

**NORTH CAROLINA DIVISION OF  
AIR QUALITY**

**Air Permit Review**

**Permit Issue Date:**

**Region:** Wilmington Regional Office  
**County:** Onslow  
**NC Facility ID:** 6700011  
**Inspector's Name:** Ashby Armistead  
**Date of Last Inspection:** 09/23/2009  
**Compliance Code:** 3 / Compliance - inspection

|   |   |   |  |
|---|---|---|--|
| <b>Facility Data</b>  |   |   | <b>Permit Applicability (this application only)</b>  |
| <b>Applicant (Facility's Name):</b> Camp Lejeune Marine Corp Base<br><br><b>Facility Address:</b><br>Camp Lejeune Marine Corp Base<br>1<br>Camp Lejeune, NC 28542<br><br><b>SIC:</b> 9711 / National Security<br><b>NAICS:</b> 92811 / National Security<br><br><b>Facility Classification: Before:</b> Title V <b>After:</b> Title V<br><b>Fee Classification: Before:</b> Title V <b>After:</b> Title V |   |   | <b>SIP:</b><br><b>NSPS:</b><br><b>NESHAP:</b><br><b>PSD:</b><br><b>PSD Avoidance:</b><br><b>NC Toxics:</b><br><b>112(r):</b><br><b>Other:</b> 2Q .0501(c)(2) PART II application   |
| <b>Contact Data</b>   |   |   | <b>Application Data</b>  |
| <b>Facility Contact</b>   | <b>Authorized Contact</b>   | <b>Technical Contact</b>  | <b>Application Number:</b> 6700011.10A<br><b>Date Received:</b> 03/09/2010<br><b>Application Type:</b> Modification<br><b>Application Schedule:</b> TV-Significant<br><b>Existing Permit Data</b><br><b>Existing Permit Number:</b> 06591/T21<br><b>Existing Permit Issue Date:</b> 11/05/2009<br><b>Existing Permit Expiration Date:</b> 02/28/2014 |
| Lisa Gideon<br>I&E/EMD/EQB Contact<br>(910) 451-5836<br>PSC Box 20004<br>Camp Lejeune, NC<br>28542+0004   | John Townson<br>Director - Environmental<br>Management<br>(910) 451-5003<br>P O Box 20004<br>Camp Lejeune, NC<br>28542+0004 | Lisa Gideon<br>I&E/EMD/EQB Contact<br>(910) 451-5836<br>PSC Box 20004<br>Camp Lejeune, NC<br>28542+0004                         |  |
| <b>Review Engineer:</b> Joseph Voelker<br><br><b>Review Engineer's Signature:</b> _____ <b>Date:</b> _____  |   | <b>Comments / Recommendations:</b><br>Issue 06591/T22<br><b>Permit Issue Date:</b><br><b>Permit Expiration Date:</b> 02/28/2014 |  |

**I. Introduction**

Camp Lejeune Marine Corp Base (MCBCL) is located in Onslow County.

In a permit application submitted on April 13, 2009, assigned application no. **6200061.09B**, the Permittee proposed to construct facilities, with various air emission sources, in support of the Marine Corps Forces Special Operations Command (MARSOC). The application also included the modifications of several existing sources. Most of these sources are insignificant as defined under 02Q.0508.

The application was processed as a significant modification; in this case pursuant to 2Q .0501(c)(2) which allows:

*(2) a construction and operation permit following the procedures under Rule .0504 and filing a complete application within 12 months after commencing operation to modify the construction and operation permit to meet the requirements of this Section.*

The procedures under 2Q 0504 allow a permit to be issued per the procedures under Section .0300 of this Subchapter (State Permitting Rules)[known as a 2Q.0501(c)(2) PART I application]. The permittee shall have one year from the date of beginning

operation of the facility or source to file an amended application [known as a 2Q.0501(c)(2) PART II application] following the procedures of this Section (2Q.0500, Title V Procedures). Permit T21 was issued on November 5, 2009 as a result of this permitting action.

This application, application no. **6700011.10A**, is considered the PART II application and will be processed under the 2Q .0500 TV permitting rules.

Since the issuance of permit T21, only a few changes have been made at the facility. Thus, the permit review conducted at that time is still valid and will be included as Attachment A to this review.

Those changes that were made since that time are primarily administrative in nature and will be discussed in Section III below.

## II. Chronology

| Date              | Description  |
|-------------------|--|
| April 13, 2009    | “Part I Application” received in the RCO and assigned app. no. .09B  |
| November 5, 2009  | Permit T21 issued as a result of permit app. no. 09B   |
| December 7, 2009  | Permit application received in the RCO and assigned app. no. .09E. Upon further review, the changes proposed in the application were administrative in nature and did not require the permit to be opened. |
| February 20, 2010 | Mr. Voelker sent the facility contact an email stating that the DAQ cannot issue refunds, the Permittee may append app no. 09E and process the PART II application required by permit no. T21.             |
| March 9, 2010     | Part II application received in the RCO and assigned application no. .10A. Application no. 09E consolidated into permit application no. 10A.   |

## III. Project description

Since the issuance of permit T21, only a few changes have been made at the facility. Thus, the permit review conducted at that time is still valid and will be included as Attachment A to this review.

The changes that have been made since that time are as follows:

### A. Boiler Replacement at Paradise Point

The Permittee would like to replace the following two boilers

| Emission Source              | Source Description  | Control Device | Control Device Description |
|------------------------------|---|----------------|----------------------------|
| A-PP-2615-09<br>A-PP-2615-10 | Two No. 2 fuel oil/natural gas-fired boilers (16.5 and 17.5 million Btu per hour heat input capacity respectively), Building PP-2651, located at Paradise Point | None           | None                       |

with two smaller boilers

| Emission Source                | Source Description   | Control Device | Control Device Description |
|--------------------------------|--|----------------|----------------------------|
| A-PP-2615-09B<br>A-PP-2615-10B | Two natural gas-fired boilers (1.261 million Btu per hour heat input capacity each), Building PP-2615, located at Paradise Point | None           | None                       |

### B. Two new small combustion sources

The Permittee would also like to add the following emission sources:

| Emission Source | Source Description | Control Device | Control Device Description |
|-----------------|--------------------|----------------|----------------------------|
|-----------------|--------------------|----------------|----------------------------|

| Emission Source | Source Description   | Control Device | Control Device Description |
|-----------------|--|----------------|----------------------------|
| A-PP-2615-11    | One natural gas-fired water heater (2.01 million Btu per hour heat input capacity) | None           | None                       |
| A-PP-2617-01    | One natural gas-fired boiler (0.99 million Btu per hour heat input capacity)       | None           | None                       |

This is fairly straightforward modification. No new regulations will apply. Note that all four of these natural gas-fired combustion sources these qualify as insignificant activities under TV permitting rules 15ANCAC 02Q .0508(8)

*(8) "Insignificant activities because of size or production rate" means any activity whose emissions would not violate any applicable emissions standard and whose potential emission of particulate, sulfur dioxide, nitrogen oxides, volatile organic compounds, and carbon monoxide before air pollution control devices, i.e., potential uncontrolled emissions, are each no more than five tons per year and whose potential emissions of hazardous air pollutants before air pollution control devices, are each below 1000 pounds per year.*

In short, all four sources simply need to be added to the insignificant activities list and the two existing boilers removed from the air permit.

No further review is necessary.

#### IV. Regulatory review

See attachment A for regulatory review for PART II application. No regulatory review is necessary for the insignificant sources discussed in Section III above.

See Section VI for changes to the General Conditions section of the air permit.

#### V. Facility-wide regulatory considerations

See Attachment A for regulatory review.

