

CITY OF PHILADELPHIA
Department of Public Health
Environmental Protection Division
Air Management Services

InterOffice Memo

To: File
From: Rahel Gebrekidan
Date: June 22, 2015
Subject: 1997 8-Hour RACT Analysis for The Navy Foundry and Propeller Center
(PLID # 09702)

Introduction:

The Clean Air Act (CAA) requires that moderate (or worse) ozone nonattainment areas implement reasonably available control technology (RACT) controls on all major sources of VOC and NOx. Philadelphia County is part of the Philadelphia-Wilmington-Atlantic City moderate ozone nonattainment area for the 1997 8-hour ozone NAAQS. This document presents the findings of a RACT evaluation for the 1997 8-hour ozone standard for this facility.

Company Description:

The Navy Foundry and Propeller Center is located at Navy Yard, Philadelphia, PA 19112. The Naval Foundry and Propeller Center is Navy facility with cement mixing, metal melting, metal stress relieving, and metal grit blasting facility as per foundry operations and a machining, degreasing, painting and blasting of metal parts facility as per the machine shop.

Applicability for NOx and VOC RACT:

The Navy Foundry and Propeller Center is a major source of Nitrogen Oxides (NOx) having potential NOx emissions greater than 100 tons per year, the major source threshold in Philadelphia County that is applicable to NOx RACT for the 1997 8-hour ozone NAAQS. This facility is not a major source of VOC having potential emissions of less than 50 tons per year, the major source threshold in Philadelphia County that is applicable to VOC RACT for the 1997 8-hour ozone NAAQS.

Process Descriptions:

The Navy Foundry and Propeller Center currently has the following NOx Sources:

Location	Combustion Sources	Capacity	Fuel
Building 20	Reverbatory Furnace	18 MMBTU/hr	Natural Gas
	2 Sand Core Ovens	15 MMBTU/hr total	Natural Gas
	2 Crucible Furnaces	<20 MMBTU/hr each	Natural Gas

	Stress Relieving Oven	20 MMBTU/hr	Natural Gas
	2 Heat Treating Ovens	8.8 MMBTU/hr each	Natural Gas
	6 Ladle Preheaters	<20 MMBTU/hr each	Natural Gas
	2 Small Ovens	<20 MMBTU/hr each	Natural Gas
	5- Air rotating units	1.875 MMBTU/hr	Natural Gas
	7- Make-up air units	3.0 MMBTU/hr	Natural Gas
	1- Air handling unit	0.4 MMBTU/hr	Natural Gas
	1- Make-up air unit	1.25 MMBTU/hr	Natural Gas
	1-Rooftop heater	0.250 MMBTU/hr	Natural Gas
	Emergency Generator	20Kw	Natural Gas
Building 546			
	3- Air rotating units	2.2 MMBTU/hr	Natural gas
	2-Heater	0.125 MMBTU/hr	Natural Gas
Building 592			
	1- Air rotation unit	2.2 MMBTU/hr	Natural gas
Building 712			
	2- Boilers	0.52 MMBTU/hr	Natural gas
Building 1029			
	2- Air rotating units	2.2 MMBTU/hr	Natural gas

RACT Evaluation:
Presumptive RACT

The following sources have maximum heat input ratings of less than 20 MMBTU/hr and thus are subject to the presumptive RACT requirements specified in 25 Pa Code 129.93(c)(1), operation and maintenance of boilers per manufacturer specifications.

<u>Location</u>	<u>Combustion Sources</u>	<u>RACT Requirement</u>
Building 20		
	Reverbatory Furnace	25 PA Code 129.93(c)(1)
	2 Sand Core Ovens	25 PA Code 129.93(c)(1)
	2 Crucible Furnaces	25 PA Code 129.93(c)(1)
	2 Heat Treating Ovens	25 PA Code 129.93(c)(1)
	6 Ladle Preheaters	25 PA Code 129.93(c)(1)
	2 Small Ovens	25 PA Code 129.93(c)(1)
	5- Air rotating units	25 PA Code 129.93(c)(1)
	7- Make-up air units	25 PA Code 129.93(c)(1)
	1- Air handling unit	25 PA Code 129.93(c)(1)
	1- Make-up air unit	25 PA Code 129.93(c)(1)
	1-Rooftop heater	25 PA Code 129.93(c)(1)
Building 546		
	3- Air rotating units	25 PA Code 129.93(c)(1)
	2-Heater	25 PA Code 129.93(c)(1)
Building 592		
	1- Air rotation unit	25 PA Code 129.93(c)(1)
Building 712		
	2- Boilers	25 PA Code 129.93(c)(1)
Building 1029		

The following source meets the presumptive RACT requirements specified in 25 Pa Code 129.93(c)(5), the operation and maintenance of the source per manufacturer's specifications, and a 5% annual capacity factor limit per rolling 12-month period under the facility's Title V operating permit # V13-002.

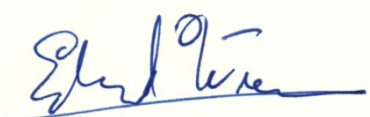
<u>Location</u>	<u>Combustion Sources</u>	<u>RACT Requirement</u>
Building 20	Stress Relieving Oven	25 PA Code 129.93(c)(5)

De minimis Source

The 20 KW emergency generator, which is listed as insignificant source in the facility Title V operating permit # V13-002, is considered a de minimus source for RACT purposes. The potential NOx emission from the emergency generator is less than 1 ton per year. Based on AMS permitting and engineering knowledge, AMS determines that installing any control technology on such small source is both technically and economically unreasonable.

Conclusions and Recommendations:

All significant NOx sources are covered by presumptive RACT.



Edward Wiener, Chief of Source Registration

6/22/15

Date