OFFICE OF ENVIRONMENTAL QUALITY CONTROL
BUREAU OF AIR QUALITY
SYNTHETIC MINOR CONSTRUCTION PERMIT

Caterpillar, Inc.
107 Southchase Boulevard
Fountain Inn, SC 29644

Permission is hereby granted to modify BM-201 from a 600 hp (maximum) diesel engine test cell to a 1200 hp (maximum) diesel engine test cell. To avoid an increase in NO_x emissions due to the modification of BM-201 the facility is requesting a reduction in their facility-wide fuel limit of #2 diesel fuel from 700,000 gallons per year to 650,024 gallons per year and a reduction in tests per year for Test Cells BM-202 & BM-203 from 5,724 engines per year each to 4,534 engines per year each.

NOTWITHSTANDING ANY OF THE CONDITIONS LISTED BELOW, NO APPLICABLE LAW, REGULATION, OR STANDARD WILL BE CONTRAVENED.

CONDITIONS

1. All official correspondence, plans, permit application forms, and written statements are an integral part of this permit.

2. The owner/operator shall submit written notification to the Director of the Engineering Services Division of the date construction is commenced, postmarked no later than 30 days after such date, and written notification of the actual date of initial startup of each new or altered source, postmarked within 15 days after such date.

3. Approval to construct shall become invalid if construction is not commenced within 18 months after receipt of such approval, if construction is discontinued for a period of 18 months or more, or if construction is not completed within a reasonable time frame. The Department may extend the 18-month period upon a satisfactory showing that an extension is justified. This request must be made prior to the permit expiration.

PERMIT NUMBER: 1200-0246 CW
DATE OF ISSUE: <DTAFT>
FACILITY SIC/NAICS CODES: 3519/333618

4. The owner or operator shall comply with all terms, conditions, and limitations of this permit.

This is pursuant to the provisions of Section 48-1-110, 1976 *Code of Laws of South Carolina*, as amended, and the *South Carolina Air Quality Control Regulation 61-62.1*, Section II.

I. STANDARD CONDITIONS

A. This permit expressly incorporates all the provisions of *South Carolina Department of Health and Environmental Control Regulation 61-62.1*, Section II, Paragraph J.

II. SPECIAL CONDITIONS

A. EMISSION LIMITATIONS

Air pollutant emissions shall not exceed the following:

ID	Pollutant/ Standard	Limit	Reference Method	Regulation	State Only
CW (BM201)	Opacity	20%	Method 9	SC regulation 61-62.5, Standard 4 Section IX	No
CW (BM201)	PM	4.89 lb/hr	*	SC regulation 61-62.5, Standard 4 Section VIII	No

* As approved by BAQ

The emission limitations listed for each emission unit are based on operation at permitted capacity. Operation at less than permitted capacity must meet emission limits specified in the applicable regulations based on that operating rate. All test methods must be the most recent revisions that are published in the *Code of Federal Regulations*, in accordance with the requirements of SC Regulation 61-62.1, Section IV, Source Test.

