

**STATEMENT OF BASIS****Page 1 of 10**BAQ Engineering Services Division
2600 Bull Street, Columbia, SC 29201
Phone: 803-898-4123 Fax: 803-898-4079**Company Name:** Winthrop University
Permit Number: CM-2440-0084**Permit Writer:** Jerisha Dukes
Date: April 1, 2009**DATE APPLICATION RECEIVED:**

December 30, 2008

DATE OF LAST INSPECTION:

November 19, 2007 – No violations observed.

FACILITY DESCRIPTION

Winthrop University is a state sponsored university located in Rock Hill, SC. The main campus encompasses 90 acres.

PROJECT DESCRIPTION

Winthrop University is requesting a renewal of its Conditional Major Operating Permit.

CHANGES SINCE LAST OP ISSUANCE:

- Per SC Regulation 61-62.1, Section II(B)(2)(b), the following boilers are now exempt sources:
 - Bancroft Boiler (Equip. ID BB1) rated at 2.002×10^6 BTU/hr and fired on natural gas
 - Math/Science Boiler (Equip. ID MS1) rated at 8.66×10^6 BTU/hr and fired on natural gas
- The replacement of the 40×10^6 BTU/hr boiler (CEB3) with two smaller units (CEB4 and CEB5, each rated at 11.81×10^6 BTU/hr) in 2007 has allowed the facility to eliminate its natural gas limit. Consequently, the facility would like to increase its No.6 fuel oil usage from 523,440 gal/yr to 590,000 gal/yr.
- The Ward House is a facility that Winthrop has leased for many years and there are two exempt furnaces located there that are listed on the previous permit (WHF1 and WHF2 each rated at 100,000 BTU/hr). Winthrop will not renew the lease this year and effective 3/21/2009, will no longer occupy or have control of the facility. Therefore, these furnaces have been deleted from the exempt sources list.
- The Career Services Boiler (Equip ID CSB1) rated at 0.167×10^6 BTU/hr is no longer in service and has been deleted from the facility's permit.
- Per SC Regulation 61-62.1, Section II(B)(2)(f), the following emergency generators and fire pumps are exempt but were not listed on the previous permits:
 - Life Science/Sims Diesel Generator (Equip. ID LSG) rated at 600 kW (1999)
 - Dinkins Natural Gas Generator (Equip. ID DG) rated at 25 kW (2004)
 - School of Music Diesel Generator (Equip. ID MusG) rated at 100 kW (2008)
 - Johnson Hall Natural Gas Generator (Equip. ID JHG) rated at 50 kW (1992)
 - Good Building Natural Gas Generator (Equip. ID GG) rated at 25 kW (2004)
 - Tillman Hall Diesel Generator (Equip. ID TG) rated at 230 kW (2006)
 - West Center Natural Gas Generator (Equip. ID WCG) rated at 30 kW (2007)
 - Owens Hall Diesel Generator (Equip. ID OHG) rated at 60 kW (2007)
 - Operations Center Natural Gas Generator (Equip. ID OCG) rated at 17 kW (2005)
 - North Campus Diesel Fire Pump (NCFP) rated at 210 HP (~156 kW) / 1500 GPM (2002)
 - Central Campus Diesel Fire Pump (CCFP) rated at 115 HP (~85 kW) / 1500 GPM (2007)
- During an equipment inventory conducted in January 2009, Winthrop University discovered several exempt sources:
 - Life Sciences Laboratory Hoods (Equip. ID LSH; installed 1999) – 28 hoods and 40 bench top ventilation units¹
 - Sims Science Laboratory Hoods (Equip. ID SSH; installed 2001) – 24 hoods and 46 linear feet of bench top ventilation units¹
 - Rutledge Hall Natural Gas Ceramic Kilns (Equip. ID RK; unknown installation date) – 3 kilns
 1. Kiln 1 (Equip. ID RK1) – 624,000 BTU/hr
 2. Kiln 2 (Equip. ID RK2) – 336,600 BTU/hr

¹ Some, not all, of these hoods were reported in a December 2003 letter to the Bureau; however, during the January 2009 equipment inventory, installations of hoods from recent years were also reported.



