



Florida Department of Environmental Protection

Central District
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Orlando, Florida 32803-3767

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Secretary

Electronically Sent- Received Receipt Requested

FINAL PERMIT

PERMITTEE

United States Air Force
45 SW/CC, 1201 Edward H. White II Street
Patrick AFB, Florida 32925-3299

Authorized Representative:
General Anthony J. Cotton, Brigadier General, USAF,
Commander

Air Permit No. 0090005-013-AC
Permit Expires: 09/30/2014
Site Name: Cape Canaveral Air
Force Station (CCAFS)
Major Source Air Construction
Project Name: Dual-Fired Boiler
#12

This is the final air construction permit, which authorizes construction/installation of a 250 horse power (hp) dual-fired boiler. The proposed work will be conducted at the CCAFS (Standard Industrial Classification No. 9711). The facility is located in Brevard County, Cape Canaveral, Florida. The UTM coordinates are Zone 17, 538.66 km East, and 3143.65 km North.

This final permit is organized by the following sections:

Section 1. General Information

Section 2. Administrative Requirements

Section 3. Facility-wide and Emissions Unit Specific Conditions

Section 4. Appendices

Because of the technical nature of the project, the permit contains numerous acronyms and abbreviations, which are defined in Appendix A of Section 4 of this permit.

This air pollution permit is issued under the provisions of: Chapter 403 of the Florida Statutes (F.S.) and Chapters 62-4, 62-204, 62-210, 62-212, 62-296 and 62-297 of the Florida Administrative Code (F.A.C.). The permittee is authorized to conduct the proposed work in accordance with the conditions of this permit. This project is subject to the general preconstruction review requirements in Rule 62-212.300, F.A.C. and is not subject to the preconstruction review requirements for major stationary sources in Rule 62-212.400, F.A.C. for the Prevention of Significant Deterioration (PSD) of Air Quality.

Upon issuance of this final permit, any party to this order has the right to seek judicial review of it under Section 120.68 of the Florida Statutes by filing a notice of appeal under Rule 9.110 of the Florida Rules of Appellate Procedure with the clerk of the Department of Environmental Protection in the Office of General Counsel (Mail Station #35, 3900 Commonwealth Boulevard, Tallahassee, Florida, 32399-3000) and by filing a copy of the notice of appeal accompanied by

the applicable filing fees with the appropriate District Court of Appeal. The notice must be filed within 30 days after this order is filed with the clerk of the Department.

Executed in Orange County, Florida



August 22, 2012

Caroline D. Shine
District Air Program Administrator
Central District

Date

CERTIFICATE OF SERVICE

The undersigned duly designated deputy agency clerk hereby certifies that this Final Air Permit package (including the Final Determination, the Final Permit and the Appendices) was sent by electronic mail (or a link to these documents made available electronically on a publicly accessible server), with received receipt requested before the close of business on August 22, 2012, to the persons listed below:

General Anthony J. Cotton, USAF (**45swcce@patrick.af.mil**)

Mr. David Ashley Luke, Jr., P.E., Merrick & Company (**david.luke@merrick.com**)

Ms. Kim Scroggs, USAF (**kim.scroggs@us.af.mil**)

Clerk Stamp

FILED, on this date, pursuant to Section 120.52, Florida Statutes, with the designated Department Clerk, receipt of which is hereby acknowledged.



August 22, 2012

(Clerk)

(Date)

SECTION 1. GENERAL INFORMATION (FINAL)

FACILITY AND PROJECT DESCRIPTION**Cape Canaveral Air Force Station**

Cape Canaveral Air Force Station (CCAFS) is an Air Force installation that occupies approximately 15,800 acres and provides space launch capability for defense, civil, and commercial satellites in support of the 45th Space Wing mission, Eastern Range, and Department of Defense operations.

The existing facility consists of the following emissions units.

Facility ID No. 0090005	
ID No.	Emission Unit Description
<i>Regulated Emissions Units</i>	
018	CCAFS Paint Spray Booth #1
019	CCAFS Boiler #3 (Cleaver Brooks)
020	CCAFS Boiler #4 (Cleaver Brooks)
045	CCAFS Abrasive Blasting Yard #2
052	CCAFS Paint Spray Booth #5 and CCAFS Abrasive Blasting Booth #1
053	CCAFS Boiler #7 (Donlee Technology)
054	CCAFS Boiler #8 (Donlee Technology)
058	CCAFS I.C. Engine Driven Chiller
062	CCAFS Facility-wide I. C. Engines and Generators using No. 2 Fuel Oil , JP-8, biodiesel, and other distillate fuels
064	CCAFS Abrasive Blasting Yard #4
069	CCAFS Five (5) Diesel Fired Boilers (each <2.0 MMBTU/hr.) using No. 2 Fuel Oil with sulfur content 0.5 percent or less, JP-8, biodiesel, and other distillate fuels
<i>Unregulated Emissions Units and Activities</i>	
059	CCAFS Unregulated Abrasive Blasting Yard #U1
061	CCAFS Unregulated Abrasive Blasting Yard #U2
063	CCAFS Facility-wide I. C. Engines and Generators using Gasoline