#### VI. Changes to Existing Air Permit

| Existing Condition No.        | Revised Condition No. | Changes   |
|-------------------------------|-----------------------|---|
| Cover letter                  | NA                    | Removed Part II submittal requirement language  |
| Insignificant Activities List | NA                    | <ul style="list-style-type: none"> <li>Added the following sources:<br/>I-A-PP-2615-09B<br/>I-A-PP-2615-10B<br/>I-A-PP-2615-11<br/>I-A-PP-2617-01</li> <li>Revised layout per Permittees' request</li> <li>Removed the emergency generator (ID no. I-C-AS-3625-03) and replaced it with new emergency generator (ID No. I-C-AS-3625-03A). This generator will be subject to NSPS Subpart IIII and MACT ZZZZ. Subpart ZZZZ simply requires compliance with Subpart IIII. The IIII requirements are similar to the "permitted" emergency generator (ID No. C-RR-440-01).</li> </ul> |
| Equipment list                | NA                    | <ul style="list-style-type: none"> <li>Removed the following sources, A-PP-2615-09 and A-PP-2615-10</li> </ul>  |
| Section 2.1.J.                | Section 2.1.J         | <ul style="list-style-type: none"> <li>Removed all conditions as this section solely addressed the removed boilers A-PP-2615-09 and A-PP-2615-10</li> <li>Section 2.1.J. will remain as RESERVED to preserve the existing numbering system for the subsequent permit conditions.</li> </ul>   |

| Existing Condition No. | Revised Condition No. | Changes   |
|------------------------|-----------------------|---|
| General Conditions     | NA                    | <p>Revised to be consistent with the current revision 3.1. [This permit has some unique general conditions given it is a military facility] The significant changes are as follows:</p> <ul style="list-style-type: none"> <li>▪ Condition BB-Regulation citation correction – no substantive changes</li> <li>▪ Condition NN - Regulation citation addition – no substantive changes</li> <li>Condition OO – Addition of green house gas reporting condition a federally enforceable only condition</li> </ul> |

**VII. Compliance History**

The DAQ has reviewed the compliance status of this facility. On its latest inspection, performed on 07/30/2009, by Mr. Ashby Armistead, of the Wilmington Regional Office, the facility appeared to be in compliance with all applicable requirements.

**VIII. Public Notice**

TBD

**IX. Comments and Conclusions**

TBD

**X. Recommendations**

TBD

**Attachment A**  
**Permit Review for Permit T21**

**NORTH CAROLINA DIVISION OF  
AIR QUALITY**

**Air Permit Review**

**Permit Issue Date: November 5, 2009**

**Region:** Wilmington Regional Office  
**County:** Onslow  
**NC Facility ID:** 6700011  
**Inspector's Name:** Ashby Armistead  
**Date of Last Inspection:** 07/30/2009  
**Compliance Code:** 3 / Compliance - inspection

|   |   |  |   |
|---|---|--|---|
| <b>Facility Data</b>  |   |  | <b>Permit Applicability (this application only)</b>   |
| <b>Applicant (Facility's Name):</b> Camp Lejeune Marine Corp Base<br><br><b>Facility Address:</b><br>Camp Lejeune Marine Corp Base<br>1<br>Camp Lejeune, NC 28542<br><br><b>SIC:</b> 9711 / National Security<br><b>NAICS:</b> 92811 / National Security<br><br><b>Facility Classification: Before:</b> Title V <b>After:</b> Title V<br><b>Fee Classification: Before:</b> Title V <b>After:</b> Title V |   |  | <b>SIP:</b><br><b>NSPS:</b><br><b>NESHAP:</b><br><b>PSD:</b><br><b>PSD Avoidance:</b><br><b>NC Toxics:</b><br><b>112(r):</b><br><b>Other:</b>   |
| <b>Contact Data</b>   |   |  | <b>Application Data</b>   |
| <b>Facility Contact</b>   | <b>Authorized Contact</b>   | <b>Technical Contact</b>   | <b>Application Number:</b> 6700011.09B<br><b>Date Received:</b> 04/13/2009<br><b>Application Type:</b> Modification<br><b>Application Schedule:</b> TV-Sign-501(c)(2)<br><b>Existing Permit Data</b><br><b>Existing Permit Number:</b> 06591/T20<br><b>Existing Permit Issue Date:</b> 07/17/2009<br><b>Existing Permit Expiration Date:</b> 02/28/2014 |
| Erin Atkins<br>Air Quality Engineer<br>(910) 451-9641<br>PSC Box 20004<br>Camp Lejeune, NC<br>28542+0004  | John Townson<br>Director - Environmental<br>Management<br>(910) 451-5003<br>P O Box 20004<br>Camp Lejeune, NC<br>28542+0004 | Erin Atkins<br>Air Quality Engineer<br>(910) 451-9641<br>PSC Box 20004<br>Camp Lejeune, NC<br>28542+0004   |   |
| <b>Review Engineer:</b> Joseph Voelker<br><br><b>Review Engineer's Signature:</b> _____ <b>Date:</b> November 5, 2009   |   | <b>Comments / Recommendations:</b>   |   |
|   |   | <b>Issue</b> 06591/T21<br><b>Permit Issue Date:</b> 11/5/2009<br><b>Permit Expiration Date:</b> 02/28/2014 |   |

**I. Introduction**

Camp Lejeune Marine Corp Base (MCBCL) is located in Onslow County.

The Permittee proposes to construct facilities, with various air emission sources, in support of the Marine Corps Forces Special Operations Command (MARSOC). The application also includes the modifications of several existing source. Most of these sources are insignificant as defined under 02Q.0508.

Also, on September 21, 2009 the Permittee requested via email that the 2D .0521 condition be revised to incorporate the COMs that are used in the CAM condition. After discussion, it was decided that the COMS would be removed from service since they are not required by any regulations and hence the request became a request to remove the COMS from the CAM condition.

This modification project had been requested to be processed as a minor modification per 15A NCAC 02Q .0515 MINOR PERMIT MODIFICATIONS. However, given that a PSD avoidance condition is being requested, the application must be processed as a significant modification, in this case pursuant to 2Q .0501(c)(2) and 2Q 0504.

## II. Chronology

| Date       | Description   |
|------------|---|
| 04/13/2009 | Application received in the RCO.  |
| 05/01/2009 | ADD INFO letter sent via email  |
| 05/11/2009 | JMV sent an email to Erin Atkins asking for additional information to justify that the applications 09A, 09B and 9C are independent for purposes of PSD applicability.  |
| 05/12/2009 | Additional information requested on 05/01/2009 received via email.  |
| 06/09/2009 | Meeting between the DAQ (JMV, William Willets, Booker Pullen and Don van der Vaart) and CL (Erin Atkins) and URS (Amy Marshall) occurred in which among, other things, the issue raised in the 05/11/2009 email was discussed. Upon further discussion, it was decided that the projects would be considered independent if they would submit additional clarifying justification. The issue of the the COMs utilized in the existing CAM plan for the coal-fired boilers was discussed. It was decided that since the COMs are not required by any rule ( they are not NSPS affected) then the COMS could be removed from service and from the CAM condition. Otherwise, the 2D .0521 (visible emissions condition) needed to be modified to account for the COMs. At the end of the meeting , MCBCL was undecided.  |
| 09/04/2009 | ADD INFO requesting for modeling tables to revise the air permit 2D .1100 condition   |
| 09/04/2009 | INFO requested on 09/04/2009 was received via email   |
| 09/09/2009 | ADD INFO requesting why 2D .0521 does not apply to the engine test stands   |
| 09/14/2009 | <p>Permittee responded to the 09/09/2009 inquiry with the following:</p> <p><i>Engine test stands/tanks are used aboard MCBCL for maintenance and preventative maintenance purposes.</i></p> <p><i>The two engine testing operations in RR-430 are engine test tanks for boat motors. My apologies, there are two other engine test tanks (B-A-69-01 &amp; A-FC-143-01) included in the permit application as well. The test tank itself is considered to be the control device with these operations.</i></p> <p><i>The remaining engine testing operations listed in the permit application are engine test stands. These test stands are on wheels and can be moved around within the assigned compound or taken to outlying range areas on the facility, as the unit needs. Therefore, controls are infeasible for these engine test stands.</i></p> <p>This response was not deemed satisfactory to address 2D.0521 applicability for Engine Test Tanks A-FC-143-01, B-A-A69-01, C-RR-430-01, and C-RR-430-02.</p> |
| 09/21/2009 | Email received requesting that the 2D.0521 condition be revised to incorporate the COMs addressed in the existing CAM condition.  |
| 09/29/2009 | ADD INFO requesting if MCBCL would like to keep the COMS and revise the 2D.0521 condition or remove the COMs and revise the CAM condition   |
| 10/07/2009 | INFO received via email with suggested CAM language to remove the COMs.   |
| 10/23/2009 | Draft sent to Permittee for review  |
| 10/27/2009 | <p>Permittee responded with the following comments:</p> <p><i>(3) Engine Test Tanks A-FC-143-01, B-A-A69-01, C-RR-430-01, and C-RR-430-02: Do not believe that these engine test tanks should have weekly visible emissions observation requirement. Previously permitted engine test tanks do not have similar requirement.</i></p>  |