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- 3. Kiln 3 (Equip. ID RK3) – 624,000 BTU/hr
 - o Rutledge Hall Natural Gas Forge (Equip. ID RF; unknown installation date) – unknown design capacity but less than 10 x 10⁶ BTU/hr
 - o Rutledge Hall (Equip. ID RH) – 2 laboratory hoods and 30 linear feet of bench-top ventilation
 - o West Center Natural Gas Dryers (Equip. ID WCD) – 2 dryers rated at 20,000 BTU/hr each
 - o McBryde Hall Commercial Dishwasher (Equip. ID McBD) – Raypack B130 rated at 130,000 BTU/hr

SPECIAL CONDITIONS, MONITORING, LIMITS

Winthrop University does have the PTE 100 TPY of PM₁₀, SO₂, and NO_x. As such, the facility will retain its previously established federally enforceable limits for this Conditional Major Operating Permit renewal. However, the facility's No.6 fuel oil usage will increase from 523,440 gal/yr to 590,000 gal/yr. Winthrop University will be required to record its No. 6 fuel oil usage. No monitoring, record keeping, or reporting will be necessary when consuming natural gas because, based on emissions calculations, the facility would not exceed any Title V thresholds if consuming 100% natural gas on all emission sources located at the facility. It was shown through conservative calculations that at 100% natural gas combustion plus combustion of #6 fuel oil at the 590,000 gal/yr limit, the facility will still remain below the 100 TPY limits specified.

PUBLIC NOTICE:

This permit renewal will be public noticed since it is a Conditional Major Operating Permit.

SOURCE DESCRIPTION

OP ID	Equip ID	Equipment Description	Installation Date / Modification Date	Stack ID
01	CEB1	Central Energy Boiler #1 rated at 84x10 ⁶ BTU/hr heat input and fired on natural gas/#6 fuel oil (Manufactured by Babcock & Wilcox, Model FP-18 No.44)	1963	CEB1
01	CEB2	Central Energy Boiler #2 rated at 84x10 ⁶ BTU/hr heat input and fired on natural gas/#6 fuel oil (Manufactured by Babcock & Wilcox, Model FP-18 No.44)	1963	CEB2
02	CEB3	Central Energy Boiler #3 rated at 40x10⁶ BTU/hr heat input and fired on natural gas/#6 fuel oil (Manufactured by Babcock & Wilcox, Model FP-18 No.28) *** VOID – DECOMMISSIONED ***	1963	CEB3
03	LWB1	Lee Wicker Boiler rated at 2.002x10⁶ BTU/hr heat input and fired on natural gas (Manufactured by Hamilton Engineering, Model HEN-2010) (Now Listed as an Exempt Source)	1987	LWB1
03	BB1	Bancroft Boiler rated at 2.002x10⁶ BTU/hr heat input and fired on natural gas (Manufactured by Hamilton Engineering, Model HEN-2010) (Now Listed as an Exempt Source)	1989	BB1
03	MS1	Math/Science Boiler rated at 8.66x10⁶ BTU/hr heat input and fired on natural gas (Manufactured by Weil McClain, Model 2594) (Now Listed as an Exempt Source)	1999	MS1
04	TCB1	Thomson Cafeteria Boiler rated at 2.343x10⁶ BTU/hr heat input and fired on natural gas/No. 2 fuel oil (Manufactured by York Shipley, Model 500-548 SPHV-70-N294219) *** VOID – DECOMMISSIONED ***	1977	TCB1
05	CEB4	Central Energy Boiler #4 rated at 11.81 x 10 ⁶ BTU/hr, natural gas fired boiler, equipped with low NO _x burners (Manufactured by Miura, Model LX-300)	2007	CEB4



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OP ID	Equip ID	Equipment Description	Installation Date / Modification Date	Stack ID
06	CEB5	Central Energy Boiler #5 rated at 11.81 x 10 ⁶ BTU/hr, natural gas fired boiler, equipped with low NO _x burners (Manufactured by Miura, Model LX-300)	2007	CEB5

* **Note:** The facility's only control devices are the low NO_x burners present on boilers CEB4 and CEB5.