B. CONTINUOUS MONITORING REQUIREMENTS

ID	Pollutant
N/A	N/A

N/A = Not Applicable

C. SOURCE TEST SCHEDULE

ID	Pollutant	Frequency	Method
N/A	N/A	N/A	N/A

N/A = Not Applicable

D. ADDITIONAL CONDITIONS

Condition Number	Conditions
1.	The permittee shall pay fees in accordance with SC Regulation 61-30, SC Environmental Protection Fees.
2.	In accordance with SC Regulation 61-62.1 Section II(J), for all sources not required to have continuous emissions monitors, in the event of any malfunction of air pollution control equipment or system, process upset or other equipment failure which results in discharges of air contaminants lasting for one hour or more and which are greater than those discharges described for normal operation in the permit application shall be reported to the local Environmental Quality Control (EQC) Regional office within twenty-four (24) hours after the beginning of the occurrence. The permittee shall also submit a written report within thirty (30) days of the occurrence. This report shall be submitted to the Manager of the Technical Management Section, Bureau of Air Quality (BAQ). The report shall contain as a minimum, the following: the identity of the emission unit and associated equipment where excess emissions occurred, the magnitude of excess emissions, the time and duration of excess emissions, the steps taken to remedy the malfunction and to prevent a recurrence, documentation that control equipment and processes were at all times maintained and operated, to the maximum extent practicable, in a manner that was consistent with good practice for minimizing emissions. Such a report shall in no way serve to excuse, otherwise justify, or in any manner affect any potential liability or enforcement action resulting from the occurrence.
3.	Air dispersion modeling (or other method) has demonstrated that this facility's operation will not interfere with the attainment and maintenance of any state or federal ambient air standard. Any changes in the parameters used in the air dispersion modeling may require a review by the facility to determine continuing compliance with these standards. These potential changes include any decrease in stack height, decrease in stack velocity, increase in stack diameter, decrease in stack exit temperature, increase in building height or building additions, increase in emission rates, decrease in distance between stack and property line, changes in vertical stack orientation, and installation of a rain cap that impedes vertical flow. Parameters that are not required in the determination will not invalidate the demonstration if they are modified. The emission rates used in the determination are listed in Attachment A of this permit. Higher emission rates may be administratively incorporated into Attachment A of this permit provided a demonstration using these higher emission rates shows the attainment and maintenance of any state or federal ambient air quality standard or with any other applicable requirement. Variations from the input parameters in the demonstration shall not constitute a violation unless the maximum allowable ambient concentrations identified in the standard are exceeded. The owner/operator shall maintain this facility at or below the emission rates as listed in Attachment A, not to exceed the pollutant limitations of this construction permit. Should the facility wish to increase the emission rates listed in Attachment A, not to exceed the pollutant limitations in the body of this permit, it may do so by the administrative process specified in this permit condition. This is a State Only enforceable requirement.
4.	These conditions shall not supersede any State or Federal requirements such as National Emission Standards for Hazardous Air Pollutants, unless these conditions would impose a more restrictive limit.
5.	This construction permit was reviewed and issued based on the permit application submitted by the owner/operator. The owner/operator shall obtain any Bureau authorization required under South Carolina Regulation 61-62.1, Section II(A) prior to making modifications not covered under this construction permit.
6.	The owner or operator shall submit a written request to the Director of the Engineering Services Division for a new or revised operating permit to cover any new or altered source postmarked no later than fifteen (15) days after the actual date of initial startup of each new or altered source. The written request for a new or revised operating permit must include, as a minimum, the following information: i. A list of sources that were placed into operation. ii. The actual date of initial startup of each new or altered source.

<table>
<tr><th>Condition Number</th><th>Conditions</th></tr>
<tr><td>7.</td><td>The owner/operator or professional engineer in charge of the project shall certify that, to the best of his/her knowledge and belief and as a result of periodic observation during construction, the construction under application has been completed in accordance with the specifications agreed upon in the construction permit issued by the Department. If construction is certified as provided above, the permittee may operate the source in compliance with the terms and conditions of the construction permit until the operating permit is issued by the Department. If construction is not built as specified in the permit application and associated construction permit(s), the owner/operator must submit to the Director of the Engineering Services Division a complete description of modifications that are at variance with the documentation of the construction permitting determination prior to commencing operation. Construction variances that would trigger additional requirements that have not been addressed prior to start of operation shall be considered construction without a permit.</td></tr>
<tr><td>8.</td><td>Unless elsewhere specified within this permit, all records required to demonstrate compliance with the limits established under this permit shall be maintained on site for a period of at least five (5) years from the date generated and shall be made available to a Department representative upon request.</td></tr>
<tr><td>9.</td><td>In accordance with SC Regulation 61-62.5, Standard No. 4 - Emissions from Process Industries, Section IX - Visible Emissions (Where Not Specified Elsewhere), where construction or modification began after December 31, 1985, emissions (including fugitive emissions) shall not exhibit an opacity greater than 20%.</td></tr>
<tr><td>10.</td><td>In accordance with SC Regulation 61-62.5, Standard No. 4 - Emissions from Process Industries, Section VIII - Other Manufacturing, particulate matter emissions shall be limited to the rate specified by use of the following equations: for process weight rates less than or equal to 30 tons per hour ($E = 4.10P^{0.67}$) and for process weight rates greater than 30 tons per hour ($E = 55.0P^{0.11} - 40$) where E = the allowable emission rate in pounds per hour and P = process weight rate in tons per hour. As such, each process's allowable particulate matter emission limit is limited to the amount shown in the table below at its nominal production rating:
<table>
<tr><th>Process</th><th>Emission Limit (lbs/hr)</th><th>Process Weight Rate (tons/hr)</th></tr>
<tr><td>CW (BM210)</td><td>4.89</td><td>1.3</td></tr>
</table>
</td></tr>
<tr><td>11.</td><td>The facility is permitted to burn 650,024 gallons of #2 Diesel Fuel per year. The owner/operator must record fuel consumption monthly and calculate yearly fuel consumption on a twelve-month rolling sum. Reports of the calculated values and the twelve-month rolling sum shall be submitted quarterly.</td></tr>
<tr><td>12.</td><td>The BM202 & BM 203 engine test cells are limited to performing a combined total of 9,068 tests per year. The owner/operator must record the actual number of tests monthly. Reports of the number of tests submitted quarterly.</td></tr>
<tr><td>13.</td><td>All other emission limits, reporting, monitoring, and record keeping established in the Conditional Major operating permit CM-1380-0025, will remain in effect.</td></tr>
</table>

