

<b>NORTH CAROLINA DIVISION OF AIR QUALITY</b> Air Permit Review – 15A NCAC 2Q .0501(c)(1)			Region: Washington Regional Office County: Craven NC Facility ID: 2500019 Inspector's Name: Bernie Pittman Date of Last Inspection: 03/23/2011 Compliance Code: 3 / Compliance - inspection
Permit Issue Date: <b>October ___2011</b>			Permit Applicability (this application only)  SIP: 15A NCAC 2D .0521, 2D .0524, 2D .1100, 2D .1111, 2Q .0705, 2Q .0711  NSPS: Subpart III NESHAP: Subpart ZZZZ PSD: N/A PSD Avoidance: N/A NC Toxics: Yes (modeling required) 112(r): N/A Other: Facility-wide modeling schedule will be placed into the permit.
<b>Facility Data</b>			
Applicant (Facility's Name): Marine Corps Air Station  Facility Address: Marine Corps Air Station Highway 70 and Highway 101 Cherry Point, NC 28533  SIC: 9711 / National Security NAICS: 92811 / National Security  Facility Classification: Before: Title V After: Title V Fee Classification: Before: Title V After: Title V			
<b>Contact Data</b>			<b>Application Data</b>
<b>Facility Contact</b> Rich Weaver Environmental Scientist (252) 466-5917 Highway 70 and Highway 101 Cherry Point, NC 28533 Richard.weaver@usmc.mil	<b>Authorized Contact</b> George Radford Environmental Affairs Officer (252) 466-0006 Marine Corps Air Station-Cherry Point Cherry Point, NC 28533 George.radford@usmc.mil	<b>Technical Contact</b> Rich Weaver Environmental Scientist (252) 466-5917 Highway 70 and Highway 101 Cherry Point, NC 28533 Richard.weaver@usmc.mil	Application Number: 2500019.11A Date Received: 06/06/2011 Application Type: Modification Application Schedule: TV-Sign-501(c)(2)  <b>Existing Permit Data</b> Existing Permit Number: 04069/T33 Existing Permit Issue Date: 09/14/2010 Existing Permit Expiration Date: 08/31/2014
Review Engineer: Booker Pullen Regional Engineer: Robert Bright  Review Engineer's Signature: _____		Start Date: August 12, 2011	<b>Comments / Recommendations:</b> Issue: 0406934 Permit Issue Date: <b>October XX, 2011</b> Permit Expiration Date: 08/31/2011

I. Introduction:

Marine Corps Air Station (MCAS) Cherry Point comprises 13,164 acres situated along the Neuse River in Craven County. MCAS Cherry Point is home to the headquarters of the 2<sup>nd</sup> Marine Aircraft Wing (MAW), which is also the largest tenant command at the facility. The 2<sup>nd</sup> MAW group includes all of the following organizations, Marine Aircraft Group (MAG) 14, Marine Wing Support Group (MWSG) 27, and Marine Air Control Group (MACG) 28. The flying squadrons assigned to MAG-14 include three AV-8B Harrier Squadrons, four EA-6B Prowler Squadrons, and one KC-130 Hercules refueling squadron. The Air Station is also home to the Marine Corps' only AV-8B Harrier Training Squadron.

Per 40 CFR Part 70.2, MCAS Cherry Point is a major source of both criteria pollutants and hazardous air pollutants. Potential emissions of criteria pollutants exceed the 100 tons per year threshold. Additionally, the facility exceeds the hazardous air pollutant (HAP) thresholds of 10 tons per year of an individual HAP or 25 tons per year of aggregate HAP.

Application No. 2500019.11A was received by the Division of Air Quality (DAQ) on June 6, 2011 and was considered complete on that date. The application was amended on August 23, 2011 to include the second step of Air Permit revision T33 that added paint booth (CP-250M-PBTH). This application and the revision will be processed in accordance with 15A NCAC 2Q .0501(c)(1).