EXEMPT SOURCE / INSIGNIFICANT ACTIVITIES DESCRIPTION

Equip ID	Source Description	Date Listed	Exemption Basis
DT1	#6 fuel oil storage tank rated at 5,000 gallons (pre-1980)	11/24/2003	SC Regulation 61-62.1, Section II (B)(2)(h)
ST1	#6 fuel oil storage tank rated at 100,000 gallons (pre-1980)	11/24/2003	SC Regulation 61-62.1, Section II (B)(2)(h)
ST2	#6 fuel oil storage tank rated at 68,000 gallons (pre-1980)	11/24/2003	SC Regulation 61-62.1, Section II (B)(2)(h)
ST3	#6 fuel oil storage tank rated at 68,000 gallons (pre-1980)	11/24/2003	SC Regulation 61-62.1, Section II (B)(2)(h)
LWB1	Lee Wicker Boiler rated at 1.124x10 ⁶ BTU/hr heat input	12/12/2003	SC Regulation 61-62.1, Section II (B)(2)(b)
McB1	McLaurin Boiler rated at 726,000 BTU/hr	12/12/2003	SC Regulation 61-62.1, Section II (B)(2)(b)
RB1	Richardson Boiler rated at 1.124x10 ⁶ BTU/hr	12/12/2003	SC Regulation 61-62.1, Section II (B)(2)(b)
CCB1	Conference Center Boiler #1 rated at 335,000 BTU/hr	12/12/2003	SC Regulation 61-62.1, Section II (B)(2)(b)
CCB2	Conference Center Boiler #2 rated at 335,000 BTU/hr	12/12/2003	SC Regulation 61-62.1, Section II (B)(2)(b)
WLB1	Winthrop Lodge Boiler #1 rated at 670,000 BTU/hr	12/12/2003	SC Regulation 61-62.1, Section II (B)(2)(b)
WLB2	Winthrop Lodge Boiler #2 rated at 670,000 BTU/hr	12/12/2003	SC Regulation 61-62.1, Section II (B)(2)(b)
WLB3	Winthrop Lodge Boiler #3 rated at 670,000 BTU/hr	12/12/2003	SC Regulation 61-62.1, Section II (B)(2)(b)
DB1	Dinkins Boiler rated at 186,000 BTU/hr	12/12/2003	SC Regulation 61-62.1, Section II (B)(2)(b)
JHHW	Johnson Hall Gas Hot Water Heater rated at 125,000 BTU/hr	12/12/2003	SC Regulation 61-62.1, Section II (B)(2)(b)
SHGP1	Stewart House Gas Pack #1 rated at 120,000 BTU/hr	11/24/2003	SC Regulation 61-62.1, Section II (B)(2)(h)
SHGP2	Stewart House Gas Pack #2 rated at 60,000 BTU/hr	11/24/2003	SC Regulation 61-62.1, Section II (B)(2)(h)
MHGP	Meeting House Gas Pack rated at 42,000 BTU/hr	11/24/2003	SC Regulation 61-62.1, Section II (B)(2)(h)
WHF1	Ward House Furnace #1 rated at 100,000 BTU/hr [11/24/2003] *** VOID - DECOMMISSIONED ***	11/24/2003	SC Regulation 61-62.1, Section II (B)(2)(h)
WHF2	Ward House Furnace #2 rated at 100,000 BTU/hr [11/24/2003] *** VOID - DECOMMISSIONED ***	11/24/2003	SC Regulation 61-62.1, Section II (B)(2)(h)