| Date       | Description  |
|------------|--|
| 10/29/2009 | JMV requested ADD INFO again why the four test tanks were not subject to 2D.0521   |
| 11/3/2009  | Permittee supplied additional information as to why 2D .0521 did not apply to the following sources:<br>(1) A-FC-143-01: This engine test tank is outside; therefore, the addition of controls is infeasible.<br>(2) B-A-A69-01: This test tank is used infrequently; therefore, the cost to design and construct additional controls is infeasible.<br>(3) C-RR-430-01 and C-RR-430-02: These engine test tanks will be used infrequently; therefore, the cost to design and construct additional controls is infeasible. |

### III. Project description

1. The modification involves the addition of the following sources to the permit:

| Emission Source | Source Description   | Control Device | Control Device Description |
|-----------------|--|----------------|----------------------------|
| C-RR-430-01     | Gasoline-fired Stationary Internal Combustion Engine (55 HP) | N/A            | N/A                        |
| C-RR-430-02     | Gasoline-fired Stationary Internal Combustion Engine (55 HP) | N/A            | N/A                        |
| C-RR-400-05     | Diesel-fired Emergency Generator (1675 HP/1250 kW)           | N/A            | N/A                        |
| C-RR-405-01     | Diesel-fired Emergency Generator (2144 HP/1600 kW)           | N/A            | N/A                        |
| C-RR-430-05     | Diesel-fired Emergency Generator (804 HP/600 kW)             | N/A            | N/A                        |
| C-RR-425-01     | Diesel-fired Emergency Generator (1675 HP/1250 kW)           | N/A            | N/A                        |
| C-RR-440-01     | Diesel-fired Emergency Generator (268 HP/200 kW)             | N/A            | N/A                        |
| C-RR-134-01     | Diesel-fired Emergency Generator (536 HP/400 kW)             | N/A            | N/A                        |
| C-SRR-470-01    | Diesel-fired Emergency Generator (536 HP/400 kW)             | N/A            | N/A                        |
| A-MP-107-11     | JP8 Fuel-fired Engine Test Stand (150 HP)                    | N/A            | N/A                        |
| A-MP-107-12     | JP8 Fuel-fired Engine Test Stand (425 HP)                    | N/A            | N/A                        |
| A-FC-365-02     | JP8 Fuel-fired Engine Test Stand (300 HP)                    | N/A            | N/A                        |
| A-HP-1854-11    | JP8 Fuel-fired Engine Test Stand (1500 HP)                   | N/A            | N/A                        |
| B-A-A47-05      | JP8 Fuel-fired Engine Test Stand (525 HP)                    | N/A            | N/A                        |
| A-FC-143-01     | Gasoline-fired Engine Test Stand (125 HP)                    | N/A            | N/A                        |
| B-A-A69-01      | JP8 Fuel-fired Engine Test Stand (90 HP)                     | N/A            | N/A                        |

2. The modification involves the modification of the description of following existing sources:

| Emission Source                           | Source Description   | Control Device | Control Device Description |
|---|--|----------------|----------------------------|
| C-AS-4141-01<br>MACT,<br>Subpart<br>GGGGG | JP-5 Line Area at MCAS, New River, Aggressive Fluid Vapor Recovery | N/A            | N/A                        |

3. The modification involves removing the Lime storage silo (I-C-AS-110-01) from the insignificant list

4. The modification request included changing the descriptors of the following sources:

| Emission Source | Requested Change       |
|-----------------|------------------------|
| M119            | Change from UST to AST |
| STP44602        | Change from UST to AST |
| NH11801         | Change from UST to AST |

However, these sources are not on the insignificant list or the permitted equipment list. They however appear in the toxics (2D.1100 condition). Sources subject to 2D.1100 should be listed on the permitted equipment list per current DAQ policy for sources subject to 2D.1100.

It is recognized however, that the nature of the MCBCL permit is such that the bookkeeping of the numerous relatively small emitting sources is a somewhat daunting task.

To this end, no explicit changes will be made to the permit. These changes from UST to AST will be made in the complete revision of the 2D.1100 condition. See Section V for facility-wide 2D.1100 discussion.

**5. The Permittee would like to remove the COMs from the current CAM condition.**

Opacity monitors (COMs) are utilized on the four coal fired boilers (ID Nos. A-HP-1700-01, 02, 03, and 04). These COMs are not require by any rule. The current CAM condition however has incorporated them. MCBCL discussed this situation with the DAQ and it was decided the permit needed to be corrected. That is, remove the COMs from operation and remove them from CAM, or, leave the COMS operational and strengthen the 2D .0521 condition to incorporate the COMs. After discussions, MCBCL decided to plan on dismantling the COMs and removed them from the CAM plan.

MCBCL suggested a CAM plan that would essentially be identical to the monitoring performed for 2D.0521 compliance (the DAQ standard “visible emissions above normal” approach). But instead of once per day, the procedure will be done once per shift (three times per day). The DAQ deems this acceptable. No additional review is necessary.

**IV. Regulatory review**

**A. Two new test stations for as-installed boat motors**

Two new IC engines will appear in the permit as follows:

| <b>Emission Source</b> | <b>Source Description</b>   | <b>Control Device</b> | <b>Control Device Description</b> |
|------------------------|---|-----------------------|-----------------------------------|
| C-RR-430-01            | Test Station for As-installed Boat Outboard Gasoline-fired Internal Combustion Engine not to exceed 55 HP | N/A                   | N/A                               |
| C-RR-430-02            | Test Station for As-installed Boat Outboard Gasoline-fired Internal Combustion Engine not to exceed 55 HP | N/A                   | N/A                               |

The Permittee request to permit two new “test tanks” or test stations. These stations will test outboard boat motors in their “as-installed” configurations. That is, the boat motor will be removed but the engine will remain intact. Thus, no single engine is permitted, but rather the location where the various outboard boat motors are to be tested. The Permittee selected the largest engine size to be tested (55 HP) for purposes of regulatory applicability and emissions estimation.

The permittee expects to operate each unit for 90 hours per year is requesting an annual operation restriction of 180 hours of operation for each unit. It will be shown this was done for PSD avoidance purposes elsewhere in this review. The following is a summary of the criteria pollutant emissions.

| Pollutant     | Each Engine                          |                                  |                                 | Both Engines                    |
|---------------|--------------------------------------|----------------------------------|---------------------------------|---------------------------------|
|               | Expected Actual Emissions @ 90 hr/yr | Potential Emissions @ 8760 hr/yr | Potential Emissions @ 180 hr/yr | Potential Emissions @ 180 hr/yr |
|               | tpy                                  | tpy                              | tpy                             | tpy                             |
| PM/PM10/PM2.5 | 0.00                                 | 0.17                             | 0.00                            | 0.01                            |
| SO2           | 0.00                                 | 0.14                             | 0.00                            | 0.01                            |
| NOx           | 0.03                                 | 2.65                             | 0.05                            | 0.11                            |
| CO            | 1.09                                 | 105.76                           | 2.17                            | 4.35                            |
| VOC           | 0.05                                 | 5.20                             | 0.11                            | 0.21                            |

Note that for these gasoline fired IC engines, CO is the largest contributing pollutant by far.

## **15A NCAC 2D .1111 MAXIMUM ACHIEVEABLE CONTROL TECHNOLOGY**

### **Subpart P P P P P—National Emission Standards for Hazardous Air Pollutants for Engine Test Cells/Stands**

This subpart P P P P P (MACT 5P) establishes national emission standards for hazardous air pollutants (NESHAP) for engine test cells/stands located at major sources of hazardous air pollutants (HAP) emissions. Four purposes of applicability for this rule, these two test stations are “new engine test cells/stands.”