## II. Purpose of application:

- A. To add three new Diesel fuel-fired emergency generators (CP-GEN-1, ICP-4551-GEN, and ICP-4875-GEN)
- B. To send the modification (issued as T33) that requested approval to construct and operate a replacement paint booth (CP-250M-PBTH, Building 250) through the 30 day public notice and 45 day EPA review. This request will fulfill the re-submittal requirements of 15A NCAC 2D .0501(c)(2). This booth will be compliant with the provisions of 40 CFR Part 63, Subpart GG.

## III. Statement of Compliance:

The DAQ has reviewed the compliance status of this facility. Mr. Bernie Pittman of the WaRO, performed a facility inspection on March 23, 2011 and the facility appeared to be in compliance with all applicable requirements.

## IV. Permit Change Summary Table

Changes to existing permit per application (2500019.11A):

Old Page No.	New Page No.	Condition No.	Changes
<b>Cover Letter</b>			
Page 1	Page 1	Heading and body of letter	Change regulatory citation for permit in the first sentence, revised permit number, changed "complete application" received date,
Page 2	Page 2	Heading and body of letter	Revised issued date at the top of letter, and changed the effective date of permit,
Page 3	Page 3	"Changes to Permit" Table	Updated the table to reflect the changes per this modification
<b>Insignificant Activities</b>			
N/A	Pages 1 - 10	Table	Reformatted layout of table of insignificant activities
<b>Changes to Body of Permit</b>			
Page 1	Page 1	Cover Page	Changed permit No. to T34, changed "replaces permit" number to T33, revised application number, changed the complete application date, changed issue date of permit
All pages	All pages	Heading	Changed Permit revision to T34
Page 3	Page 3	Table of Permitted Sources	Added generator CP-1-GEN, corrected kW rating for CP-4377-GEN to 2000 kW, removed generator CP-177-GEN-01 from permit, added MACT designations to generators
Page 22	Page 22	Specific Limitations and Conditions	Added generator CP-1-GEN to condition H, and added MACT and NSPS designations
Page 23	Page 23		Added generator ID numbers to NSPS condition
Page 24	Page 24		Added generator ID numbers to MACT condition
N/A	Page 46		Added toxics schedule to Multiple Emissions Condition "I"
N/A	Pages 53-62	General Conditions	Added most current version of General Conditions

## V. Source-by Source Evaluation for Modification Revision T34:

## A. Diesel-fuel fired emergency generators:

- CP-1-GEN
- ICP-4851-GEN
- ICP-4875-GEN

1. Description: These generators are for emergency use and shall not exceed 500 hours of operation per year. All emissions from this generator are uncontrolled.
2. Applicable Regulatory Requirements: Generator (GEN-1) will be installed after July 1, 1971 and will be subject to 20% opacity.

NSPS, 40 CFR Part 60, Subpart IIII does apply to the compression ignition, Diesel-fired emergency generators (CP-1-GEN, ICP-4851-GEN, ICP-4875-GEN). These units are classified as "new" generators because they will be manufactured after April 1, 2006.

MACT, 40 CFR Part 63, Subpart ZZZZ (as revised in the January 18, 2008 Federal Register) does apply to these emergency generators ((CP-1-GEN, ICP-4851-GEN, ICP-4875-GEN).

Emergency generator CP-1-GEN has a capacity rating greater than 500 brake horsepower and will be considered “new” because the final installation date on-site will be after December 19, 2002. Per 40 CFR §63.6590(b), new emergency RICE engines greater than 500 hp used as emergency generators at major sources of HAPs, must only meet the initial notification requirements of §63.6645(h). [40 CFR §63.6590(b)]

Emergency generators ICP-4851-GEN and ICP-4875-GEN have capacity ratings less than 500 horsepower and will be considered “new” because the final installation date on-site will be after June 12, 2006. Per 40 CFR §63.6590(c)(6), new emergency RICE engines less than 500 hp located at major sources of HAPs, must only meet the requirements of the NSPS, Subpart IIII.