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Equip ID	Source Description	Date Listed	Exemption Basis
SGP1	The Shack Gas Pack #1 rated at 60,000 BTU/hr	11/24/2003	SC Regulation 61-62.1, Section II (B)(2)(h)
SGP2	The Shack Gas Pack #2 rated at 36,000 BTU/hr	11/24/2003	SC Regulation 61-62.1, Section II (B)(2)(h)
GRN	Greenhouse natural gas heaters (13) rated at 80,000 BTU/hr (each)	04/2009	SC Regulation 61-62.1, Section II (B)(2)(h)
FMGP1	Facilities Management Gas Pack #1 rated at 36,000 BTU/hr	11/24/2003	SC Regulation 61-62.1, Section II (B)(2)(h)
FMGP2	Facilities Management Gas Pack #2 rated at 36,000 BTU/hr	11/24/2003	SC Regulation 61-62.1, Section II (B)(2)(h)
PHF	President's House Furnace rated at 100,000 BTU/hr	11/24/2003	SC Regulation 61-62.1, Section II (B)(2)(h)
OCGP1	Operations Center Gas Pack #1 (structural) rated at 250,000 BTU/hr	11/24/2003	SC Regulation 61-62.1, Section II (B)(2)(h)
OCGP2	Operations Center Gas Pack #2 (shops) rated at 250,000 BTU/hr	11/24/2003	SC Regulation 61-62.1, Section II (B)(2)(h)
OCGP3	Operations Center Gas Pack #3 (receiving) rated at 100,000 BTU/hr	11/24/2003	SC Regulation 61-62.1, Section II (B)(2)(h)
OCGP4	Operations Center Gas Pack #4 rated at 100,000 BTU/hr	11/24/2003	SC Regulation 61-62.1, Section II (B)(2)(h)
OCGP5	Operations Center Gas Pack #5 (supply) rated at 220,000 BTU/hr	11/24/2003	SC Regulation 61-62.1, Section II (B)(2)(h)
LCR	Lake Complex Residence Gas Pack rated at 36,000 BTU/hr	11/24/2003	SC Regulation 61-62.1, Section II (B)(2)(h)
BB1	Bancroft Boiler rated at 2.002×10^6 BTU/hr	04/2009	SC Regulation 61-62.1, Section II (B)(2)(b)
MS1	Math/Science Boiler rated at 8.66×10^6 BTU/hr	04/2009	SC Regulation 61-62.1, Section II (B)(2)(b)
LSH	Life Sciences Laboratory Hoods (28 hoods and 40 linear feet of bench-top ventilation units)	04/2009	SC Regulation 61-62.1, Section II (B)(2)(b)
SSH	Sims Science Laboratory Hoods (24 hoods and 46 bench-top ventilation units)	04/2009	SC Regulation 61-62.1, Section II (B)(2)(b)
RK1	Rutledge Hall Natural Gas Ceramic Kiln #1 rated at 624,000 BTU/hr	04/2009	SC Regulation 61-62.1, Section II (B)(2)(b)
RK2	Rutledge Hall Natural Gas Ceramic Kiln #2 rated at 336,600 BTU/hr	04/2009	SC Regulation 61-62.1, Section II (B)(2)(b)
RK3	Rutledge Hall Natural Gas Ceramic Kiln #3 rated at 624,000 BTU/hr	04/2009	SC Regulation 61-62.1, Section II (B)(2)(b)
RF	Rutledge Hall Natural Gas Forge	04/2009	SC Regulation 61-62.1, Section II (B)(2)(b)
RH	Rutledge Hall (2 laboratory hoods and 30 linear feet of bench-top ventilation)	04/2009	SC Regulation 61-62.1, Section II (B)(2)(b)
WCD	West Center Natural Gas Dryers (2) rated at 20,000 BTU/hr (each)	04/2009	SC Regulation 61-62.1, Section II (B)(2)(b)
McBD	McBryde Hall Commercial Dishwasher rated at 130,000 BTU/hr	04/2009	SC Regulation 61-62.1, Section II (B)(2)(h)
LSG	Life Sciences / Sims Diesel Generator rated at 600 kW	04/2009	SC Regulation 61-62.1, Section II (B)(2)(f)