Project Description and Proposed Emissions Units

The proposed project consists of expanding and renovating Building 1777 at CCAFS. The new expansion will require the use of a single dual-fired steam boiler (BLR-101, Model No. CBEX-250) rated at 250 hp with a maximum heat input of 10.2 MMBtu/hr. This boiler is planned to be dual-fired by either natural gas or No. 2 diesel fuel.

This project will create the following emissions unit.

Facility ID No. 0090005	
ID No.	Emission Unit Description

SECTION 1. GENERAL INFORMATION (FINAL)

070	CCAFS Boiler #12 (Cleaver Brooks, Building 1777)
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NOTE: Please reference the Permit No., Facility ID, and Emission Unit ID in all correspondence, test report submittals, applications, etc.

FACILITY REGULATORY CLASSIFICATION

- The facility is a synthetic minor source of hazardous air pollutants (HAP).
- The facility has no units subject to the acid rain provisions of the Clean Air Act (CAA).
- The facility is a Title V major source of air pollution in accordance with Chapter 213, F.A.C.
- The facility is not a major stationary source in accordance with Rule 62-212.400(PSD), F.A.C.
- This emissions unit is subject to 40 CFR 60, Subpart A- General Provisions (See Appendix E) and 40 CFR 60, Subpart Dc -Standards of Performance for Small Industrial-Commercial-Institutional Steam Generating Units (See Appendix F).
{Permitting Note: The boiler is subject to 40 CFR 60 Subpart Dc, recordkeeping requirements only.}
- If the boiler meets the definition of gas fired boiler listed in specific condition **A.7.**, the boiler will not be subject to 40 CFR 63 Subpart JJJJJ and the regulation will not be included as part of the Title V Air Operation Permit Revision that will incorporate the boiler. **This federal regulation has not yet been adopted by reference in Rule 62-204.800, F.A.C.**

PERMIT HISTORY/AFFECTED PERMITS

Current Permit 0090005-010-AV and Proposed Permit No. 0090005-011-AV.

SECTION 2. ADMINISTRATIVE REQUIREMENTS (FINAL)

1. Permitting Authority: The permitting authority for this project is the Florida Department of Environmental Protection, Central District Air Resource Management Section. The Central District's mailing address and phone number is:

Florida Department of Environmental Protection
Central District Office
Air Resource Management Section
3319 Maguire Blvd., Ste. 232
Orlando, FL 32803-3767
Telephone: 407-897-4100

All documents related to applications for permits shall be submitted to the above address.

2. Compliance Authority: All documents related to compliance activities such as reports, tests, and notifications shall be submitted to the Central District Air Resource Management Section (see above mailing address and phone number).
3. Appendices: The following Appendices are attached as part of this permit:
 - a. Appendix A. Citation Formats and Glossary of Common Terms;
 - b. Appendix B. General Conditions;
 - c. Appendix C. Common Conditions;
 - d. Appendix D. Common Testing Requirements;
 - e. Appendix E. 40 CFR 60, Subpart A- General Provisions; and
 - f. Appendix F. 40 CFR 60, Subpart Dc- Standards of Performance for Small Industrial-Commercial-Institutional Steam Generating Units.
4. Applicable Regulations, Forms and Application Procedures: Unless otherwise specified in this permit, the construction and operation of the subject emissions units shall be in accordance with the capacities and specifications stated in the application. The facility is subject to all applicable provisions of: Chapter 403, F.S.; and Chapters 62-4, 62-204, 62-210, 62-212, 62-213, 62-296 and 62-297, F.A.C. Issuance of this permit does not relieve the permittee from compliance with any applicable federal, state, or local permitting or regulations.
5. New or Additional Conditions: For good cause shown and after notice and an administrative hearing, if requested, the Department may require the permittee to conform to new or additional conditions. The Department shall allow the permittee a reasonable time to conform to the new or additional conditions, and on application of the permittee, the Department may grant additional time.
[Rule 62-4.080, F.A.C.]
6. Modifications: Unless otherwise exempt by rule, the permittee shall not initiate any construction, reconstruction, or modification at the facility and shall not install/modify any pollution control device at the facility without obtaining prior authorization from the Department. Modification is defined as: Any physical change or changes in the method of operations or addition to a facility

SECTION 2. ADMINISTRATIVE REQUIREMENTS (FINAL)

that would result in an increase in the actual emissions of any air pollutant subject to air regulations, including any not previously emitted, from any emission unit or facility.