#### **§ 63.9285 Am I subject to this subpart?**

You are subject to this subpart if you own or operate an engine test cell/stand that is located at a major source of HAP emissions.

(a) An engine test cell/stand is any apparatus used for testing uninstalled stationary or uninstalled mobile (motive) engines.

(b) An uninstalled engine is an engine that is not installed in, or an integrated part of, the final product.

(c) A major source of HAP emissions is a plant site that emits or has the potential to emit any single HAP at a rate of 10 tons (9.07 megagrams) or more per year or any combination of HAP at a rate of 25 tons (22.68 megagrams) or more per year

Since these test stations are not testing uninstalled engines, MACT 5P and hence 2D .1111 does not apply to these sources.

## **15A NCAC 2D .0524: NEW SOURCE PERFORMANCE STANDARDS**

### **Subpart J J J J—Standards of Performance for Stationary Spark Ignition Internal Combustion Engines**

#### **§ 60.4230 Am I subject to this subpart?**

*(a) The provisions of this subpart are applicable to manufacturers, owners, and operators of stationary spark ignition (SI) internal combustion engines (ICE) as specified in paragraphs (a)(1) through (5) of this section. For the purposes of this subpart, the date that construction commences is the date the engine is ordered by the owner or operator.*

Subpart J J J J is the only potentially applicable NSPS, given these are spark ignition engines which are to be tested. Note however, that this NSPS applies to engines not test stands. Thus, NSPS Subpart J J J J and hence 2D.0524, do not apply to these sources.

## **15A NCAC 2D .0516: SULFUR DIOXIDE EMISSIONS FROM COMBUSTION SOURCES**

The allowable emission rate under 2D.0516 is 2.3 lb SO<sub>2</sub>/mmBtu. The AP-42 emission factor for SO<sub>x</sub> emissions from gasoline combustion is 0.84 lb/mmBtu. It is unknown what the sulfur content of the fuel was that was used to generate this emission factor. However, AP-42 was last revised in 10/96 and since then the sulfur content of commercially available gasoline has dropped significantly. Compliance is expected with this regulation. Given the low sulfur content of currently available gasoline there is no need for M/R/R to be placed into the permit.

## **15A NCAC 2D .0521: CONTROL OF VISIBLE EMISSIONS**

*(a) Purpose. The intent of this Rule is to prevent, abate and control emissions generated from fuel burning operations and industrial processes where an emission can reasonably be expected to occur, except during startup, shutdowns, and malfunctions approved according to procedures set out in Rule .0535 of this Section.*

*(b) Scope. This Rule shall apply to all fuel burning sources and to other processes that may have a visible emission. However, sources subject to a visible emission standard in Rules .0506, .0508, .0524, .0543, .0544, .1110, .1111, .1205, .1206, .1210, .1211, or .1212 of this Subchapter shall meet that standard instead of the standard contained in this Rule.*

*This Rule does not apply to engine maintenance, rebuild, and testing activities where controls are infeasible, except it does apply to the testing of peak shaving and emergency generators. (In deciding if controls are infeasible, the Director shall consider emissions, capital cost of compliance, annual incremental compliance cost, and environmental and health impacts.)*

The Permittee supplied information suggesting that controls are infeasible, thus this regulation does not apply.

## **15A NCAC 2Q. 0317: AVOIDANCE CONDITIONS for 15A NCAC 2D. 0530: PREVENTION OF SIGNIFICANT DETERIORATION**

See multiple source regulatory review section.



**B. Add 7 emergency generators to support the MARSOC at the Rifle Range (RR)**

The Permittee would like to permit the following emergency generators to be located at various locations at the Rifle Range (RR).

| <b>Emission Source</b> | <b>Source Description</b>   | <b>Control Device</b> | <b>Control Device Description</b> |
|------------------------|---|-----------------------|-----------------------------------|
| C-RR-400-05            | Diesel-fired Emergency Generator (1675 HP/1250 kW) [MACT Subpart ZZZZ, NSPS Subpart IIII] | N/A                   | N/A                               |
| C-RR-405-01            | Diesel-fired Emergency Generator (2144 HP/1600 kW) [MACT Subpart ZZZZ, NSPS Subpart IIII] | N/A                   | N/A                               |
| C-RR-430-05            | Diesel-fired Emergency Generator (804 HP/600 kW) [MACT Subpart ZZZZ, NSPS Subpart IIII]   | N/A                   | N/A                               |
| C-RR-425-01            | Diesel-fired Emergency Generator (1675 HP/1250 kW) [MACT Subpart ZZZZ, NSPS Subpart IIII] | N/A                   | N/A                               |
| C-RR-440-01            | Diesel-fired Emergency Generator (268 HP/200 kW) [MACT Subpart ZZZZ, NSPS Subpart IIII]   | N/A                   | N/A                               |
| C-RR-134-01            | Diesel-fired Emergency Generator (536 HP/400 kW) [MACT Subpart ZZZZ, NSPS Subpart IIII]   | N/A                   | N/A                               |
| C-SRR-470-01           | Diesel-fired Emergency Generator (536 HP/400 kW) [MACT Subpart ZZZZ, NSPS Subpart IIII]   | N/A                   | N/A                               |

The Permittee supplied emissions estimates for all seven emergency generators operating at 350 hour per year each. This will be shown to be necessary for PSD avoidance elsewhere in the review.

| Pollutant     | Potential Emissions @ 350 hr/yr per engine |
|---------------|--|
|               | tpy  |
| PM/PM10/PM2.5 | 1.39                                       |
| SO2           | 5.43                                       |
| NOx           | 37.07                                      |
| CO            | 8.35                                       |
| VOC           | 1.39                                       |

**15A NCAC 2D .0516: SULFUR DIOXIDE EMISSIONS FROM COMBUSTION SOURCES**

Per the regulation,

*(b) A source subject to an emission standard for sulfur dioxide in Rules .0524, .0527, .1110, .1111, .1205, .1206, or .1210 .1210, or .1211 of this Subchapter shall meet the standard in that particular rule instead of the standard in Paragraph (a) of this Rule.*

Thus the permittee will be required to comply with fuel standards in NSPS Subpart IIII, which limit the sulfur content of the fuel combusted.

As such, no 2D .0516 condition will be included in the permit.

**15A NCAC 2D .0521: CONTROL OF VISIBLE EMISSIONS**

The emergency generators will fire off-road diesel fuel, essentially equivalent to No.2 fuel oil. In general, the DAQ does not require monitoring recordkeeping and reporting with respect to visible emissions that burn No.2 fuel oil, natural gas or propane.

Given the compliance history with most emergency generators employed at CL, and other facilities as well, it is likely that this installation will maintain compliance with this regulation.

## 15A NCAC 2Q .0317: AVOIDANCE CONDITIONS for 15A NCAC 2D .0530: PREVENTION OF SIGNIFICANT DETERIORATION

See multiple source regulatory review section.

### 15A NCAC 2D .1111 MAXIMUM ACHIEVEABLE CONTROL TECHNOLOGY 40 CFR Part 63, Subpart ZZZZ—National Emissions Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines (RICE)

Subpart ZZZZ establishes national emission limitations and operating limitations for hazardous air pollutants (HAP) emitted from stationary reciprocating internal combustion engines (RICE) located at major and area sources of HAP emissions. This subpart also establishes requirements to demonstrate initial and continuous compliance with the emission limitations and operating limitations

#### § 63.6585 Am I subject to this subpart?

*You are subject to this subpart if you own or operate a stationary RICE at a major or area source of HAP emissions, except if the stationary RICE is being tested at a stationary RICE test cell/stand.*

*(a) A stationary RICE is any internal combustion engine which uses reciprocating motion to convert heat energy into mechanical work and which is not mobile. Stationary RICE differ from mobile RICE in that a stationary RICE is not a non-road engine as defined at 40 CFR 1068.30, and is not used to propel a motor vehicle or a vehicle used solely for competition.*

*(b) A major source of HAP emissions is a plant site that emits or has the potential to emit any single HAP at a rate of 10 tons (9.07 megagrams) or more per year or any combination of HAP at a rate of 25 tons (22.68 megagrams) or more per year, except that for oil and gas production facilities, a major source of HAP emissions is determined for each surface site.*

*(c) An area source of HAP emissions is a source that is not a major source.*

*(d) If you are an owner or operator of an area source subject to this subpart, your status as an entity subject to a standard or other requirements under this subpart does not subject you to the obligation to obtain a permit under 40 CFR part 70 or 71, provided you are not required to obtain a permit under 40 CFR 70.3(a) or 40 CFR 71.3(a) for a reason other than your status as an area source under this subpart. Notwithstanding the previous sentence, you must continue to comply with the provisions of this subpart as applicable.*

*(e) If you are an owner or operator of a stationary RICE used for national security purposes, you may be eligible to request an exemption from the requirements of this subpart as described in 40 CFR part 1068, subpart C.*

Thus these generators are subject to Subpart ZZZZ. The facility has not requested an exemption per (e).