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Equip ID	Source Description	Date Listed	Exemption Basis
DG	Dinkins Natural Gas Generator rated at 25 kW	04/2009	SC Regulation 61-62.1, Section II (B)(2)(f)
MusG	School of Music Diesel Generator rated at 100 kW	04/2009	SC Regulation 61-62.1, Section II (B)(2)(f)
JHG	Johnson Hall Natural Gas Generator rated at 50 kW	04/2009	SC Regulation 61-62.1, Section II (B)(2)(f)
GG	Good Building Natural Gas Generator rated at 25 kW	04/2009	SC Regulation 61-62.1, Section II (B)(2)(f)
TG	Tillman Hall Diesel Generator rated at 230 kW	04/2009	SC Regulation 61-62.1, Section II (B)(2)(f)
WCG	West Center Natural Gas Generator rated at 30 kW	04/2009	SC Regulation 61-62.1, Section II (B)(2)(f)
OHG	Owens Hall Diesel Generator rated at 60 kW	04/2009	SC Regulation 61-62.1, Section II (B)(2)(f)
OCG	Operations Center Natural Gas Generator rated at 17 kW	04/2009	SC Regulation 61-62.1, Section II (B)(2)(f)
NCFP	North Campus Diesel Fire Pump rated at 210 HP (~156 kW) / 1500 GPM	04/2009	SC Regulation 61-62.1, Section II (B)(2)(f)
CCFP	Central Campus Diesel Fire Pump rated at 115 HP (~85 kW) / 1500 GPM	04/2009	SC Regulation 61-62.1, Section II (B)(2)(f)

EMISSIONS

UNCONTROLLED POTENTIAL EMISSIONS (PROJECT ONLY)

ID	Pollutant	lb/hr	TPY	Method for Estimating Emissions
CEB1	PM	13.45	58.91	<p>AP-42 Fifth Edition</p> <p><i>Tables 1.3-1,-2,-3,-5, 9/98 Update</i> Uncontrolled PM, PM₁₀, SO₂, and NO_x emissions are calculated using the worst case PTE from No. 6 fuel oil.</p> <p><i>Tables 1.4-1,-2, 7/98 Update</i> Uncontrolled CO and VOC emissions are calculated using the worst case PTE from natural gas.</p>
CEB1	PM ₁₀	11.77	51.55	
CEB1	SO ₂	184.63	808.69	
CEB1	NO _x	30.80	134.90	
CEB1	CO (Natural Gas)	6.72	29.43	
CEB1	VOC (Natural Gas)	0.44	1.93	
CEB2	PM	13.45	58.91	
CEB2	PM ₁₀	11.77	51.55	
CEB2	SO ₂	184.63	808.69	
CEB2	NO _x	30.80	134.90	
CEB2	CO (Natural Gas)	6.72	29.43	
CEB2	VOC (Natural Gas)	0.44	1.93	



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UNCONTROLLED POTENTIAL EMISSIONS (PROJECT ONLY)

ID	Pollutant	lb/hr	TPY	Method for Estimating Emissions
CEB4	PM	0.085	0.37	AP-42 Fifth Edition, Tables 1.4-1,-2, 7/98 Update
CEB4	PM ₁₀	0.085	0.37	
CEB4	SO ₂	0.007	0.03	
CEB4	NO _x	1.124	4.93	
CEB4	CO	0.945	4.14	
CEB4	VOC	0.062	0.27	
CEB5	PM	0.085	0.37	AP-42 Fifth Edition, Tables 1.4-1,-2, 7/98 Update
CEB5	PM ₁₀	0.085	0.37	
CEB5	SO ₂	0.007	0.03	
CEB5	NO _x	1.124	4.93	
CEB5	CO	0.945	4.14	
CEB5	VOC	0.062	0.27	

CONTROLLED POTENTIAL EMISSIONS (PROJECT ONLY)