The following provides a summary of limits and/or standards for the emission source(s) described above.

Regulated Pollutant	Limits/Standards	Applicable Regulation
Visible emissions	20 percent opacity	15A NCAC 2D .0521
Sulfur dioxide	15 parts per million sulfur fuel content	15A NCAC 2D .0524
NMHC + NOx, HC, NOx, CO, PM	Purchase engine certified to meet the applicable engine design emission limits	40 CFR Part 60, Subpart IIII
Hazardous air pollutants	Initial notification requirements	15A NCAC 2D .1111 40 CFR Part 63, Subpart ZZZZ
Toxic air pollutants	Limits requiring toxic pollutant modeling (See Multiple Emissions Section VII C)	15A NCAC 2Q .0711 15A NCAC 2Q .0705
	Modeled emissions rates (State enforceable only) (See Multiple Emissions Section VII C)	15A NCAC 2D .1100

a. 15A NCAC 2D .0521 "Control Of Visible Emissions"

Regulation Analysis:

- i. Generators (CP-1-GEN, ICP-4851-GEN, ICP-4875-GEN) will be installed after July 1, 1971, and is therefore subject to the State regulation 15A NCAC 2D .0521(d). Per this regulation visible emissions shall not be more than 20 percent opacity when averaged over a six-minute period except that six-minute periods averaging more than 87 percent opacity may occur not more than once in any hour nor more than four times in any 24-hour period.

Compliance is expected with this regulation because this generator will be firing Diesel fuel only.

Generators (ICP-4851-GEN and ICP-4875-GEN) will be placed onto the insignificant activities list until the facility-wide toxics modeling demonstration is performed (according to the compliance schedule). These units will then be placed into the body of the permit.

Monitoring/Recordkeeping/Reporting [15A NCAC 2Q .0508(f)]

- ii. No monitoring, recordkeeping, or reporting is required for visible emissions from the firing of Diesel fuel in any generator because it should always be in compliance with the opacity standard during normal operation.

b. 15A NCAC 2D .0524, NSPS, 40 CFR Part 60, Subpart IIII

Regulation Analysis:

- i. Diesel fuel sulfur content used in generators (CP-1-GEN, ICP-4851-GEN, and ICP-4875-GEN) shall not exceed 15 parts per million sulfur content. [40 CFR §60.4207(a)]

Monitoring/Recordkeeping/Reporting [15A NCAC 2Q .0508(f)]

- ii. No monitoring, recordkeeping, or reporting is required for sulfur dioxide emissions from the firing of Diesel fuel in generator (GEN-1).
  - Owner/operators who purchase an emergency generator that is less than 30 liters per cylinder must purchase units that are certified by the manufacturer to meet the applicable engine design emission limits. [40 CFR §60.4211(c)].
  - Owners/operators must operate and maintain engines and control devices in accordance with the manufacturer's written instructions or procedures developed by the owner or operator that are approved by the engine manufacturer, over the life of the engine. {§60.4206 and §60.4211 (a)}.
  - No testing is required for units less than 30 liter per cylinder displacement that have been certified by the manufacturer to meet design limits.
  - Install a nonresettable hour meter {(§60.4209(a)}.

Note: Generators ICP-4851-GEN, and ICP-4875-GEN will be placed on the insignificant activities list until the facility-wide toxics modeling is performed according to the schedule that will be placed in the body of the permit.

- c. 15A NCAC 2D .1111, 40 CFR Part 63, Subpart ZZZZ "National Emission Standards for Hazardous Air Pollutants For Stationary Reciprocating Internal Combustion Engines"
  - CP-1-GEN (1000 kW, 1341 horsepower)
  - ICP-4851-GEN (150 kW, 201 horsepower)
  - ICP-4875-GEN (250 kW, 335 horsepower)

- i. General Provisions [40 CFR §63.6665]:

The Permittee shall comply with the requirements of 40 CFR part 63 Subpart A "General provisions," according to the applicability of Subpart A to such sources, as identified in Table No. 8 in Subpart ZZZZ, "Applicability Of General Provisions to Subpart ZZZZ".