#### § 63.6590 What parts of my plant does this subpart cover?

*This subpart applies to each affected source.*

*(a) Affected source. An affected source is any existing, new, or reconstructed stationary RICE located at a major or area source of HAP emissions, excluding stationary RICE being tested at a stationary RICE test cell/stand.*

*(1) Existing stationary RICE.*

All these generators are new, thus (a)(1) does not apply

*(2) New stationary RICE. (i) A stationary RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions is new if you commenced construction of the stationary RICE on or after December 19, 2002.*

*(ii) A stationary RICE with a site rating of equal to or less than 500 brake HP located at a major source of HAP emissions is new if you commenced construction of the stationary RICE on or after June 12, 2006.*

*(iii) A stationary RICE located at an area source of HAP emissions is new if you commenced construction of the stationary RICE on or after June 12, 2006.*

Thus regardless of size, all seven generators are subject to Subpart ZZZZ.

(3) *Reconstructed stationary RICE.*

All these generators are new, thus (a)(1) does not apply

**(b) Stationary RICE subject to limited requirements.**

(1) *An affected source which meets either of the criteria in paragraph (b)(1)(i) through (ii) of this section does not have to meet the requirements of this subpart and of subpart A of this part except for the initial notification requirements of §63.6645(h).*

(i) *The stationary RICE is a new or reconstructed emergency stationary RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions; or*

(ii) *The stationary RICE is a new or reconstructed limited use stationary RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions.*

(2) *A new or reconstructed stationary RICE .....*

(3) *A stationary RICE which is an existing .....*

Six of the seven emergency generators (excluding C-RR-440-01) meet the requirements of condition (b)(1)(i), thus they are only subject to the initial notification requirements of **§63.6645(h)**.

**(c) Stationary RICE subject to Regulations under 40 CFR Part 60.** *An affected source that is a new or reconstructed stationary RICE located at an area source, or is a new or reconstructed stationary RICE located at a major source of HAP emissions and is a spark ignition 2 stroke lean burn (2SLB) stationary RICE with a site rating of less than 500 brake HP, a spark ignition 4 stroke lean burn (4SLB) stationary RICE with a site rating of less than 250 brake HP, or a 4 stroke rich burn (4SRB) stationary RICE with a site rating of less than or equal to 500 brake HP, a stationary RICE with a site rating of less than or equal to 500 brake HP which combusts landfill or digester gas equivalent to 10 percent or more of the gross heat input on an annual basis, **an emergency or limited use stationary RICE with a site rating of less than or equal to 500 brake HP**, or a compression ignition (CI) stationary RICE with a site rating of less than or equal to 500 brake HP,*

*must meet the requirements of this part by meeting the requirements of 40 CFR part 60 subpart IIII, for compression ignition engines or 40 CFR part 60 subpart JJJJ, for spark ignition engines. No further requirements apply for such engines under this part.*

*[69 FR 33506, June 15, 2004, as amended at 73 FR 3604, Jan. 18, 2008]*

Thus, the generator C-RR-440-01 must meet the requirements of 40 CFR60 Subpart IIII for compression ignition engines. See Subpart IIII discussion elsewhere in this review document.

**§ 63.6645 What notifications must I submit and when?**

*h) If you are required to conduct a performance test or other initial compliance demonstration as specified in Tables 4 and 5 to this subpart, you must submit a Notification of Compliance Status according to §63.9(h)(2)(ii).*

(1) *For each initial compliance demonstration required in Table 5 to this subpart that does not include a performance test, you must submit the Notification of Compliance Status before the close of business on the 30th day following the completion of the initial compliance demonstration.*

(2) *For each initial compliance demonstration required in Table 5 to this subpart that includes a performance test conducted according to the requirements in Table 3 to this subpart, you must submit the Notification of Compliance Status, including the performance test results, before the close of business on the 60th day following the completion of the performance test according to §63.10(d)(2).*

*[73 FR 3606, Jan. 18, 2008]*

Note that (h) above has nothing to do with the situation explicitly addressed in 40 CFR 63.6590(b)(1)(i). Instead of 63.6645(h), consider 63.6645(f), which states:

*f) If you are required to submit an Initial Notification but are otherwise not affected by the requirements of this subpart, in accordance with §63.6590(b), your notification should include the information in §63.9(b)(2)(i) through (v), and a statement that your stationary RICE has no additional requirements and explain the basis of the exclusion (for example, that it operates exclusively as an emergency stationary RICE if it has a site rating of more than 500 brake HP located at a major source of HAP emissions).*

In previous revisions of Subpart ZZZZ 63.6590(b) referred to 63.6645(d), which subsequently became (f). Thus, it seems EXTREMELY likely that the CURRENT condition 63.6645(f) is the CORRECT and INTENDED notification condition.

In summary, then

- The six “larger” emergency generators are affected sources under MACT Subpart ZZZZ and must simply meet the notification requirements in 63.6645(d) to satisfy the *requirements of 40 CFR 63 Subpart ZZZZ or Subpart A*.
- Generator C-RR-440-01 must meet the requirements of 40 CFR 60 Subpart IIII for compression ignition engines to satisfy compliance with *40 CFR 63 Subpart ZZZZ .and Subpart A*.

## **15A NCAC 2D .0524: NEW SOURCE PERFORMANCE STANDARDS**

These new generators are subject to **Subpart IIII—Standards of Performance for Stationary Compression Ignition Internal Combustion Engines**. Only the relevant conditions of the regulation will be discussed.

### **§ 60.4200 Am I subject to this subpart?**

Per 60.4200.a.2.i, the generator is subject because:

*(a) The provisions of this subpart are applicable to manufacturers, owners, and operators of stationary compression ignition (CI) internal combustion engines (ICE) as specified in paragraphs (a)(1) through (3) of this section. For the purposes of this subpart, the date that construction commences is the date the engine is ordered by the owner or operator.*

*(2) Owners and operators of stationary CI ICE that commence construction after July 11, 2005 where the stationary CI ICE are:*

*(i) Manufactured after April 1, 2006 and are not fire pump engines,*

The Permittee stated they will purchase only generators with a manufacture date of 2007 or later according to Form B.

### **§ 60.4205 What emission standards must I meet for emergency engines if I am an owner or operator of a stationary CI internal combustion engine?**

*(b) Owners and operators of 2007 model year and later emergency stationary CI ICE with a displacement of less than 30 liters per cylinder that are not fire pump engines must comply with the emission standards for new nonroad CI engines in §60.4202, for all pollutants, for the same model year and maximum engine power for their 2007 model year and later emergency stationary CI ICE.*

The units to be installed will have a displacement of less than 30 liters per cylinder (presumably based on power rating). Therefore the units will need to comply with the standards in **§60.4202**.

### **§ 60.4202 What emission standards must I meet for emergency engines if I am a stationary CI internal combustion engine manufacturer?**

(a) Stationary CI internal combustion engine manufacturers must certify their 2007 model year and later emergency stationary CI ICE with a maximum engine power less than or equal to 2,237 KW (3,000 HP) and a displacement of less than 10 liters per cylinder that are not fire pump engines to the emission standards specified in paragraphs (a)(1) through (2) of this section.