ID	Pollutant	lb/hr	TPY	Method for Estimating Emissions
CEB1, CEB2 (Total)	PM	13.45	7.09	AP-42 5th Ed, Tables 1.3-1,-2,-3,-5 9/98 Update Engineering Calculations ++ (Refer to calculations below) * Calculated assuming boilers consume 590,000 gal/yr of No. 6 fuel oil
	PM ₁₀	11.77	6.20	
	SO ₂	184.63	97.26	
	NO _x	30.80	16.23	
	CO	2.800	1.48	
	VOC	0.567	0.08	
CEB4	PM	-	-	AP-42 Fifth Edition, Tables 1.4-1,-2, 7/98 Update * Calculated using the AP-42 Emission Factor for Low NO _x burners (50 lb/10 ⁶ scf NG)
CEB4	PM ₁₀	-	-	
CEB4	SO ₂	-	-	
CEB4	NO _x	0.56	2.46	
CEB4	CO	-	-	
CEB4	VOC	-	-	
CEB5	PM	-	-	AP-42 Fifth Edition, Tables 1.4-1,-2, 7/98 Update
CEB5	PM ₁₀	-	-	



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CONTROLLED POTENTIAL EMISSIONS (PROJECT ONLY)

ID	Pollutant	lb/hr	TPY	Method for Estimating Emissions
CEB5	SO ₂	-	-	* Calculated using the AP-42 Emission Factor for Low NO _x burners (50 lb/10 ⁶ scf NG)
CEB5	NO _x	0.56	2.46	
CEB5	CO	-	-	
CEB5	VOC	-	-	

++ CONTROLLED CALCULATIONS FOR CENTRAL ENERGY BOILERS, CEB1 AND CEB2:

As proposed, Winthrop University will consume 590,000 gal/yr of No. 6 fuel oil. Hourly emission rates will remain unaffected by this yearly limit.

- Generic Equation: $TPY = (FuelUsageLimit)(EmissionFactor)\left(\frac{ton}{2000lb}\right)$

PM

$$\left(\frac{590000\text{ gal}}{\text{yr}}\right)\left(\frac{24.019\text{ lb}}{1000\text{ gal}}\right)\left(\frac{ton}{2000\text{ lb}}\right) = 7.086\text{ ton/yr}$$

PM₁₀

$$\left(\frac{590000\text{ gal}}{\text{yr}}\right)\left(\frac{21.02\text{ lb}}{1000\text{ gal}}\right)\left(\frac{ton}{2000\text{ lb}}\right) = 6.200\text{ ton/yr}$$

SO₂

$$\left(\frac{590000\text{ gal}}{\text{yr}}\right)\left(\frac{329.7\text{ lb}}{1000\text{ gal}}\right)\left(\frac{ton}{2000\text{ lb}}\right) = 97.262\text{ ton/yr}$$

NO_x

$$\left(\frac{590000\text{ gal}}{\text{yr}}\right)\left(\frac{55\text{ lb}}{1000\text{ gal}}\right)\left(\frac{ton}{2000\text{ lb}}\right) = 16.225\text{ ton/yr}$$

CO

$$\left(\frac{590000\text{ gal}}{\text{yr}}\right)\left(\frac{5\text{ lb}}{1000\text{ gal}}\right)\left(\frac{ton}{2000\text{ lb}}\right) = 1.475\text{ ton/yr}$$

VOC

$$\left(\frac{590000\text{ gal}}{\text{yr}}\right)\left(\frac{0.28\text{ lb}}{1000\text{ gal}}\right)\left(\frac{ton}{2000\text{ lb}}\right) = 0.083\text{ ton/yr}$$



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FACILITY WIDE EMISSIONS		
Pollutant	Uncontrolled Emissions	Controlled Emissions
	TPY	TPY
PM	124.56	13.82
PM ₁₀	109.84	12.94
SO ₂	1617.91	97.79
NO _x	353.52	99.94
CO	98.98	75.93
VOC	6.25	4.96

* **Note A:** Facility wide uncontrolled emissions are calculated by adding emissions from facility wide equipment together with emissions from CEB1 and CEB2 consuming No. 6 fuel oil for 8760 hr/yr.

