



CITY OF PHILADELPHIA
DEPARTMENT OF PUBLIC HEALTH
AIR MANAGEMENT SERVICES

RACT PLAN APPROVAL

Effective Date: February 9, 2016

Expiration Date: None

In accordance with provisions of the Air Pollution Control Act, the Act of January 8, 1960, P.L. 2119, as amended, and after due consideration of a Reasonably Available Control Technology (RACT) proposal received under the Pennsylvania Code, Title 25, Chapter 129.91 thru 129.95, of the rules and regulations of the Pennsylvania Department of Environmental Protection (PADEP), Air Management Services (AMS) approved the RACT proposal of the facility below for the source(s) listed in section 1.A. Emission Sources of the attached RACT Plan Approval.

Facility: Naval Surface Warfare Center - Carderock Division, Ship
Systems Engineering Station (NSWCCD-SSES)

Permittee: NSWCCD
Location: 5001 South Broad Street, Code 02, Philadelphia, PA 19112
Mailing Address: 5001 South Broad Street, Code 02, Philadelphia, PA 19112
SIC Code(s): 9722
Plant ID: 9724

Facility Contact: Mark Donato
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Permit Contact: Mark Donato
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Responsible Official: Walter A. Coppeans III
Title: Captain, US Navy Commanding Officer

A handwritten signature in blue ink, appearing to read "Edward Wiener".

Edward Wiener, Chief of Source Registration

2/9/2016

Date

In accordance with provisions of the Pennsylvania Code, Title 25, Chapter 129.91 thru 129.95, Air Management Services (AMS) has approved the RACT proposal plans for Naval Surface Warfare Center - Carderock Division, Ship Systems Engineering Station (NSWCCD-SSES) on the above indicated air contamination source(s).

The RACT plan approval is subject to the following conditions:

1. The purpose of this Plan Approval is to establish Nitrogen Oxides (NOx) Reasonably Available Control Technology (RACT) for NSWCCD-SSES. This includes the following emission sources and control equipment:

A. Emission Sources

- i. One (1) 202 MMBTU/hr wall-fired ship’s boiler (DDG-15, CU-M108) used for testing.
- ii. Eighteen (18) testing engines and turbines.

<u>TVID</u>	<u>Engines and Turbines</u>	<u>Capacity</u>	<u>Fuel</u>	
CU-B108	B633; Boiler DDG-15	202.13 MMBTU/hr	#2 Diesel Fuel	
CU-M110G	77H; Marine Engine Test Cell 1	16.42 MMBTU/hr	#2 Diesel Fuel	
CU-M111	B77H; Engine Testing Gas Turbine DDG-51206.9 MMBTU/hr	206.9 MMBTU/hr	#2 Diesel Fuel	(LM-2500 2A)
CU-M112	B77H; Engine Testing Gas Turbine DDG-51206.9 MMBTU/hr	206.9 MMBTU/hr	#2 Diesel Fuel	(LM-2500 2B)
CU-M113	B77H; Engine Testing Gas Turbine CG-47	40.6 MMBTU/hr	#2 Diesel Fuel	(K-17)
CU-M114	B77H; Engine Testing Gas Turbine GTG#2	37.4 MMBTU/hr	#2 Diesel Fuel	(K-34)
CU-M115	B633; Engine Testing LSD-41 ALPHA	51.2 MMBTU/hr	#2 Diesel Fuel	
CU-M116	B633; Engine Testing LSD-41 Bravo	51.2 MMBTU/hr	#2 Diesel Fuel	
CU-M119	B824; Engine Testing TF-40 Gas Turbine	≤ 42.1 MMBTU/hr	#2 Diesel Fuel	Test Cell 2
CU-M139	B77H; Engine Testing Gas Turbine GTG#1	37.4 MMBTU/hr	#2 Diesel Fuel	(K-34)
CU-M142	B77H; Engine Testing Gas Turbine Auxiliary	4.72 MMBTU/hr	#2 Diesel Fuel	(RIMMS)
CU-M144	B87; Engine Testing Diesel Generator	377 HP	#2 Diesel Fuel	
CU-M149	B633; P-104 Test Cell	238 MMBTU/hr	#2 Diesel Fuel	
CU-M150	B77H; DD(X) MT-30	311.8 MMBTU/hr	#2 Diesel Fuel	
CU-M151	B77H; DD(X) LM-500	51.4 MMBTU/hr	#2 Diesel Fuel	
CU-M152	B77H; DD(X) RR-4500	55.6 MMBTU/hr	#2 Diesel Fuel	
	DDX Test Cell	418.8 MMBTU/hr	#2 Diesel Fuel	
CU-M153	B87; Caterpillar D80-4 Test Engine Generator	80 kW	#2 Diesel Fuel	
CU-M155	B77H Diesel Engine Testing EDG, CAT C-18	4.79 MMBTU/hr	#2 Diesel Fuel	

2. This approval authorizes:

- A. NOx emissions from CU-B108 (Boiler DDG-15) shall not exceed 0.38 lb/MMBtu. AMS will re-evaluate this emission limit after the testing required in Condition 4.A.i is conducted.
- B. The boiler and testing engines/gas turbines will continue to adhere to the standard Navy Planned Maintenance program as defined for shipboard use.

3. RACT Implementation Schedule

- A. Upon issuance of this approval, NSWCCD-SSES shall begin immediate implementation of the measures necessary to comply with the approved RACT proposal.

4. Testing and Monitoring Requirements

- A. As per 25 PA Code 129.91(i), following the implementation of the RACT requirements, for a combustion unit with a rated heat input greater than 100 MMBTU/hr and not subject to 25 PA Code 123.51 (DDG-15), NSWCCD-SSES shall determine the rate of NOx emissions from the combustion unit through an AMS approved source testing program.

- i. The boiler shall be tested with 12 months of the effective date of this RACT Plan Approval and within 5 years of

the previous test.

- ii The test in Condition 4.A.i may be postponed during any calendar year the boiler operated less than 50 hours.
- iii. The boiler shall be tested once it reaches 100 hours of operation from the effective date of this RACT Plan Approval if testing has not been conducted under Conditions 4.A.i or 4.A.ii . If required, the test shall be conducted within 60 days of reaching the 100-hour threshold.

5. Recordkeeping and Reporting Requirements

A. NSWCCD-SSES shall maintain a file containing all the records and other data that are required to be collected to demonstrate compliance with RACT requirements of 25 PA Code §129.91-129.94. These records shall include:

- i. Fuel consumption and operation hours for the boiler;
- ii. Details of the maintenance program for the boiler and testing engines/turbines at the facility.
- iii. Boiler test results shall be submitted to AMS in a timely manner within 60 days of from the testing date or as approved by AMS.

B. Records shall be retained for at least five years and shall be made available to AMS on request.

6. Revisions to any emission limitations incorporated in this RACT Approval will require resubmission as revision to the PA State Implementation Plan. The applicant shall bear the cost of public hearing and notification required for EPA approval as stipulated in 25 PA Code §129.91(h).