Best Available Control Technology (BACT) Determination
Department of the Navy
Naval Air Station, Jacksonville
Duval County

This BACT determination is required for the source as set forth in Rules 62-296.400, Florida Administrative Code (FAC), - Specific Emissions Limiting and Performance Standards, and Rule 62-296.406, FAC, - Fossil Fuel Steam Generators with less than 250 Million Btu per hour Heat Input, New and Existing Sources.

The applicant has applied for a Construction Permit to construct 15 boilers at the existing naval air station located at 6500 Roosevelt Blvd., Jacksonville, FL. The boilers are located throughout the base and are designated as follows:

Emission Unit ID No.	Brief Description
087	Steam Plant A (5 boilers)
088	Steam Plant C (3 boilers)
089	Steam Plant F (2 boilers)
090	Steam Plant G (1 boilers)
091	Steam Plant J (3 boilers)
092	Bldg. 11, Boiler No. 1

The boilers range in size from 2.1 MM Btu per hour heat input to 31.4 MMBtu per hour heat input. The primary fuel is natural gas with very low sulfur fuel oil as backup for all boilers except Boiler No. 1 in Bldg. 11, which is fired exclusively by natural gas.

BACT Determination Requested by Applicant:

Steam plant A, C, F, G, and J: Particulate matter and sulfur dioxide emissions shall be controlled by the firing of Natural gas or No. 2 (distillate) fuel oil with a maximum sulfur content of 0.05% by weight. Bldg. 11, Boiler No. 1: Particulate matter and sulfur dioxide emissions shall be controlled by the firing of natural gas.

Date of Receipt of BACT Application:

October 20, 1999

BACT Determination by the Department:

Steam plant A, C, F, G, and J: Particulate matter emissions and sulfur dioxide emissions shall be controlled by the firing of natural gas or very low sulfur content No. 2 fuel oil. The sulfur content of the fuel oil shall not exceed 0.05%, by weight. Bldg. 11, Boiler No. 1: Particulate matter and sulfur dioxide emissions shall be controlled by the firing of natural gas.

Initial testing requirements for all boilers subject to NSPS shall be in accordance with applicable requirements as stated in the 40 CFR 60, Subpart Dc, and 40 CFR 60, Subpart A. Testing requirements for boiler nos. A-4, A-5, J-1, J-2, and J-3 shall be as follows:

Testing for demonstration of compliance shall be performed in accordance with Environmental Protection Agency (EPA) Reference Method (RM) 9 (as described in 40 CFR 60, Appendix A), for the visual determination of opacity. The initial visible emission compliance test shall be a minimum of three (3) hours in length while firing fuel oil.

Testing requirements for boiler no. 1 in bldg. 11 shall be as follows:

Testing for demonstration of compliance shall be performed in accordance with Environmental Protection Agency (EPA) Reference Method (RM) 9 (as described in 40 CFR 60, Appendix A), for the visual determination of opacity. The initial visible emission compliance test shall be a minimum of thirty (30) minutes in length.

BACT Determination Rationale:

Sulfur in fuel is a primary air pollution concern since most of the fuel sulfur becomes sulfur dioxide. Particulate Matter emissions are also related to the sulfur content of the fuel oil.

This determination is consistent with other recent BACT Determinations for small boilers (i.e., less than 100 * 10^6 Btu/hr firing rate) and is more stringent than Subpart Dc, New Source Performance Standards.

Details of the Analysis May be Obtained by Contacting:

Jerry E. Woosley
Associate Pollution Control Engineer
Regulatory and Environmental Services Department
Air & Water Quality Division
117 West Duval Street, Suite 225
Jacksonville, FL 32202

Approved by:

Richard L. Robinson

Richard Robinson, P.E., Manager
Air Pollution Source Permitting Section

2/10/00

Date

s:\air quality\permitv\TVOP\draft\0310215-022NASbact6boilerplants-AV.doc

Best Available Control Technology (BACT) Determination

United States Navy
Navy Public Works Center -_Jacksonville
Duval County

The applicant has submitted a construction permit application for three (3) 300 HP boilers. The application is for the modification of the air pollution source permit AC16-253654 issued October 13, 1994 for two (2) 350 HP boilers. The boilers are fired primarily with natural gas. No. 2 fuel oil is a secondary fuel for emergencies or natural gas curtailment.