Elizabeth J. Basil, Director
Engineering Services Division
Bureau of Air Quality

ATTACHMENT A

Modeled Emission Rates
Caterpillar, Inc.
1200-0246-CW

STANDARD NO. 2 - MODELED AAQS EMISSION RATES (LBS/HR)					
STACK ID	**TSP**	**PM_{10}**	**SO_2**	**NO_2**	**CO**
BM-201 – Engine Test Cell #1	**2.07**	**2.07**	**3.80**	**3.48**	**5.17**
BM-202 – Engine Test Cell #2	**1.18**	**1.18**	**6.81**	**4.94**	**9.29**
BM-203 – Engine Test Cell #3	**1.18**	**1.18**	**6.81**	**4.94**	**9.29**
BM-206 – Engine Test Cell #6	1.1508	1.1508	2.1191	0.4603	3.5001
BM-207 – Engine Test Cell #7	1.1508	1.1508	2.1191	0.4603	3.5001
BM-208 – Engine Test Cell #8	1.1508	1.1508	2.1191	0.4603	3.5001
BM-209 – Engine Test Cell #9	1.1508	1.1508	2.1191	0.4603	3.5001
BM-210 – Engine Test Cell #10	1.1508	1.1508	2.1191	0.4603	3.5001
BM-211 – Engine Test Cell #11	1.1508	1.1508	2.1191	0.4603	3.5001
BM-212 – Engine Test Cell #12	1.1508	1.1508	2.1191	0.4603	3.5001
BV-93 – Hot Water Supply Heater	0.0148	0.0148	0.0011	0.1984	0.1643
BV-94 – 0.69 MMBTU NG-fired Hot Water Heater Main Wash	0.0053	0.0053	0.0005	0.0676	0.0569
BV-95 – 0.345 MMBTU NG-fired Hot Water Heat 2nd Pass Wash	0.0025	0.0025	0.0002	0.0338	0.0283
M-4606A – E-Coat Cure Oven Zone #1	0.0148	0.0148	0.0011	0.1984	0.1643
M-4606B – E-Coat Cure Oven Zone #2	0.0037	0.0037	0.0002	0.0476	0.0413
M-4607 – Spray Booth #1	0.0138	0.0138	0.0009	0.1587	0.1349
M-4608 – Spray Booth #2	0.0138	0.0138	0.0009	0.1587	0.1349
M-4609 – Spray Booth Oven	0.0037	0.0037	0.0002	0.0476	0.0413
M4610A – Primer Booth 1A	0.0263	0.0263	0.0003	0.0553	0.0464
M4610B – Primer Booth 1B	0.0263	0.0263	0.0003	0.0553	0.0464
M4611A – Primer Booth 2A	0.0263	0.0263	0.0003	0.0553	0.0464
M4611B – Primer Boot 2B	0.0263	0.0263	0.0003	0.0553	0.0464
M4612A – Top Coat Paint Booth 1A	0.0359	0.0359	0.0003	0.0553	0.0464
M4612B – Top Coat Paint Booth 1A	0.0359	0.0359	0.0003	0.0553	0.0464
M4613A – Top Coat Paint Booth 2A	0.0359	0.0359	0.0003	0.0553	0.0464
M4613B – Top Coat Paint Booth 2B	0.0359	0.0359	0.0003	0.0553	0.0464
M4616 – Top Coat Flash Tunnel	0.0256	0.0256	0.0021	0.3372	0.2833
M4617 – Main Spray Paint Cure Oven	0.0059	0.0059	0.0005	0.0785	0.0660
M4619A – 2nd Pass Paint Booth 1A	0.0063	0.0063	0.0003	0.0562	0.0472
M4619B – 2nd Pass Paint Booth 1B	0.0063	0.0063	0.0003	0.0562	0.0472
M4620A – 2nd Pass Paint Booth 2A	0.0063	0.0063	0.0003	0.0562	0.0472

