAC 2D. 1208) to Commercial and Industrial Solid Waste Incinerators (15A NCAC 2D .1210).
04612T22	October 29, 2004	Non-applicability statement of the permit shield for emergency generator (ID No. EG-1400). Construction of the generator (ID No. EG-1400) was allowed in accordance with North Carolina General Statute 143-215.108A(c).
04612T23	January 21, 2005	Request for relaxation of the "State Only" Toxic Air Pollutant reporting frequency from quarterly to annual and a request that compliance with the TAP limits be demonstrated as part of the annual emissions inventory submittal.
04612T24	June 9, 2005	This application was submitted according to permitting procedures 15A NCAC 2Q .0517 "Reopening for Cause".
04612T25	October 31, 2005	Changed the deadline for the submittal of the Annual Title V Compliance Certification from January 30 to March 1. General Condition P in the permit was modified accordingly. The facility also requested that the deadline for submittal of Semi-Annual reporting also be changed. This was denied.
04612T26	February 20, 2007	Installation of catalytic oxidizers (ID Nos. CD-M-EG-1, CD-M-EG-2, CD-EG8.1, CD-EG8.2, CD-EG8.3, CD-EG8.4, and CD-EG8.5) on seven, existing permitted emergency generators (ID Nos. M-EG-1, M-EG-2, EG8.1, EG8.2, EG8.3, EG8.4, and EG8.5). Also one diesel fired temporary generator (ID No. TempGen1) not to exceed 2,500 kW (electric) power output capacity and two No. 2 fuel oil-fired temporary boilers (ID Nos. TempBoil1 and TempBoil2) each having a heat input capacity not to exceed 22 million Btu/hr.

Permit No.	Issuance Date	Description of Revision
04612T27	February 29, 2008	Minor Modification to add a section to address the new M-EG-3 generator and the applicable regulations 2D .0524 (NSPS Subpart IIII), 2D .0521 and 2D .1111 (MACT Subpart ZZZZ) and removed RC-1, RC-2, and RCII-EG-3
04612T28	June 4, 2008	Removal of vacated 40 CFR 63 Subpart DDDDD from the permit.

8. Facility Emissions Review

The following is an emission summary for this facility. Actual emissions are for year 2006, as reported by the company to DAQ through submittal of annual emission inventory.

Pollutant	Actual Emissions Tons/Yr	Potential Emissions Tons/Yr
PM	2	< 100
PM10	2	< 100
PM2.5	2	< 100
CO	21.28	> 100
NO _x	26.24	< 100
SO ₂	0.33	< 100
VOC	9.7	< 100
Single HAP (Acetonitrile)	1.72	> 10
Total HAP	12.86	> 25

8. Public Notice / EPA and Affected States Review

Permit application processed shall be reviewed by EPA and is required to be noticed in the newspaper for public comments

9. Compliance Review

Date	Action
09/27/2007	Compliance inspection- No problems
09/20/2006	Compliance inspection- No problems.
09/19/2006	NOV issued for unpermitted 1550 kW generator
09/23/2004	Compliance inspection- No problems.
09/27/2002	Compliance inspection- No problems.

10. Conclusions, Comments, and Recommendations

This is a permit renewal for the facility under consolidated applications 3200017.08B and 3200017.05D (the permit renewal application). The North Campus Incinerator has been removed from the permit by request from GlaxoSmithKline. The Incinerator has been shut down since February 2005 according to RCRA standards and has been dismantled. CAM has been implemented for the South Campus Incinerator and should be monitored for effectiveness as it has been applied in the permit. The permit allows the facility to follow the deviation reports and requirements of 40 CFR 60 Subpart DDDD (deviation reports required under 60.2775 and 60.2780) in lieu of language that would require a Quality Improvement Plan (QIP) according to 40 CFR 64. This is due to the overlap between the two rules with respect to recordkeeping and reporting requirements. A QIP can be required/added to the permit at a future time if the facility fails to make adequate corrections to ensure consistent compliance with CAM requirements.

Operating parameters for the Incinerator have been modified to incorporate the requirements suggested in the Technical Services - Stationary Source Compliance office letter sent to GlaxoSmithKline on December 13, 2007. RRO has requested a draft copy of this permit. RRO recommended issuance of the permit and had no additional comments.