* **Note B:** Facility wide controlled emissions are calculated by adding emissions from Boilers CEB1 and CEB2 consuming 590,000 gal/yr of No. 6 fuel oil together with facility wide equipment.

PROJECT REGULATORY APPLICABILITY REVIEW			
Regulation	Applicable		Comments
	Yes	No	
South Carolina Regulation 61-62.1 through 62.99: Air Pollution Regulations (PROJECT ONLY)			
Section II(E): Synthetic Minor	X		This facility is not requesting a construction permit that would trigger the 250 TPY PTE limit. Therefore, it is not a potential PSD major source.
Section II(G): Conditional Major	X		This facility does have the PTE 100 TPY of PM ₁₀ , SO ₂ , and NO _x . As such, the facility will retain its previously established federally enforceable limits for this Conditional Major Operating Permit renewal. However, the facility's No.6 fuel oil usage will increase from 523,440 gal/yr to 590,000 gal/yr.
Standard 1: Fuel Burning Operations	X		The facility's Central Energy Boilers #1 and #2 were constructed <i>before</i> February 11, 1971 and will have PM, SO ₂ , and opacity limits imposed by this standard. The boilers (Equip. ID CEB1 and Equip. ID CEB2) will each be subject to a 0.6 lb/10 ⁶ BTU/hr PM limit and a 3.5 lb/10 ⁶ BTU/hr SO ₂ limit. Each boiler will be subject to a 40% opacity limit. The facility's Central Energy Boilers #4 and #5 were constructed <i>after</i> February 11, 1971 and will have PM, SO ₂ , and opacity limits imposed by this standard. The boilers (Equip. ID CEB4 and Equip. ID CEB5) will each be subject to a 0.6 lb/10 ⁶ BTU/hr PM limit and a 3.5 lb/10 ⁶ BTU/hr SO ₂ limit. Each boiler will be subject to a 20% opacity limit.
Standard 2: Ambient Air Quality Standards	X		This facility has demonstrated compliance through modeling; see modeling summary dated April 6, 2009. No operational restriction has been established to ensure compliance with the modeled emission rates.
Standard 3: Waste Combustion/Reduction (state only)		X	This facility does not contain waste combustion or reduction sources.



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PROJECT REGULATORY APPLICABILITY REVIEW

Regulation	Applicable		Comments
	Yes	No	
Standard 3.1: HMI Waste Incinerators		X	The facility is not incinerating HMI waste.
Standard 4: Emissions from Process Industries		X	The facility does not have either emissions or processes described under this standard.
Standard 5: Volatile Organic Compounds		X	None of this standard's regulated processes apply.
Standard 5.1: BACT/LAER For VOC (state only)		X	The facility does not have the PTE 100 TPY of VOCs; therefore, it is not subject to this standard.
Standard 5.2: Control of Oxides of Nitrogen	X		Any stationary source constructed after June 25, 2004 that emits or has the potential to emit NO _x generated from fuel combustion is subject to Sections III and VI of this standard. This standard mandates that any affected units be equipped with Low NO _x burners or an equivalent to achieve 30 ppmv @ 3% O ₂ Dry (0.036 lb / 10 ⁶ BTU). Manufacturer's specification sheets for Equipment IDs CEB4 and CEB5 show that these units are equipped with Low NO _x burners with a ratio of 25 ppm at 3% corrected O ₂ .
Standard 7: Prevention of Significant Deterioration		X	This facility does have the PTE 250 TPY of SO ₂ and NO _x . However, the facility has Synthetic Minor Emission Limitations of less than 100 TPY, each, for SO ₂ and NO _x .
Standard 7(c): Ambient Air Increments	X		This facility has demonstrated compliance through modeling for the PSD Class II increments for York County; see modeling summary dated April 6, 2009.
Standard 7.1: Standards for Non Attainment Areas	X		This facility is located in a nonattainment area of York County. However, Winthrop University is a Conditional Major facility with federally enforceable limits that currently meet this nonattainment area's 100 TPY NO _x and VOC limit. In the event that York County's classification upgrades from moderate to severe the facility may have additional limits imposed upon it.
Standard 8: Toxic Air Pollutants (state only)		X	The TAPs from burning virgin fuel are not subject to this regulation.
Regulation 61-62.6: Control of Fugitive Particulate Matter		X	This facility does not emit fugitive particulate matter (dust).
Regulation 61-62.60: SC Designated Facility Plan and NSPS		X	This facility's Central Energy Boilers #4 and #5 (Equip. ID CEB4 and Equip. ID CEB5) are subject to subparts A and Dc of this standard. These boilers are not subject to PM emission limitations, SO ₂ emission limitations, or emissions monitoring. Additionally, each boiler's SO ₂ emissions are less than 0.32 lb/million BTU (0.32 lb/million BTU x 11.81 million BTU/hr = 3.78 lb SO ₂ /hr; PTE of SO ₂ is 0.007 lb/hr) so the facility is allowed to keep fuel usage records on a monthly basis. Records should remain on site for two years (the conditional major requirement is 5 years) and report on a semiannual basis.
Regulation 61-62.61: NESHP		X	This facility does not emit the pollutants subject to this standard (asbestos, benzene, beryllium, coke oven emissions, arsenic, mercury, radio nuclide, radon, or vinyl chloride).



