



STATEMENT OF BASIS

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BAQ Engineering Services Division
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Company Name: Caterpillar Inc.
Permit Number: CM 1200-0246CW

Permit Writer: Michael G. Daugherty
Date: April 30, 2009

DATE APPLICATION RECEIVED: April 24, 2009

FACILITY DESCRIPTION Caterpillar, Inc. owns and operates an engine manufacturing facility located in Fountain Inn. Operations at this facility include machining engine blocks, assembling and testing diesel engines, painting, packaging and shipping.

PROJECT DESCRIPTION The project that is proposed by Caterpillar is to modify the facility's reliability test cell #1 (BM0-201) to perform tests on engines rated up to 1200 hp. The test cell is currently permitted to test engines up to 600 hp. In order to show no increase in the facility-wide emissions the facility will reduce the number of engine tests performed in test cell #2 & #3 (BM-202 & BM-203). The facility also will reduce the No. 2 fuel usage limit which is currently at 700,000 gallons per year to 650,024 gallons per year. The facility is requesting the change in yearly fuel usage and the reduction in tests per year on test cells #2 & #3 to maintain compliance with less than 100 tpy of NO_x emissions. In addition the facility plans to increase the exit velocity from stacks associated with test cells BM-201, BM-202, and BM-203. The facility will also increase the stack height for test cell BM-203 from 54 feet above ground level to 84 feet above ground level.

PUBLIC NOTICE The permit is being public noticed due to the increase in capacity of Test Cell #1 (BM-201) which will require changes in fuel and operating limits in order for the facility to maintain its NO_x emissions below 100 tpy and remain a Conditional Major and avoid PSD.

EMISSIONS

UNCONTROLLED POTENTIAL EMISSIONS (PROJECT ONLY)

ID	Pollutant	lb/hr	TPY	Method for Estimating Emissions
CW (BM-201)	PM	2.07	1.6	Engineering Calculations / AP 42.3.4
	PM ₁₀	2.07	1.6	Engineering Calculations / AP 42.3.4
	SO ₂	3.80	2.94	Engineering Calculations / AP 42.3.4
	CO	5.17	4.0	Engineering Calculations / AP 42.3.4
	NO _x	3.48	15.25	Engineering Calculations/EPA Cert
	VOC	0.60	0.66	Engineering Calculations / AP 42.3.4
	HAP (Single)	0.0013	0.0015	Engineering Calculations / AP 42.3.4
	HAP (Total)	0.028	0.031	Engineering Calculations / AP 42.3.4

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FACILITY WIDE EMISSIONS		
Pollutant	Uncontrolled Emissions	Controlled Emissions
	TPY	TPY
PM	19.19	19.19
PM ₁₀	19.19	19.19
SO ₂	40.16	40.16
CO	70.26	70.26
NO _x	82.69	82.69
VOC	95.73	95.73
HAP (Single)	6.16	6.16
HAP (Total)	13.18	13.18

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		The facility will be changing the fuel usage limit and also the test per year for test cells BM202 & 203 in order to maintain compliance.
Section II(G): Conditional Major	X		The facility is a Conditional Major and with this construction permit and the limits imposed it will remain a Conditional Major.
Standard 1: Fuel Burning Operations		X	The project is not fuel burning operation as defined in the standard.
Standard 2: Ambient Air Quality Standards	X		The facility has shown compliance through modeling dated 5/26/2009.
Standard 3: Waste Combustion/Reduction (state only)		X	The project will not and the facility does not perform any waste combustion / reduction.
Standard 3.1: HMI Waste Incinerators		X	The project will not and the facility does not incinerate any hospital or medical waste.
Standard 4: Emissions from Process Industries	X		Project will be subject to opacity and PM limits.
Standard 5: Volatile Organic Compounds		X	The project is not for one of the processes listed in the standard.
Standard 5.1: BACT/LAER For VOC (state only)		X	The project will not result in a net increase of VOC emissions which would exceed 100tpy.
Standard 5.2: Control of Oxides of Nitrogen		X	The project does produce NO _x but is exempt from the standard because the source is rated at 3.1x10 ⁶ Btu/hr which is less than the threshold of the standard which is 10x10 ⁶ Btu/hr.
Standard 7: Prevention of Significant Deterioration		X	The facility already has enforceable limits in place (less than 100tpy NO _x) in order to avoid PSD. The project will not change any of the in place limits
Standard 7(c): Ambient Air Increments	X		The facility has shown compliance through modeling dated 5/26/2009.
Standard 7.1: Standards for Non Attainment Areas		X	The facility is not in a non attainment area.
Standard 8: Toxic Air Pollutants (state only)	X		The facility has shown compliance through modeling dated 9/28/2007.
Regulation 61-62.6: Control of Fugitive Particulate Matter		X	The project will not emit any fugitive emissions.



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PROJECT REGULATORY APPLICABILITY REVIEW

Regulation	Applicable		Comments
	Yes	No	
Regulation 61-62.60: SC Designated Facility Plan and NSPS		X	The project is not covered under any of the regulations subparts.
Regulation 61-62.61: NESHAP		X	The project does not emit any pollutants subject to the standard (asbestos, benzene, beryllium, arsenic, mercury, radio nuclides, radon, or vinyl chloride).
Regulation 61-62.63: NESHAP For Source Categories		X	The facility would be subject to 40CFR63 PPPPP but since it has federally enforceable limits (which make them part of the design) already in place to reduce its PTE as minor source the MACT does not apply.
Regulation 61-62.68: Chemical Accident Prevention		X	The project will not use or store chemicals subject 112(r).
Regulation 61-62.70: Title V		X	The facility has taken limits to maintain its emissions below that of a major threshold and with the addition of this project they will decrease their yearly fuel consumption to maintain their Conditional Major status.
Regulation 61-62.72: Acid Rain		X	The facility is not a generating facility therefore they are not subject to the regulation.
Regulation 61-62.96: Nitrogen Oxides (NO _x) Budget Trading Program		X	The facility is not a generating facility therefore they do not participate.
Regulation 61-62.99: Nitrogen Oxides (NO _x) Budget Program Requirements for Stationary Sources Not In the Trading Program		X	The facility does not have any fuel burning kilns therefore they do not participate.
Other			
Federal Regulations (PROJECT ONLY)			
NSPS (Part 60) Subpart(s)		X	The project is not covered under any of the regulations subparts.
NESHAP (Part 61) Subpart(s)		X	The project does not emit any pollutants subject to the standard (asbestos, benzene, beryllium, arsenic, mercury, radio nuclides, radon, or vinyl chloride).
MACT (Part 63) Subpart(s)		X	The facility would be subject to 40CFR63 PPPPP but since it has federally enforceable limits (which make them part of the design) already in place to reduce its PTE as a minor source the MACT does not apply.
Area Source Standards (Part 63) Subpart(s)		X	The project is not an area source for HAPs
Compliance Assurance Monitoring (CAM) (Part 64)		X	The facility is not Title V therefore CAM does not apply.
Other			

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.