This BACT determination is required for the source as set forth in Rules 62-296.400, Florida Administrative Code (FAC), - Specific Emissions Limiting and Performance Standards, and Rule 62-296.406, FAC, - Fossil Fuel Steam Generators with less than 250 Million Btu per hour Heat Input, New and Existing Sources.

BACT Determination Requested by Applicant:

Particulate matter and sulfur dioxide emissions shall be controlled by the firing of natural gas.

Date of Receipt of BACT Application:

January 5, 1996

BACT Determination by the Department:

The amount of particulate matter and sulfur dioxide emissions from the boilers shall be limited by the firing of natural gas as the primary fuel.

No. 2 fuel oil shall be fired as an emergency fuel and during periods of natural gas curtailment.

The maximum sulfur content of No. 2 fuel oil as fired shall not exceed 0.05 percent, by weight.

The firing of no. 2 fuel oil as fired shall not exceed a maximum of 400 hours per calendar year.

BACT Determination Rationale:

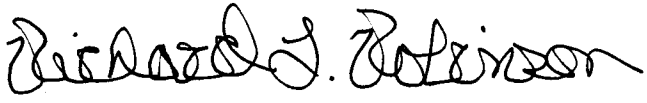
Sulfur in fuel is a primary air pollution concern since most of the fuel sulfur becomes sulfur dioxide. Also particulate matter emissions from fuel burning are related to the sulfur content. The firing of natural gas shall be BACT for the boilers.

This decision is consistent with previous BACT Determinations for similar units and with 40 CFR 60, Subpart Dc - Standards of Performance for Small Industrial - Commercial - Institutional Steam Generating Units.

Details of the Analysis May be Obtained by Contacting:

Ronald L. Roberson, Associate Engineer
Regulatory and Environmental Services Department
Air & Water Quality Division
421 W. Church Street, Suite 422
Jacksonville, FL 32202

Approved by:



Richard L. Robinson, P.E.
Pollution Control Engineer

January 18, 1996

s:\air quality\permitv\TVOP\draft\0310215-022NASbact3 300 HP boilers-AV.doc

Best Available Control Technology (BACT) Determination
Department of the Navy, Naval Air Station, Jacksonville
Duval County

This BACT determination is required for the source as set forth in Rules 62-296.400, Florida Administrative Code (FAC), - Specific Emissions Limiting and Performance Standards, and Rule 62-296.406, FAC, - Fossil Fuel Steam Generators with less than 250 Million Btu per hour Heat Input, New and Existing Sources.

Numerous small boilers/hot water heaters fired by natural gas or No. 2 fuel oil are located at the facility, which require a BACT determination. The small boilers/hot water heaters regulated by this BACT have a maximum heat output of greater than or equal to 1 MMBtu per hour and a maximum heat input of 10 MMBtu per hour.

BACT Determination Requested by Applicant:

Particulate matter and sulfur dioxide emissions shall be controlled by the firing of Natural gas or No. 2 (distillate) fuel oil with a maximum sulfur content of 0.05% by weight.

Date of Receipt of BACT Application:

January 30, 2004

BACT Determination by the Department:

Particulate matter emissions and sulfur dioxide emissions shall be controlled by the firing of natural gas or very low sulfur content fuel oil. The sulfur content of the fuel oil shall not exceed 0.05%, by weight.

BACT Determination Rationale:

Sulfur in fuel is a primary air pollution concern since most of the fuel sulfur becomes sulfur dioxide. Particulate Matter emissions are also related to the sulfur content of the fuel oil.

This determination is consistent with other recent BACT Determinations for small boilers (i.e., less than $100 \cdot 10^6$ Btu/hr firing rate) and is more stringent than Subpart Dc, New Source Performance Standards.

Details of the Analysis May be Obtained by Contacting:

Jerry E. Woosley
Environmental Engineer
Environmental Resource Management Department
Environmental Quality Division
117 West Duval Street, Suite 225
Jacksonville, FL 32202

Approved by:

Richard L. Robinson

Richard Robinson, P.E., Manager
Air Pollution Source Permitting Section

9/21/04

Date