[Rules 62-210.200 - Definition of "Modification" and 62-210.300(1)(a), F.A.C.]

7. Annual Operating Report: On or before **April 1** of each year, the permittee shall submit a completed DEP Form 62-210.900(5), "Annual Operating Report for Air Pollutant Emitting Facility" (AOR) for the preceding calendar year. The report may be submitted electronically in accordance with the instructions received with the AOR package sent by the Department, or a hardcopy may be sent to the Compliance Authority.
[Rule 62-210.370(3), F.A.C.]
8. Application for Title V Air Operation Permit Revision: This permit authorizes construction or modification of the permitted emissions unit and initial operation to determine compliance with Department rules. A Title V air operation permit revision is required for continued operation of the permitted emissions unit. The permittee shall apply for a Title V air operation permit revision at least 90 days prior to expiration of this permit, but no later than 180 days after commencing operation or commencing operation as modified. Commencing operation means setting into operation of any emissions unit for any purpose. To apply for a Title V air operation permit revision, the applicant shall submit the following:
 - a. the appropriate permit application form (*see current version of Rule 62-210.900, F.A.C. (Forms and Instructions)*), and/or FDEP Division of Air Resource Management website at: <http://www.dep.state.fl.us/air/>;
 - b. a copy of the most recent compliance test report required by Specific Conditions No. **A.9.** and **A.10.** (if applicable), if not previously submitted; and
 - c. copies of the most recent two months of records/logs specified in Specific Condition No. **A.18.**

The application shall be submitted to the Permitting Authority.

[Rules 62-4.030, 62-4.050, 62-4.220 and Chapter 62-213, F.A.C.]

SECTION 3. FACILITY-WIDE AND EMISSIONS UNIT SPECIFIC CONDITIONS (FINAL)

A. EU No. 070-CCAFS Boiler # 12 (Cleaver Brooks, Building 1777)

This section of the permit addresses the following emissions unit.

ID No.	Emission Unit Description
070	Dual-fired steam boiler (BLR-101, Model No. CBEX-250) rated at 250 hp with a maximum heat input of 10.205 MMBtu/hr. This boiler is planned to be dual-fired by either natural gas or No. 2 fuel oil.

PERFORMANCE RESTRICTIONS

- A.1. Federal Regulatory Requirements: This emission unit is subject to 40 CFR 60, Subpart A-General Provisions (See Appendix E) and Subpart Dc - Standards of Performance for Small Industrial-Commercial-Institutional Steam Generating Units (See Appendix F), which is adopted by reference in Rule 62-204.800, F.A.C. The conditions and terms of this regulation are incorporated into this permit (attached and part of this permit).
[Rule 62-204.800(8), F.A.C.]

{Permitting Note: The boiler is subject to 40 CFR 60 Subpart Dc, recordkeeping requirements only.}

- A.2. Permitted Capacity: The maximum heat input rate shall not exceed 10.205 MMBtu/hr.
[Rule 62-210.200(PTE), F.A.C.]
- A.3. Authorized Fuel: The boiler is only permitted to fire natural gas or no. 2 fuel oil with a maximum sulfur content of 0.5 percent, by weight.
[Rules 62-210.200(PTE) and 62-213.410, F.A.C.; 40CFR60, Subpart Dc, §60.44c (g)]
- A.4. Restricted Operation: The hours of operation are not limited (8760 hours per year).
[Rules 62-4.070(3) and 62-210.200(PTE), F.A.C.]

