



STATE OF MAINE
DEPARTMENT OF ENVIRONMENTAL PROTECTION

JOHN ELIAS BALDACCI
GOVERNOR

DAVID P. LITTELL
COMMISSIONER

PORTSMOUTH NAVAL SHIPYARD) DEPARTMENTAL
YORK COUNTY) FINDINGS OF FACT AND ORDER
KITTERY, MAINE) NEW SOURCE REVIEW LICENSE
A-452-77-1-M 1 MINOR REVISION

After review of the air emission license minor revision application, staff investigation reports and other documents in the applicant’s file in the Bureau of Air Quality, pursuant to 38 M.R.S.A, Section 344, Section 590, 06-096 CMR 115 and the Department finds the following facts:

I. REGISTRATION

A. Introduction

FACILITY	Portsmouth Naval Shipyard (PNS)
PART 70 LICENSE NUMBER	A-452-70-C-R
LICENSE TYPE	Chapter 115 Minor Revision
NAIC CODES	336611- Ship Building and Repair
NATURE OF BUSINESS	National Security (Submarine Repair for U.S. Navy)
FACILITY LOCATION	Kittery, Maine
DATE OF NSR LICENSE ISSUANCE	November 24, 2008

B. Revision Description and Affected Emission Equipment

PNS has requested to install a steam driven water evaporation unit which would evaporate reprocessed pure water with slightly elevated levels of tritium. The evaporator will use 200 pound steam from the licensed PNS steam generating units to achieve the temperatures needed to evaporate water.

C. Application Classification

PNS is a major source per the Maine Department of Environmental Protection’s 06-096 CMR 100 regulation. The inclusion of a steam driven water evaporator will result in no increase in emissions of any criteria pollutants. The water evaporator unit will evaporate reprocessed pure water with slightly elevated levels of tritium, a radionuclide which is a hazardous air pollutant (HAP). The insignificant threshold for radionuclides is 0 lbs/year, which means that if the proposed unit emits any amount of radionuclides, then it is not insignificant. This amendment will increase emissions by less than 4 tons/year for each single pollutant and less than 8 tons/year for all pollutants combined. Therefore, this modification is determined to be a minor revision in accordance with 06-096 CMR 115 and has been processed as such.

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II. BEST PRACTICAL TREATMENT (BPT)

A. Introduction

In order to receive a license the applicant must control emissions from each unit to a level considered by the Department to represent Best Practical Treatment (BPT), as defined in 06-096 CMR 100 of the Department's regulations. Separate control requirement categories exist for new and existing equipment as well as for those sources located in designated non-attainment areas.

BPT for new and modified units requires a demonstration that emissions are receiving Best Available Control Technology (BACT), as defined in 06-096 CMR 100 of the Department's regulations. BACT is a top-down approach to selecting air emission controls considering economic, environmental and energy impacts.

B. Water Evaporator Unit

The steam driven water evaporator being proposed by PNS has a maximum capacity to evaporate 28 gallons of water per hour. The pollutant of concern is the slight amount of tritium that could be released; therefore a thorough analysis of the maximum quantity is needed. It is estimated that this water evaporation unit would result in a release of 9.08×10^{-7} lbs/year of tritium, at the conservative evaporation rate of 28 gal/hour.

Federal Requirements

40 CFR 61, Subpart I, "National Emission Standards for Radionuclide Emissions from Federal Facilities other than the Nuclear Regulatory Commission Licensees and Not Covered by Subpart H". This subpart applies to facilities owned or operated by any Federal agency other than the Department of Energy and not licensed by the Nuclear Regulatory Commission. The Shipyard is not a major source of Hazardous Air Pollutants (HAPs) because it is limited to 25 tons/year of total HAPs and 10 tons/year for each individual HAP, however it is subject to 40 CFR 61, Subpart I.

According to 40 CFR 61.106, "An application under 61.07 does not need to be filed for any new construction of or modification within an existing facility if the following condition is met. The effective dose equivalent calculated by using methods described in 61.103, that is caused by all emissions from the new construction or modification, is less than 1% of the limit prescribed in 61.102." The effective dose equivalent was calculated by the Shipyard based on the potential to emit 24 hours/day, 365 days/year, for the proposed new construction. The calculated exposure is estimated to be less than 1% of the limit prescribed in section 61.102. Therefore, according to section 61.106, PNS does not need to submit an application to construct or modify per the federal regulations.

However, since the evaporator will emit more than 0 lbs/year of a radionuclide, it is subject to the Department's minor revision requirements.

Reporting Requirements

Facilities emitting radionuclides in an amount that would cause less than 10% of the dose standard in 40 CFR 61.102 are exempt from the reporting requirements of 40 CFR 61.104. In accordance with 40 CFR 61.104(b), PNS annually determines whether it is exempt from reporting. Thus far it has always been determined that PNS is exempt and it is anticipated to maintain that status after the proposed new construction is in place, however that determination will be made annually as required by 40 CFR 61.104(a).

Once the new unit is installed and operational, PNS will demonstrate that the unit is below emission limits and meets reporting compliance with 40 CFR 61, Subpart I by using alternative procedures approved by the EPA, as documented in a letter to the Department of the Navy from the EPA dated 1 October, 1997. This calculation method is described in Attachment 3 of the September 2008 application submittal, which is the current PNS practice for reporting all radionuclide emissions. Emissions of radionuclides, including iodine, are limited by 40 CFR 61.102 to those levels that would cause any member of the public to receive in any year an effective dose equivalent of 10 mrem/year. Emissions of iodine shall not exceed those amounts that would cause any member of the public to receive in any year an effective dose equivalent of 3 mrem/year. PNS will demonstrate compliance using the approved computer model COMPLY.

By meeting the emission and reporting requirements of Subpart I, PNS meets BACT per this minor revision license.

MACT Emission Limitations, 40 CFR 63

The proposed new construction is not subject to any MACT standard that has been promulgated to date.

ORDER

Based on the above Findings and subject to conditions listed below, the Department concludes that the emissions from this source:

- will receive Best Practical Treatment,
- will not violate applicable emission standards,
- will not violate applicable ambient air quality standards in conjunction with emissions from other sources.

PORTSMOUTH NAVAL SHIPYARD)
YORK COUNTY)
KITTERY, MAINE)
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DEPARTMENTAL
FINDINGS OF FACT AND ORDER
NEW SOURCE REVIEW LICENSE
MINOR REVISION

The Department hereby grants this Minor Revision, Air Emission License A-452-77-1-M, pursuant to the preconstruction licensing requirements of 06-096 CMR 115 and subject to the standard and special conditions below.

Severability. The invalidity or unenforceability of any provision, or part thereof, of this license shall not affect the remainder of the provision or any other provisions. This License shall be construed and enforced in all respects as if such invalid or unenforceable provision or part thereof had been omitted.

SPECIFIC CONDITIONS

The following are New Conditions:

- (1) PNS may install a new steam driven evaporator unit to evaporate reprocessed water with slightly elevated levels of tritium. To meet BACT, PNS shall meet the emission and reporting requirements of 40 CFR Part 61 Subpart I.

DONE AND DATED IN AUGUSTA, MAINE THIS 29th DAY OF November 2008.

DEPARTMENT OF ENVIRONMENTAL PROTECTION

BY: 
DAVID P. LITTELL, COMMISSIONER

PLEASE NOTE ATTACHED SHEET FOR GUIDANCE ON APPEAL PROCEDURES

Date of initial receipt of application: September 15, 2008

Date of application acceptance: October 14, 2008

Date filed with the Board of Environmental Protection _____

This Order prepared by Edwin Cousins, Bureau of Air Quality