(b) Stationary CI internal combustion engine manufacturers must certify their 2007 model year and later emergency stationary CI ICE with a maximum engine power greater than 2,237 KW (3,000 HP) and a displacement of less than 10 liters per cylinder that are not fire pump engines to the emission standards specified in paragraphs (b)(1) through (2) of this section.

(c) Stationary CI internal combustion engine manufacturers must certify their 2007 model year and later emergency stationary CI ICE with a displacement of greater than or equal to 10 liters per cylinder and less than 30 liters per cylinder that are not fire pump engines to the certification emission standards for new marine CI engines in 40 CFR 94.8, as applicable, for all pollutants, for the same displacement and maximum engine power.

In other words, the emission standards that must be met will depend on size. Presumably, the installed units will have displacements less than 10 liters per cylinder (based on past experience). However, it will be ultimately shown that the Permittee as a matter of course will not be required to do testing to meet the standards.

**§ 60.4206 How long must I meet the emission standards if I am an owner or operator of a stationary CI internal combustion engine?**

*Owners and operators of stationary CI ICE must operate and maintain stationary CI ICE that achieve the emission standards as required in §§60.4204 and 60.4205 according to the manufacturer's written instructions or procedures developed by the owner or operator that are approved by the engine manufacturer, over the entire life of the engine.*

Thus the Permittee will have to meet the emissions limitations over the entire life of the emergency generator by simply “operate and maintain stationary the engine according to the manufacturer's written instructions or procedures developed by the owner or operator that are approved by the engine manufacturer, over the entire life of the engine.”

**§ 60.4207 What fuel requirements must I meet if I am an owner or operator of a stationary CI internal combustion engine subject to this subpart?**

(a) Beginning October 1, 2007, owners and operators of stationary CI ICE subject to this subpart that use diesel fuel must use diesel fuel that meets the requirements of 40 CFR 80.510(a).

(b) Beginning October 1, 2010, owners and operators of stationary CI ICE subject to this subpart with a displacement of less than 30 liters per cylinder that use diesel fuel must use diesel fuel that meets the requirements of 40 CFR 80.510(b) for nonroad diesel fuel.

40 CFR 80.510 is

**Subpart I—Motor Vehicle, Nonroad, Locomotive, and Marine Diesel Fuel**

**80.510 What are the standards and marker requirements for NRLM diesel fuel?**

Among other requirements this regulation limits the sulfur content of NRLM diesel fuel to 500 ppmv by 6/1/2007 per part (a) and to 15 ppmv by 10/1/2010 per part (b). This regulation primarily affects the supplier of the diesel fuel. 40 CFR 80.23 discusses the liability for such violations.

Since Camp Lejeune is not in the fuel manufacturing or blending business, it is highly unlikely there would be any compliance issues with this requirement.

**§ 60.4209 What are the monitoring requirements if I am an owner or operator of a stationary CI internal combustion engine?**

*If you are an owner or operator, you must meet the monitoring requirements of this section. In addition, you must also meet the monitoring requirements specified in §60.4211.*

*(a) If you are an owner or operator of an emergency stationary CI internal combustion engine, you must install a non-resettable hour meter prior to startup of the engine.*

*(b) If you are an owner or operator of a stationary CI internal combustion engine equipped with a diesel particulate filter to comply with the emission standards in §60.4204, the diesel particulate filter must be installed with a backpressure monitor that notifies the owner or operator when the high backpressure limit of the engine is approached.*

It is unclear whether or not the to-be-installed units will require a PM filter. The emission standards in 60.4204 do not apply (are for non-emergency engines), thus no PM backpressure monitoring requirement. A non-resettable hour meter will be required in the permit.

**§ 60.4211 What are my compliance requirements if I am an owner or operator of a stationary CI internal combustion engine?**

*(a) If you are an owner or operator and must comply with the emission standards specified in this subpart, you must operate and maintain the stationary CI internal combustion engine and control device according to the manufacturer's written instructions or procedures developed by the owner or operator that are approved by the engine manufacturer. In addition, owners and operators may only change those settings that are permitted by the manufacturer. You must also meet the requirements of 40 CFR parts 89, 94 and/or 1068, as they apply to you.*

Thus the Permittee will have to meet the emissions limitations over the entire life of the emergency generator by simply “operate and maintain stationary the engine according to the manufacturer's written instructions or procedures developed by the owner or operator that are approved by the engine manufacturer, over the entire life of the engine.”

*(c) If you are an owner or operator of a 2007 model year and later stationary CI internal combustion engine and must comply with the emission standards specified in §60.4204(b) or §60.4205(b), or if you are an owner or operator of a CI fire pump engine that is manufactured during or after the model year that applies to your fire pump engine power rating in table 3 to this subpart and must comply with the emission standards specified in §60.4205(c), you must comply by purchasing an engine certified to the emission standards in §60.4204(b), or §60.4205(b) or (c), as applicable, for the same model year and maximum (or in the case of fire pumps, NFPA nameplate) engine power. The engine must be installed and configured according to the manufacturer's specifications.*

The Permittee stated they will purchase generators, which will meet 60.4204(b).

*(e) Emergency stationary ICE may be operated for the purpose of maintenance checks and readiness testing, provided that the tests are recommended by Federal, State, or local government, the manufacturer, the vendor, or the insurance company associated with the engine. Maintenance checks and readiness testing of such units is limited to 100 hours per year. There is no time limit on the use of emergency stationary ICE in emergency situations. Anyone may petition the Administrator for approval of additional hours to be used for maintenance checks and readiness testing, but a petition is not required if the owner or operator maintains records indicating that Federal, State, or local standards require maintenance and testing of emergency ICE beyond 100 hours per year. For owners and operators of emergency engines meeting standards under §60.4205 but not §60.4204, any operation other than emergency operation, and maintenance and testing as permitted in this section, is prohibited.*

In other words the Permittee is allowed 100 hours per year of maintenance checks and readiness testing and although not limited in operating hours, the operation must be strictly for emergency operation. No compliance problems expected with this condition.

**§ 60.4214 What are my notification, reporting, and recordkeeping requirements if I am an owner or operator of a stationary CI internal combustion engine?**

*(b) If the stationary CI internal combustion engine is an emergency stationary internal combustion engine, the owner or operator is not required to submit an initial notification. Starting with the model years in table 5 to this subpart, if the emergency engine does not meet the standards applicable to non-emergency engines in the applicable model year, the owner or operator must keep records of the operation of the engine in emergency and non-emergency service that are recorded through the non-resettable hour meter. The owner must record the time of operation of the engine and the reason the engine was in operation during that time.*

Since the emergency engines are expected to be pre 2011 models (the earliest models indicated in Table 5) the Permittee will not have to meet that requirement. Although an initial notification is not required, the permit will contain a notification to include proof that the generators installed meet the specifications required in this NSPS. The content will be similar to that required in 40CFR 60.4214(a). This notification is considered a “gap filling” measure for Title V purposes (40CFR 70.6).

*(c) If the stationary CI internal combustion engine is equipped with a diesel particulate filter, the owner or operator must keep records of any corrective action taken after the backpressure monitor has notified the owner or operator that the high backpressure limit of the engine is approached.*

It is unclear whether or not the to-be-installed units will have a PM filter. However, the intent appears to be those with a PM filter and a backpressure monitor, which is only required for engines complying with 60.4204. Thus, no such recordkeeping condition will be placed into the permit to account for this possibility specifically.

However, although no recordkeeping and reporting is explicitly required per Subpart IIII, recordkeeping and reporting requirements pertaining to the maintenance requirements of 40 CFR 60.4206 and 40 CFR 60.4211(a) will be placed into the permit to make these requirements practically enforceable as allowed by 2Q 0508(f).

**§ 60.4218 What parts of the General Provisions apply to me?**

*Table 8 to this subpart shows which parts of the General Provisions in §§60.1 through 60.19 apply to you.*

All the General Provisions apply with the exception of 60.11 (compliance with standards and maintenance requirements), since the requirements are specified in Subpart IIII, and 60.18 (general control device requirements). For this particular engine the Permittee has no “active” ongoing requirements per the general conditions. Note that some of the notification, recordkeeping and reporting requirements imposed as discussed above were implemented as gap filling measures under 40CFR 70.6.