EMISSIONS STANDARDS

- A.5. Visible Emissions: Visible emissions shall not exceed 20 percent opacity except for one six-minute period per hour during which the opacity shall not exceed 27 percent, or one two-minute period per hour during which opacity shall not exceed 40 percent.
[Rule 62-296.406(1), F.A.C.]
- A.6. HAP Emissions Limitations: The maximum **facility-wide** (all emission units at the facility, including this boiler) HAP emissions are limited to the following:

Pollutant	Emissions (tons per any consecutive 12-months)
Total HAPs	Less than 24.5
Single HAPs	Less than 9.5

[Rule 62-210.200, (PTE), F.A.C. and Construction Permit No. 0090005-008-AC]

SECTION 3. FACILITY-WIDE AND EMISSIONS UNIT SPECIFIC CONDITIONS (FINAL)

A. EU No. 070-CCAFS Boiler # 12 (Cleaver Brooks, Building 1777)

- A.7. The boiler is subject to a particulate matter standard of 0.03 lb per MMBtu of heat input, **unless it meets the definition of gas-fired boiler listed below.**

Gas-fired boiler includes any boiler that burns gaseous fuels not combined with any solid fuels, burns liquid fuel only during periods of gas curtailment, gas supply emergencies, or periodic testing on liquid fuel. Periodic testing of liquid fuel shall not exceed a combined total of 48 hours during any calendar year.

{Permitting Note: The particulate matter standard of 0.03 lb per MMBtu is for the filterable PM only, not the condensable.}

[Rule 62-4.070(3), F.A.C.]

{Permitting Note: If the boiler meets the definition of gas fired boiler listed in Specific Condition **A.7.**, the boiler will not be subject to 40 CFR 63 Subpart JJJJJ and the regulation will not be included as part of the Title V Air Operation Permit Revision that will incorporate the boiler. **This federal regulation has not yet been adopted by reference in Rule 62-204.800, F.A.C}**

WORK PRACTICE STANDARDS

- A.8. If boiler is subject to 40 CFR 63 Subpart JJJJJ, then the following work practice standards shall apply to the boiler:
- Minimize the boiler's startup and shutdown periods following the manufacturer's recommended procedures. If manufacturer's recommended procedures are not available, you must follow recommended procedures for a unit of similar design for which manufacturer's recommended procedures are available; and,
 - Conduct a tune-up of the boiler biennially (every other year) as specified in § 63.11223.

[40CFR63, Subpart JJJJJ]

TESTING REQUIREMENTS

- A.9. **VE Compliance Tests:** The boiler shall be tested to demonstrate initial compliance with the emissions standard for visible emissions specified in Specific Condition **A.5.**, **no later than 90 days after commencing operation.**
[Rule 62-4.070(3), F.A.C.]
- A.10. **PM Compliance Tests:** The boiler, **if using fuel oil**, shall be tested **using fuel oil** to demonstrate initial compliance with the particulate matter standard specified in Specific Condition **A.7.**, no later than 90 days after commencing operation, unless the boiler meets the definition of gas-fired boiler listed in Specific Condition A.7., and triennially (every three years) thereafter.

SECTION 3. FACILITY-WIDE AND EMISSIONS UNIT SPECIFIC CONDITIONS (FINAL)

A. EU No. 070-CCAFS Boiler # 12 (Cleaver Brooks, Building 1777)

[Rule 62-4.070(3), F.A.C.; 40CFR63, Subpart JJJJJ]

- A.11. Boiler Operating Load During Testing: For boilers that demonstrate compliance with a performance stack test, maintain the operating load of each unit such that it does not exceed 110 percent of the average operating load recorded during the most recent performance stack test. The boiler operating load during testing shall be determined by the following:
- Collect operating load data (fuel feed rate or steam generation data) every 15 minutes during the entire period of the performance test;
 - Determine the average operating load by computing the hourly averages using all of the 15-minute readings taken during each performance test; and
 - Determine the average of the three test run averages during the performance test, and multiply this by 1.1 (110 percent) as your operating limit.

[40CFR63, Subpart JJJJJ]

- A.12. Test Requirements: Tests shall be conducted in accordance with the applicable requirements specified in Appendix D (Common Testing Requirements) of this permit.

[Rule 62-297.310, F.A.C.]

- A.13. Test Methods: Required tests shall be performed in accordance with the following reference method.

EPA Method	Description of Method and Comments
1	Sample and Velocity Traverses for Stationary Sources
2	Determination of Stack Gas Velocity and Volumetric Flow Rate
3A	Determination of Oxygen and Carbon Dioxide Concentrations in Emissions from Stationary Sources (Instrumental Analyzer Procedure)
3B	Gas Analysis for the Determination of Emission Rate Correction Factor or Excess Air
4	Determination of Moisture Content in Stack Gases
5	Determination of Particulate Emissions from Stationary Sources
9	Visual Determination of the Opacity of Emissions from Stationary Sources The test period shall be 60 minutes for the boiler that is required to be tested.
17	Determination of Particulate Emissions from Stationary Sources (In-stack Filtration Method)
19	Determination of Sulfur Dioxide Removal Efficiency and Particulate, Sulfur Dioxide and Nitrogen Oxides Emission Rates

The above method(s) are described in Appendix A of 40 CFR 60 and are adopted by reference in Rule 62-204.800, F.A.C. No other method(s) may be used unless prior written approval is received from the Department.