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M4620B – 2nd Pass Paint Booth 2B	0.0063	0.0063	0.0003	0.0562	0.0472
M4621A – 2nd Pass Paint Booth 3A	0.0063	0.0063	0.0003	0.0562	0.0472
M4621B – 2nd Pass Paint Booth 3B	0.0063	0.0063	0.0003	0.0562	0.0472
M4622 – 2nd Pass Spray Paint Cure Oven	0.0037	0.0037	0.0002	0.0491	0.0411
Facility Total	**12.8798**	**12.8798**	**32.2658**	**18.7373**	**50.0617**
* Stacks exist prior to PM_{10} and SO_2 baseline dates.					

STANDARD NO. 7 - MODELED PSD CLASS II INCREMENT EMISSION RATES (LBS/HR)

STACK ID	Minor Source Baseline Date(s)		
	7/3/2001	7/3/2001	7/18/1995
	PM_{10}	SO_2	NO_2
BM-201 – Engine Test Cell #1*	**2.07**	**3.80**	**3.48**
BM-202 – Engine Test Cell #2*	**1.18**	**6.81**	**4.94**
BM-203 – Engine Test Cell #3*	**1.18**	**6.81**	**4.94**
BM-206 – Engine Test Cell #6*	--	--	0.4603
BM-207 – Engine Test Cell #7*	--	--	0.4603
BM-208 – Engine Test Cell #8*	--	--	0.4603
BM-209 – Engine Test Cell #9*	--	--	0.4603
BM-210 – Engine Test Cell #10*	--	--	0.4603
BM-211 – Engine Test Cell #11*	--	--	0.4603
BM-212 – Engine Test Cell #12*	--	--	0.4603
BV-93 – Hot Water Supply Heater*	--	--	0.1984
BV-94 – 0.69 MMBTU NG-fired Hot Water Heater Main Wash	0.0053	0.0005	0.0676
BV-95 – 0.345 MMBTU NG-fired Hot Water Heat 2nd Pass Wash	0.0025	0.0002	0.0338
M-4606A – E-Coat Cure Oven Zone #1*	--	--	0.1984
M-4606B – E-Coat Cure Oven Zone #2*	--	--	0.0476
M-4607 – Spray Booth #1*	--	--	0.1587
M-4608 – Spray Booth #2*	--	--	0.1587
M-4609 – Spray Booth Oven*	--	--	0.0476
M4610A – Primer Booth 1A	0.0263	0.0003	0.0553
M4610B – Primer Booth 1B	0.0263	0.0003	0.0553
M4611A – Primer Booth 2A	0.0263	0.0003	0.0553
M4611B – Primer Boot 2B	0.0263	0.0003	0.0553

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1200-0246-CW

M4612A – Top Coat Paint Booth 1A	0.0359	0.0003	0.0553
M4612B – Top Coat Paint Booth 1A	0.0359	0.0003	0.0553
M4613A – Top Coat Paint Booth 2A	0.0359	0.0003	0.0553
M4613B – Top Coat Paint Booth 2B	0.0359	0.0003	0.0553
M4616 – Top Coat Flash Tunnel	0.0256	0.0021	0.3372
M4617 – Main Spray Paint Cure Oven	0.0059	0.0005	0.0785
M4619A – 2nd Pass Paint Booth 1A	0.0063	0.0003	0.0562
M4619B – 2nd Pass Paint Booth 1B	0.0063	0.0003	0.0562
M4620A – 2nd Pass Paint Booth 2A	0.0063	0.0003	0.0562
M4620B – 2nd Pass Paint Booth 2B	0.0063	0.0003	0.0562
M4621A – 2nd Pass Paint Booth 3A	0.0063	0.0003	0.0562
M4621B – 2nd Pass Paint Booth 3B	0.0063	0.0003	0.0562
M4622 – 2nd Pass Spray Paint Cure Oven	0.0037	0.0002	0.0491
Facility Total	**4.7596**	**17.4277**	**18.7373**

* Stacks exist prior to PM_{10} and SO_2 baseline dates. Since modifications (resulting in emissions increases) have been made to test cells BM201, BM202, and BM203 since the baseline date was set, the entire current source emissions are conservatively modeled by the facility for simplicity.