**C. Add 7 existing engine test stands**

The Permittee would like to permit the following engine test stands

| <b>Emission Source</b> | <b>Source Description</b>  | <b>Control Device</b> | <b>Control Device Description</b> |
|------------------------|--|-----------------------|-----------------------------------|
| A-MP-107-11            | JP8 Fuel-fired Engine Test Stand (150 HP) for teaching purposes only | N/A                   | N/A                               |
| A-MP-107-12            | JP8 Fuel-fired Engine Test Stand (425 HP) for teaching purposes only | N/A                   | N/A                               |
| A-FC-365-02            | JP8 Fuel-fired Engine Test Stand (300 HP)                            | N/A                   | N/A                               |
| A-HP-1854-11           | JP8 Fuel-fired Engine Test Stand (1500 HP)                           | N/A                   | N/A                               |
| B-A-A47-05             | JP8 Fuel-fired Engine Test Stand (525 HP)                            | N/A                   | N/A                               |
| A-FC-143-01            | Boat Motor Gasoline-fired Engine (not to exceed 125 HP) Test Tank    | N/A                   | N/A                               |
| B-A-A69-01             | Boat Motor JP8-fired Engine (not to exceed 90 HP) Test Tank          | N/A                   | N/A                               |

These test stands have been on site at Camp Lejeune but were only recently discovered by the MCBCL Environmental Management Division.

**15A NCAC 2D .1111 MAXIMUM ACHIEVEABLE CONTROL TECHNOLOGY**

**Subpart P—National Emission Standards for Hazardous Air Pollutants for Engine Test Cells/Stands**

This subpart P (MACT 5P) establishes national emission standards for hazardous air pollutants (NESHAP) for engine test cells/stands located at major sources of hazardous air pollutants (HAP) emissions.

The permittee has supplied the following reasons MACT 5P does not apply:

| Permit ID    | Rating | Fuel                   | Comments   |
|--------------|--------|------------------------|--|
| A-MP-107-11  | 150    | JP-8                   | <b>Test stand</b> ***The source is not subject to the Engine Testing NESHAP as it is used exclusively for teaching [40 CFR 63.9290(d)(3)].   |
| A-MP-107-12  | 425    | JP-8                   | <b>Test stand</b> ***The source is not subject to the Engine Testing NESHAP as it is used exclusively for teaching [40 CFR 63.9290(d)(3)].   |
| A-FC-365-02  | 300    | JP-8                   | <b>Test stand</b> ***This source is not subject to the Engine Testing NESHAP as it was installed and operating prior to 2002. Lejeune EMD only recently became aware of the operation. |
| A-HP-1854-11 | 1500   | JP-8                   | <b>Test stand</b> ***This source is not subject to the Engine Testing NESHAP as it was installed and operating prior to 2002. Lejeune EMD only recently became aware of the operation. |
| B-A-A47-05   | 525    | JP-8                   | <b>Test stand</b> ***This source is not subject to the Engine Testing NESHAP as it was installed and operating prior to 2002. Lejeune EMD only recently became aware of the operation. |
| A-FC-143-01  | 125    | Gasoline               | <b>Test tank</b> ***This source is not subject to the Engine Testing NESHAP as it is testing outboard boat motors in there vessel-installed configuration [40 CFR63.9285]              |
| B-A-A69-01   | 90     | JP-8, Diesel, Kerosene | <b>Test tank</b> ***This source is not subject to the Engine Testing NESHAP as it is testing outboard boat motors in there vessel-installed configuration [40 CFR63.9285].             |

**15A NCAC 2D .0524: NEW SOURCE PERFORMANCE STANDARDS**

**Subpart III—Standards of Performance for Stationary Compression Ignition Internal Combustion Engines**

**§ 60.4200 Am I subject to this subpart?**

(a) The provisions of this subpart are applicable to manufacturers, owners, and operators of stationary compression ignition (CI) internal combustion engines (ICE) as specified in paragraphs (a)(1) through (3) of this section. For the purposes of this subpart, the date that construction commences is the date the engine is ordered by the owner or operator.

(b) The provisions of this subpart are not applicable to stationary CI ICE being tested at a stationary CI ICE test cell/stand.

Thus this NSPS potentially applies to the engines themselves but not during testing at test stands. Thus, NSPS Subpart JJJJ does not apply to these sources.

**Subpart JJJJ—Standards of Performance for Stationary Spark Ignition Internal Combustion Engines**

**§ 60.4230 Am I subject to this subpart?**

(a) *The provisions of this subpart are applicable to manufacturers, owners, and operators of stationary spark ignition (SI) internal combustion engines (ICE) as specified in paragraphs (a)(1) through (5) of this section. For the purposes of this subpart, the date that construction commences is the date the engine is ordered by the owner or operator.*

(b) *The provisions of this subpart are not applicable to stationary SI ICE being tested at an engine test cell/stand.*

Thus this NSPS potentially applies to the engines themselves but not during testing at test stands. Thus, NSPS Subpart JJJJ does not apply to these sources.

Thus, 2D.0524 does not apply to these sources.

**15A NCAC 2D .0516: SULFUR DIOXIDE EMISSIONS FROM COMBUSTION SOURCES**

The allowable emission rate under 2D.0516 is 2.3 lb SO<sub>2</sub>/mmBtu. The combustion of gasoline and JP-8 are expected to meet this limitation by a wide margin. As such, there is no need for M/R/R to be placed into the permit.

**15A NCAC 2D .0521: CONTROL OF VISIBLE EMISSIONS**

(a) *Purpose. The intent of this Rule is to prevent, abate and control emissions generated from fuel burning operations and industrial processes where an emission can reasonably be expected to occur, except during startup, shutdowns, and malfunctions approved according to procedures set out in Rule .0535 of this Section.*

(b) *Scope. This Rule shall apply to all fuel burning sources and to other processes that may have a visible emission. However, sources subject to a visible emission standard in Rules .0506, .0508, .0524, .0543, .0544, .1110, .1111, .1205, .1206, .1210, .1211, or .1212 of this Subchapter shall meet that standard instead of the standard contained in this Rule.*

*This Rule does not apply to engine maintenance, rebuild, and testing activities where controls are infeasible, except it does apply to the testing of peak shaving and emergency generators. (In deciding if controls are infeasible, the Director shall consider emissions, capital cost of compliance, annual incremental compliance cost, and environmental and health impacts.)*

The Permittee supplied information suggesting that controls are infeasible on the two outboard motor test stands, thus this regulation does not apply.

For the remaining five test stands addressed, due to their mobile nature (These test stands are on wheels and can be moved around within the assigned compound or taken to outlying range areas on the facility, as needed), controls are infeasible for purposes of this rule. This determination is consistent with the other test stands permitted at MCBCL.

**15A NCAC 2Q. 0317: AVOIDANCE CONDITIONS for 15A NCAC 2D. 0530: PREVENTION OF SIGNIFICANT DETERIORATION**

These test stands and tanks are existing sources and not tied to any particular modification. PSD nor avoidance applies.

**D. Revise equipment descriptors**

The Permittee would like to revise the following permitted source:

| <b>Emission Source</b>                     | <b>Source Description</b>   | <b>Control Device</b> | <b>Control Device Description</b> |
|--|---|-----------------------|-----------------------------------|
| C-AS-4141-01<br><b>MACT, Subpart GGGGG</b> | JP-5 Line Area at MCAS, New River, Aggressive Fluid Vapor Recovery                                  | None                  | None                              |
| To read                                    |   |                       |                                   |
| C-AS-4141-01<br><b>MACT, Subpart GGGGG</b> | JP-5 Line Area at MCAS, New River, Aggressive Fluid Vapor Recovery <b>and Dual Phase Extraction</b> |                       |                                   |

No additional regulatory review is necessary. The existing conditions in the permit are sufficient for this source to demonstrate compliance with all applicable air regulations.

## V. Facility-wide regulatory considerations

### NSPS

NSPS implications are discussed in Section IV.