[Rules 62-204.800 and 62-297.310, F.A.C.; and Appendix A of 40 CFR 60]

SECTION 3. FACILITY-WIDE AND EMISSIONS UNIT SPECIFIC CONDITIONS (FINAL)

A. EU No. 070-CCAFS Boiler # 12 (Cleaver Brooks, Building 1777)

A.14. Fuel Certification Requirements: In order to demonstrate ongoing compliance with Specific Condition No. **A.3.**, the permittee shall maintain fuel supplier certifications for each shipment of fuel oil received. The certifications shall include the following information for distillate oil:

- (i) The name of the oil supplier and either (ii) and (iii), or (iv) following.
- (ii) A statement from the oil supplier that the oil complies with the specifications under the definition of distillate oil in §60.41c of 40CFR 60, Subpart Dc; and
- (iii) The sulfur content or maximum sulfur content of the oil;
- (iv) Documentation that the fuel is ultra low sulfur diesel (e.g., fuel delivery receipt).

The records of the fuel supplier certifications that are maintained shall represent all of the fuel oil combusted in the boiler.

[Rules 62-210.200(PTE) and 62-4.070(3), F.A.C. and 40CFR60, Subpart Dc, §60.48C (f)]

{Permitting Note: Distillate oil means fuel oil that complies with the specifications for fuel oil numbers 1 or 2, as defined by the American Society for Testing and Materials in ASTM D396 (incorporated by reference, see §60.17) or diesel fuel oil numbers 1 or 2, as defined by the American Society for Testing and Materials in ASTM D975.}

NOTIFICATION REQUIREMENTS

A.15. Test Notification: The permittee shall notify the Compliance Authority at least 15 days prior to any required tests. The notification must include the following information: the date, time, and location of each test; the name and telephone number of the facility's contact person who will be responsible for coordinating the test; and the name, company, and the telephone number of the person conducting the test.

{Permitting Note: The notification should also include the relevant emission unit ID No(s), test method(s) to be used, and pollutants to be tested.}

[Rules 62-4.070(3) and 62-297.310(7)(a)9., F.A.C.]

A.16. Notification of Operation Commencement: The permittee shall notify the Compliance Authority in writing of the date of commencing operation of the **EU No. 070**, no later than five (5) business days after that date. Commencing operation means setting into operation of any emissions unit for any purpose.

[Rules 62-4.070 and 62-210.200 (Commence Operation), F.A.C.]

RECORDS AND REPORTS

SECTION 3. FACILITY-WIDE AND EMISSIONS UNIT SPECIFIC CONDITIONS (FINAL)

A. EU No. 070-CCAFS Boiler # 12 (Cleaver Brooks, Building 1777)

- A.17. Test Reports: The permittee shall prepare and submit reports for all required tests in accordance with the requirements specified in Appendix D (Common Testing Requirements) of this permit.
[Rule 62-297.310(8), F.A.C.]
- A.18. Monthly Recordkeeping Requirements: In order to demonstrate compliance with Specific Condition Nos. **A.2.**, **A.3.**, **A.6.**, and **A.14.**, the permittee shall maintain a log at the facility for a period of at least five (5) years from the date the data is recorded and made available to the Department upon request. The log shall contain the following:
- Facility Name, Facility ID No. (i.e., 0090005);
 - Month and year of record;
 - Type and quantity of fuel used to fire the boiler;
 - Total operational hours for the boiler when it is burning a liquid fuel for the most recent consecutive 12-month period;
 - Fuel certifications required by condition number **A.14.**;
 - Monthly total of VOC, total HAP, and single HAP emissions; and
 - Consecutive 12-month totals for total VOC, total HAP, and single HAP emissions.

The monthly logs shall be completed by the end of the following month.

Note: A consecutive 12 months total is equal to the total for the month in question plus the totals for the eleven months previous to the month in question. A consecutive 12-months total treats each month of the year as the end of a 12-months period. A 12-months total is not a year-to-date total. Facilities or emission units that have not been operating for 12 months should retain 12 months totals using whatever number of months of data are available until such a time as a consecutive 12 months total can be maintained each month.

[Rule 62-4.070(3), F.A.C.]