- ii. Compliance/Notification Procedures [40 CFR §63.6645]

Stationary RICE that are emergency generators are subject to limited requirements of Subpart ZZZZ and do not have to meet the requirements of Subpart ZZZZ and of Subpart A of this part, except for the initial notification requirements. Notification should include the following information:

The owner or operator of an affected source that has an initial startup before the effective date of a relevant standard under this part shall notify the Administrator in writing that the source is subject to the relevant standard. The notification, which shall be submitted not later than 120 calendar days after startup of the emergency generator and shall provide the following:

- (A) The name and address of the owner or operator;
- (B) The address (i.e., physical location) of the affected source;
- (C) An identification of the relevant standard, or other requirement, that is the basis of the notification and the source's compliance date;
- (D) A brief description of the nature, size, design, and method of operation of the source and an identification of the types of emission points within the affected source subject to the relevant standard and types of hazardous air pollutants emitted;
- (E) A statement of whether the affected sources is a major source or an area source.
- (F) A statement that the generators have no additional requirements and explain the basis for the exclusion (for example, that the units operate exclusively as emergency stationary RICE).

Note: Generators ICP-4851-GEN, and ICP-4875-GEN will be placed on the insignificant activities list until the facility-wide toxics modeling is performed according to the schedule that will be placed in the body of the permit.

Recordkeeping Requirement For Applicability Determination [40 CFR §63.10(b)(3)]

- iii. The applicability determination for exclusion of these generators from the requirements of 40 CFR Part 63, Subpart ZZZZ and Subpart A of this part, shall be maintained on site for a period of 5 years after the determination, or until the source changes its operations to become an affected source, whichever comes first. The analyses, or other information, that demonstrates the exemption from the requirements of Subpart ZZZZ and part A of this subpart, shall be signed by the person making the determination.

This Paint Booth (CP-250M-P BTH) was permitted in accordance with 15A NCAC 2Q .0501(c)(2) – two step process in Air Permit Revision T33. This booth will be sent through the 30 day public notice and the 45 day EPA review in this modification to full fill the requirements to resubmit the application that was processed in revision T33.

B. Paint Booth (CP-250M-PBTH)

- 1. Description: This paint booth will be in MALS-14 Airframes located in Building 250. This booth will replace an existing paint booth that currently has multiple operational and safety deficiencies. This booth will be a drive-in type booth with inside working dimensions of approximately 16 feet in width, 32 feet in length and 12 feet tall. This paint booth will be manufactured by a company named JBI Spray Booth Systems.
- 2. Applicable Regulatory Requirements: This Paint booth is subject to 40 CFR Part 63, Subpart GG “Aerospace Manufacturing and Rework Facilities” and 20 percent Visible Emissions.

The following provides a summary of limits and/or standards for the emission source(s) described above.

Regulated Pollutant	Limits/Standards	Applicable Regulation
Particulate	$E = 4.10 (P)^{0.67}$ (For process weight rates $\leq 60,000$ lbs) $E = 55.0 (P) 0.11 - 40$ (For process weight rates $> 60,000$ lbs) Where P = process weight rate (tons/hr) E = allowable emission rate for particulate (lbs/hr)	15A NCAC 2D .0515
Visible emissions	20 percent opacity	15A NCAC 2D .0521
HAPs & Volatile organic compounds	Work practice standards	15A NCAC 2D .1111 40 CFR Part 63, Subpart GG

- a. 15A NCAC 2D .0515: Particulates From Miscellaneous Industrial Processes
  - i. Emissions of particulate matter from spray booth (CP-250M-PBTH) shall not exceed an allowable emission rate as calculated by the following equations [15A NCAC 2D .0515(a)]:

$$E = 4.10 \times P^{0.67} \quad \text{For process weight rates less than or equal to 60,000 lbs}$$

$$E = 4.10 \times P^{0.11} - 40 \quad \text{For process weight rates greater than 60,000 lbs}$$

Where E = allowable emission rate in pounds per hour  
 P = process weight in tons per hour

Liquid and gaseous fuels and combustion air are not considered as part of the process weight.