Company Name: Winthrop University
Permit Number: CM-2440-0084

Permit Writer: Jerisha Dukes
Date: April 1, 2009

PROJECT REGULATORY APPLICABILITY REVIEW

Regulation	Applicable		Comments
	Yes	No	
Regulation 61-62.63: NESHAP For Source Categories		X	This facility is not major for HAP emissions and does not emit any MACT area source pollutants.
Regulation 61-62.68: Chemical Accident Prevention		X	This facility does not store or use chemicals subject to 112(r) above threshold quantities.
Regulation 61-62.70: Title V		X	This facility does have the PTE 100 TPY of PM ₁₀ , SO ₂ , and NO _x . As such, the facility will retain its previously established federally enforceable limits for this Conditional Major Operating Permit renewal.
Regulation 61-62.72: Acid Rain		X	This facility is not a utility unit; therefore, it is not subject to this regulation.
Regulation 61-62.96: Nitrogen Oxides (NO _x) Budget Trading Program		X	This facility does not participate in NO _x emissions trading; therefore, it is not subject to this regulation.
Regulation 61-62.99: Nitrogen Oxides (NO _x) Budget Program Requirements for Stationary Sources Not In the Trading Program		X	This facility does not participate in NO _x emissions trading; therefore, it is not subject to this regulation.
Federal Regulations (PROJECT ONLY)			
NSPS (Part 60) Subpart(s)	X		This facility's Central Energy Boilers #4 and #5 (Equip. ID CEB4 and Equip. ID CEB5) are subject to subparts A and Dc of this standard. These boilers are not subject to PM emission limitations, SO ₂ emission limitations, or emissions monitoring. Additionally, each boiler's SO ₂ emissions are less than 0.32 lb/million BTU (0.32 lb/million BTU x 11.81 million BTU/hr = 3.78 lb SO ₂ /hr; PTE of SO ₂ is 0.007 lb/hr) so the facility is allowed to keep fuel usage records on a monthly basis. Records should remain on site for two years (the conditional major requirement is 5 years) and report on a semiannual basis.
NESHAP (Part 61) Subpart(s)		X	This facility does not emit the pollutants subject to this standard (asbestos, benzene, beryllium, coke oven emissions, arsenic, mercury, radio nuclide, radon, or vinyl chloride).
MACT (Part 63) Subpart(s)		X	This facility is not major for HAP emissions and does not emit any MACT area source pollutants.
Compliance Assurance Monitoring (CAM) (Part 64)		X	This is not a Title V facility; therefore, it is not subject to CAM.

SUMMARY AND CONCLUSIONS

It has been determined that this source, if operated in accordance with the submitted application, will meet all applicable requirements and emission standards.