STANDARD NO. 8 – TOXIC AIR POLLUTANTS LEVEL I DE MINIMIS ANALYSIS				
POLLUTANT	**CAS NUMBER**	**EMISSION RATE (LBS/DAY)**	**DE MINIMIS (LBS/DAY)**	**PASS (Y or N)**
Benzene	71-43-2	0.1505	1.800	Y
Ethylbenzene	100-41-4	6.1482	52.200	Y
Glycol Ethers	+	34.8478	+	Y
Manganese Compounds	+	0.0423	0.300	Y
Methanol	67-56-1	1.85E-03	15.720	Y
Methyl Isobutyl Ketone	108-10-1	0.2525	24.600	Y
Toluene	108-88-3	18.6580	52.200	Y
Xylene	1330-20-7	33.7505	52.200	Y

<DATE>

Caterpillar Inc.
107 Southchase Blvd
Fountain Inn SC 29644

ATTENTION: Misty Taylor

Dear Ms Taylor:

Enclosed is Synthetic Minor Construction Permit No. 1200-0264CW. Please note the conditions on this permit by reading it carefully. Pursuant to the South Carolina Administrative Procedures Act, this permit decision may be appealed in accordance with applicable state law. Please see the enclosed Notice of Appeal Procedure, effective July 01, 2006, for guidelines on appeal submittals.

In addition to this permit to construct, a permit to operate is required in accordance with the Air Pollution Control Regulations and Standards for the State of South Carolina. The regulations require a written request for a new or revised operating permit to cover any new, or altered source, postmarked no later than fifteen (15) days after the actual date of initial startup of each new or altered source unless a more stringent time frame is required.

Please examine this new permit carefully for errors or omissions and notify the appropriate staff member, Michael G. Daugherty, (803-898-4315) or e-mail at daughemg@dhec.sc.gov promptly if any are discovered.

Sincerely,

Elizabeth J. Basil, Director
Engineering Services Division
Bureau of Air Quality

EJB:MGD:<TYPIST'S INITIALS>

Enclosures

cc: William Williamson, Region 2, Greenville EQC Office
Margaret Sembos Kestrel Horizons, LLC, 1876 Wallenberg Blvd Charleston SC 29407
Permit File: CM 1200-0264CW
Main File: CM 1200-0264CW

Notice of Appeal Procedure

The following procedures are in effect beginning July 1, 2006, pursuant to 2006 Act No. 387:

1. This decision of the S.C. Department of Health and Environmental Control (Department) becomes the final agency decision 15 days after notice of the decision has been mailed to the applicant or respondent, unless a written request for final review is filed with the Department by the applicant, permittee, licensee, or affected person.

2. An applicant, permittee, licensee, or affected person who wishes to appeal this decision must file a written request for final review with the Clerk of the Board at the following address or by facsimile at 803-898-3393.

   Clerk of the Board
   SC DHEC
   2600 Bull Street
   Columbia, SC 29201

3. The request for final review should include the following:
   a. the grounds on which the Department's decision is challenged and the specific changes sought in the decision
   b. a statement of any significant issues or factors the Board should consider in deciding how to handle the matter
   c. a copy of the Department's decision or action under review

4. In order to be timely, a request for final review must be received by the Clerk of the Board within 15 days after notice of the decision has been mailed to the applicant or respondent. If the 15th day occurs on a weekend or State holiday, the request is due to be received by the Clerk of the Board on the next working day. The request for final review must be received by the Clerk of the Board by 5:00 p.m. on the date it is due.

5. If a timely request for final review is filed with the Clerk of the Board, the Clerk will provide additional information regarding procedures.

6. The Board of Health and Environmental Control has 60 days from the date of receipt of a request for final review to conduct a final review conference. The conference may be conducted by the Board, its designee, or a committee of three members of the Board appointed by the chair.

7. If a final review conference is not conducted within 60 days, the Department decision becomes the final agency decision, and a party may request a contested case hearing before the Administrative Law Court within 30 days after the deadline for the final review conference.

The above information is provided as a courtesy; parties are responsible for complying with all applicable legal requirements.