The allowable emission rate is calculated using the weight of the materials input into the process that contribute to the particulate emissions in tons per hour. These painting processes apply coatings to aircraft components and/or ground support equipment. Considering the weight of the aircraft components and ground support equipment entering the system along with the control efficiency (greater than 90%) of the dry filters located in the booth, compliance is indicated for 15A NCAC 2D .0515 for each spray booth.

Testing [15A NCAC 2D .0501 (c)(3)]

- ii. If emission testing is required, the testing shall be performed in accordance with General Condition JJ in Section 3 of the Permit. If the results of this test are above the limit as calculated by the equation given in Section V. A. 2. a. i. above, the Permittee shall be deemed in noncompliance with 15A NCAC 2D .0515.

Monitoring/Recordkeeping [15A NCAC 2Q .0508(f)]

- iii. The Permittee shall maintain production records that specify the types of materials and finishes processed and shall make these records available to a DAQ authorized representative upon request. The Permittee shall be deemed in noncompliance with 15A NCAC 2D .0515 if the production records are not maintained or the types of materials and finishes are not monitored.

- b. 15A NCAC 2D .0958: Work Practices For Sources Of Volatile Organic Compounds  
This regulation applies to all facilities that use volatile organic compounds as solvents, carriers, material processing media or industrial chemical reactants, or in other similar uses, or that mix, blend, or manufacture volatile organic compounds or emit volatile organic compounds as a product of chemical reactions. This regulation does not apply to this booth because this booth is subject to 40 CFR Part 63, Subpart GG “National Standards For Aerospace Manufacturing and Rework Facilities” which control VOCs through work practice standard that are at least as stringent as 2D .0958.

In accordance with 40 CFR §70.6(a)(3)(A) “Each permit shall contain the following requirements with respect to monitoring: All monitoring and analysis procedures or test methods required under applicable monitoring and testing requirements, including Part 64 of this chapter and any other procedures and methods that may be promulgated pursuant to sections 114(a)(3) or 504(b) of the Act. If more than one monitoring or testing requirement applies, the permit may specify a streamlined set of monitoring or testing provisions provided the specified monitoring or testing is adequate to assure compliance at least to the same extent as the monitoring or testing applicable requirements that are not included in the permit as a result of such streamlining.”.

- c. 15A NCAC 2D .0521: Control Of Visible Emissions
  - i. Visible emissions from paint spray booth (CP-250M-PBTH) shall not be more than 20 percent opacity each when averaged over a six-minute period. However, six-minute averaging periods may exceed 20 percent not more than once in any hour and not more than four times in any 24-hour period. In no event shall the six-minute average exceed 87 percent opacity. [15A NCAC 2D .0521 (d)]

Testing [15A NCAC 2D .2601]

- ii. If emission testing is required, the testing shall be performed in accordance with 15A NCAC 2D .2601 and General Condition JJ. If the results of this test are above the limit given in Section V. A. 2. c. i. above, the Permittee shall be deemed in noncompliance with 15A NCAC 2D .0521.

Monitoring [15A NCAC 2Q .0508(f)]

- iii. To assure compliance, once a month, the Permittee shall observe the emission points of this source for any visible emissions above normal. The Permittee shall establish “normal” for the source in the first 30 days following the effective date of permit. If visible emissions from this source are observed to be above normal, the Permittee shall either: (a) be deemed to be in noncompliance with 15A NCAC 2D .0521 or (b) demonstrate that the percent opacity from the emission points of the emission source in accordance with 15A NCAC 2D .0501(c)(8) is below the limit given in Section V. A. 2. c. i. above in this section. If the demonstration in (b) above cannot be made, the Permittee shall be deemed to be in noncompliance with 15A NCAC 2D .0521.