### PSD

The addition of the seven emergency generators and the two new test tanks are assumed by the Permittee to be a single modification for PSD applicability purposes. The supplied emission calculations show that the potential emissions from these 9 sources for NOx are greater than 40 tpy. The Permittee has chosen to avoid PSD by taking an operating limitation on the seven emergency generators of 350 hours per year each and an annual operation limitation of 180 hours per year each for the two new test tanks. With these limitations the potential emissions for these 9 sources are as follows:

| Pollutant     | Potential Emissions @350 hr/yr per engine and 180hour per year per test stand, tpy |
|---------------|--|
| PM/PM10/PM2.5 | 1.39   |
| SO2           | 5.43   |
| NOx           | 37.17  |
| CO            | 12.69  |
| VOC           | 1.61   |

An avoidance condition will be placed into Section 2.2. of the permit with associated recordkeeping and reporting requirements.

### NESHAPS

NESHAP implications are discussed in Section IV

### CAM

This modification has no implications with respect to NESHAPS or CAM.

### Toxics

The Permittee has supplied a completely revised and up-to-date facility wide toxics modeling demonstration. For almost all pollutants the margin of compliance is very large given the large footprint of Camp Lejeune. The Permittee then “optimized” most emission rates such that 98% of the AAL was obtained, thus obtaining a permitted emission rate larger than what will be achieved in practice. These are the emission rates that are included in the revised permit. Given the margin of compliance, no monitoring, recordkeeping or reporting will be required.

## VI. Changes to Existing Air Permit No. 06591T20

| Condition No.                 | Changes  |              |              |              |              |             |             |             |            |             |             |             |             |             |             |             |            |
|-------------------------------|--|--------------|--------------|--------------|--------------|-------------|-------------|-------------|------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|------------|
| Cover letter                  | Updated cover letter to reflect this modification  |              |              |              |              |             |             |             |            |             |             |             |             |             |             |             |            |
| Insignificant Activities List | Updated the list with the new sources presented in the application.  |              |              |              |              |             |             |             |            |             |             |             |             |             |             |             |            |
| Permit page 3                 | The first two introductory paragraphs were removed as they have been deemed redundant and unnecessary  |              |              |              |              |             |             |             |            |             |             |             |             |             |             |             |            |
| Equipment list                | <ul style="list-style-type: none"> <li>Added the following sources as requested in the permit application <table border="1"> <tbody> <tr> <td>C-RR-430-01</td> <td>C-RR-430-05</td> <td>C-SRR-470-01</td> <td>A-HP-1854-11</td> </tr> <tr> <td>C-RR-430-02</td> <td>C-RR-425-01</td> <td>A-MP-107-11</td> <td>B-A-A47-05</td> </tr> <tr> <td>C-RR-400-05</td> <td>C-RR-440-01</td> <td>A-MP-107-12</td> <td>A-FC-143-01</td> </tr> <tr> <td>C-RR-405-01</td> <td>C-RR-134-01</td> <td>A-FC-365-02</td> <td>B-A-A69-01</td> </tr> </tbody> </table> </li> <li>Revised source ID No. C-AS-4141-01 from:<br/>JP-5 Line Area at MCAS, New River, Aggressive Fluid Vapor Recovery<br/>To:<br/>JP-5 Line Area at MCAS, New River, Aggressive Fluid Vapor Recovery and Dual Phase Extraction</li> <li>Deleted Lime storage silo (I-C-AS-110-01) from insignificant list</li> </ul> | C-RR-430-01  | C-RR-430-05  | C-SRR-470-01 | A-HP-1854-11 | C-RR-430-02 | C-RR-425-01 | A-MP-107-11 | B-A-A47-05 | C-RR-400-05 | C-RR-440-01 | A-MP-107-12 | A-FC-143-01 | C-RR-405-01 | C-RR-134-01 | A-FC-365-02 | B-A-A69-01 |
| C-RR-430-01                   | C-RR-430-05  | C-SRR-470-01 | A-HP-1854-11 |              |              |             |             |             |            |             |             |             |             |             |             |             |            |
| C-RR-430-02                   | C-RR-425-01  | A-MP-107-11  | B-A-A47-05   |              |              |             |             |             |            |             |             |             |             |             |             |             |            |
| C-RR-400-05                   | C-RR-440-01  | A-MP-107-12  | A-FC-143-01  |              |              |             |             |             |            |             |             |             |             |             |             |             |            |
| C-RR-405-01                   | C-RR-134-01  | A-FC-365-02  | B-A-A69-01   |              |              |             |             |             |            |             |             |             |             |             |             |             |            |

| Condition No.      | Changes   |
|--------------------|---|
| 2.1.A.3.e.         | <ul style="list-style-type: none"> <li>Revised the opacity monitoring condition to be consistent with current DAQ practice, allowing 3 days of absent observations per semi-annual period.</li> </ul>   |
| 2.1.A.5            | <ul style="list-style-type: none"> <li>The CAM plan was revised by removing COMS and adding once per daylight shift observations similar to 2D.0521 monitoring.</li> </ul>  |
| 2.1.M.             | <ul style="list-style-type: none"> <li>Added the new generators to the existing list</li> </ul>   |
| 2.1.M.1            | <ul style="list-style-type: none"> <li>Revised the 2D.0516 condition to include the phrase <b>(Applicable to non NSPS Subpart IIII affected sources only)</b></li> </ul>  |
| 2.1.M.4            | <ul style="list-style-type: none"> <li>Revised the existing Subpart ZZZZ condition to: <ul style="list-style-type: none"> <li>Create a table, 2.1.M.4, for the applicable sources</li> <li>Add the standard “Applicability” paragraph which was missing from the existing</li> <li>Renumber the remaining paragraphs to reflect the addition of the “applicability” paragraph.</li> </ul> </li> </ul>   |
| 2.1.M.5            | <ul style="list-style-type: none"> <li>Revised the existing Subpart IIII condition to: <ul style="list-style-type: none"> <li>Create a table to reflect the affected sources, including the two existing and seven new sources.</li> <li>Revised all language to current DAQ standards. No substantive requirements were changed for the two existing sources. The new sources require initial notifications given to verify that the units installed will meet the requirements of NSPS Subpart IIII.</li> </ul> </li> </ul> |
| 2.1.M.6            | <ul style="list-style-type: none"> <li>Added a new Subpart ZZZZ condition to address the seven new affected sources. A new condition was necessary because compliance requirements are subtly different based on installation date and size and it was more expedient to not readdress the regulatory applicability for the existing sources.</li> </ul>  |
| 2.1.O.             | <ul style="list-style-type: none"> <li>Added the seven existing test stands to this section</li> </ul>  |
| 2.1.O.1            | <ul style="list-style-type: none"> <li>Revised the 2D.0516 condition to reflect the current regulatory applicability [testing 2D .2601 and monitoring 2Q.0508(f)]</li> </ul>  |
| 2.1.U.             | <ul style="list-style-type: none"> <li>Revised source ID No. C-AS-4141-01 from:<br/>JP-5 Line Area at MCAS, New River, Aggressive Fluid Vapor Recovery<br/>To:<br/>JP-5 Line Area at MCAS, New River, Aggressive Fluid Vapor Recovery and Dual Phase Extraction</li> </ul>  |
| 2.2.A.1            | <ul style="list-style-type: none"> <li>Revised Table B.7 in its entirety based on the facility-wide TAP modeling demonstration submitted with this application</li> </ul>   |
| 2.2.B.2.           | <ul style="list-style-type: none"> <li>Added a PSD avoidance condition for the new test tanks and 7 emergency generators.</li> </ul>  |
| General Conditions | <p>Revised to current revision 3.0. The only change was in condition D as follows:</p> <p><i>All submittals shall include the facility name and Facility ID number (refer to the cover page of this permit).</i></p>  |

## VII. Compliance History

The DAQ has reviewed the compliance status of this facility. On its latest inspection, performed on 07/30/2009, by Mr. Ashby Armistead, of the Wilmington Regional Office, the facility appeared to be in compliance with all applicable requirements.

## VIII. Public Notice

NA

## IX. Comments and Conclusions

NA

## X. Recommendations

It is recommended that permit no. 06591T21 be issued.