Recordkeeping [15A NCAC 2Q .0508(f)]

- iv. The results of the monitoring shall be maintained in a logbook (written or electronic format) on-site and made available to an authorized representative upon request. The logbook shall record the following:
  - (A) the date and time of each recorded action;
  - (B) the results of each observation and/or test noting those sources with emissions that were observed to be in noncompliance along with any corrective actions taken to reduce visible emissions; and
  - (C) the results of any corrective actions performed.

The Permittee shall be deemed in noncompliance with 15A NCAC 2D .0521 if these records are not maintained.

Reporting [15A NCAC 2Q .0508(f)]

- v. The Permittee shall submit a summary report of the observations postmarked on or before January 30 of each calendar year for the preceding six-month period between July and December and July 30 of each calendar year for the preceding six-month period between January and June. All instances of deviations from the requirements of this permit must be clearly identified.

- d. 15A NCAC 2D .1111: Maximum Achievable Control Technology, 40 CFR Part 63, Subpart GG “Aerospace Manufacturing and Rework Facilities”  
This paint booth operation (CP-250M-PBTH) shall comply with all requirements of 15A NCAC .2D .1111 AMaximum Achievable Control Technology≅ and 40 CFR Part 63 Subpart GG ANational Emissions Standards for Aerospace Manufacturing and Rework Facilities”

This regulation and all of the Specific Limitations and Conditions are currently listed in the existing permit. This replacement paint booth will be listed in the current condition.

- VI. A Professional Engineers Seal is not required for this significant modification.
- VII. A consistency determination was included with the application received on June 6, 2010. MCAS Cherry Point is located on Federal property and is therefore not subject to local zoning regulations. All of the proposed modifications have been approved by the installation planning and development authority and in accordance with the Air Station master plan.
- VIII. An application fee of \$867.00 is required and was received on June 6, 2011.
- IX. The appropriate number of copies of the application was received by the DAQ on June 6, 2011.
- X. The application did contain the Reduction and Recycling Form.
- XI. The application was signed by an authorized official as defined by 15A NCAC 2Q .0304(j).
- XII. Air toxics:  
An air toxic pollutant review is required with this modification to add three emergency generators (CP-1-GEN, ICP-4851-GEN, and ICP-4875-GEN) and the previous modification under revision T33 to add paint booth (CP-250-PBTH). MCAS Cherry Point has requested that a schedule to perform a facility-wide toxics evaluation and modeling be placed into the Air Permit due to the numerous sources of combustion that have been triggered for review.

XIII. Public Notice:

A thirty-day public notice is required.

Public notice: The 30-day public notice period was from \_\_\_\_\_ through \_\_\_\_\_. \_\_\_\_ public comments were received for this permit application.

EPA 45-Day review Period: The DAQ sent copies of the appropriate information the USEPA on \_\_\_\_\_. The EPA 45-day review period was from \_\_\_\_\_ through \_\_\_\_\_. The USEPA \_\_\_\_\_adverse comments on the renewal permit for this facility.

XIV. NonAttainment:

Craven County has not been designated as a nonattainment area for the eight-hour ozone standard. A review for nonattainment is not required.

XV. This facility is subject to 15A NCAC 2Q .0508(g) "Prevention of Accidental Releases". MCAS submitted its Risk Management Plan (RMP) in June 1999.

XVI. The PSD Minor Source Baseline date has not been triggered in Craven County.

XVII. Recommendations

This permit modification application for the Marine Corp Air Station at Cherry Point, located in Cherry Point, North Carolina has been reviewed by NC DAQ to determine compliance with all procedures and requirements. NC DAQ has determined that this facility appears to be complying with all applicable requirements. The Washington Regional Office concurs.

Issue Permit No. 04069T34