TECHNICAL EVALUATION
&
PRELIMINARY DETERMINATION

APPLICANT

BAE Systems Southeast Shipyard
8500 Heckscher Drive
Jacksonville, FL 32226

Jacksonville Shipbuilding and Repair Facility
ARMS Facility ID No. 0310258

PROJECT

Project No. 0310258-013-AC
Application for Air Construction Permit
Open Air Surface Coating/Indoor Surface Coating Modification

COUNTY

Duval, Florida

PERMITTING AUTHORITY

Florida Department of Environmental Protection
Northeast District Office
Waste and Air Resources Management
8800 Baymeadows Way West, Suite 100
Jacksonville, Florida 32256

December 6, 2013

1. GENERAL PROJECT INFORMATION

Air Pollution Regulations

Projects with the potential to emit air pollution are subject to the applicable environmental laws specified in Section 403 of the Florida Statutes (F.S.). The statutes authorize the Department of Environmental Protection (Department) to establish regulations regarding air quality as part of the Florida Administrative Code (F.A.C.), which includes the following chapters: 62-4 (Permits); 62-204 (Air Pollution Control – General Provisions); 62-210 (Stationary Sources – General Requirements); 62-212 (Stationary Sources – Preconstruction Review); 62-213 (Operation Permits for Major Sources of Air Pollution); 62-296 (Stationary Sources - Emission Standards); and 62-297 (Stationary Sources – Emissions Monitoring). Specifically, air construction permits are required pursuant to Rules 62-4, 62-210 and 62-212, F.A.C.

In addition, the U. S. Environmental Protection Agency (EPA) establishes air quality regulations in Title 40 of the Code of Federal Regulations (CFR). Part 60 specifies New Source Performance Standards (NSPS) for numerous industrial activities. Part 61 specifies National Emission Standards for Hazardous Air Pollutants (NESHAP) based on specific pollutants. Part 63 specifies NESHAP based on the Maximum Achievable Control Technology (MACT) for numerous industrial categories. The Department adopts these federal regulations on a quarterly basis in Rule 62-204.800, F.A.C.

Facility Description and Location

The applicant operates an existing shipyard known as the BAE Jacksonville Southeast Shipyards, which is a ship building and repair facility categorized under Standard Industrial Classification No. 3731. The existing Jacksonville Facility is located in Duval County at 8500 Heckscher Drive, Jacksonville, FL 32226. The UTM coordinates of the existing facility are Zone 17, 455.7 km East and 3361.9 km North. This site is in an area that is in attainment (or designated as unclassifiable) for all pollutants subject to a National Ambient Air Quality Standard (NAAQA). The site is also in an area designated as a maintenance area for the pollutant ozone and is located in an area of influence of a maintenance area for the pollutant particulate matter.

BAE System Southeast Shipyards is a full service ship building and repair operation. The facility operations includes abrasive blasting, open air and indoor surface coating of ships and parts, steel work, machinery, electrical and piping work. In addition, there are two (2) portable grit silos.

Existing Process Description

The emission units affected by this air construction permit are EU No. 018 (Open Air Surface Coating) and EU No. 020 (Indoor Surface Coating). EU No. 018 has a federally enforceable condition limiting volatile organic compound emissions to 211.06 tons per year (TPY). EU No. 020 has a federally enforceable condition limiting volatile organic compound emissions to 175.88 TPY. These limits were previously established at the applicant's request.

Both EUs are subject to the National Emission Standards for Hazardous Air Pollutants (NESHAPS), 40 CFR 63, Subpart II, National Emission Standards for Ship Building and Ship Repair (Surface Coating). This standard limits the emissions of Hazardous Air Pollutants (HAPs).

Both EUs are subject to the Reasonably Available Control Technology (RACT) requirements found in Rule 62-296.510, Florida Administrative Code (F.A.C.) and Rule 2.1101, Jacksonville Environmental Protection board (JEPB) which limits the emissions of Volatile Organic Compounds (VOC).

Facility Regulatory Categories

- The facility is a major source of hazardous air pollutants (HAP).
- The facility does not operate units subject to the acid rain provisions of the Clean Air Act.
- The facility is a Title V major source of air pollution in accordance with Chapter 213, F.A.C.
- The facility is a major stationary source in accordance with Rule 62-212.400, F.A.C. for the Prevention of Significant Deterioration (PSD) of Air Quality.

Project Description

This project involves 1): Adding a new paint booth to the existing Indoor Surface Coating (EU ID No. 20) emissions unit, and;

2): A portion of the coating operations conducted for marine vessels in the Open Air Surface Coating operation (EU ID No. 18) will be moved to the new paint booth in the Indoor Surface Coating operation which will result in a necessary revision of the VOC emission caps on EU Nos. 018 and 020 respectively. The project is not expected to have an impact on the facility emission rates of any pollutant.

Proposed Work

New Paint Booth: The permittee will install a new paint booth as part of EU No. 020 for the indoor surface coating operations. The new paint booth will be located separately from the other indoor painting locations at the facility, however they are all part of the same emissions unit. The new paint booth will be equipped with high efficiency paint arrestor filters to minimize PM emission from paint overspray which may occur.

Appurtenances necessary for the operation of the new paint booth will also be constructed which may include but are not limited to ventilation fans, stacks, and monitors.

Processing Schedule

Construction upon permit issuance.

2. PSD APPLICABILITY

General PSD Applicability

The Department regulates major stationary sources of air pollution in accordance with Florida's PSD preconstruction review program as defined in Rule 62-212.400, F.A.C. A PSD applicability review is required in areas currently in attainment with the state and federal AAQS or areas otherwise designated as "unclassifiable". A facility is considered a major stationary source with respect to PSD if it emits or has the potential to emit: 5 tons per year or more of lead; 250 tons per year or more of any regulated air pollutant; or 100 tons per year or more of any regulated air pollutant and the facility belongs to one of the 28 PSD-major facility categories (fossil fuel-fired steam electric plants of more than 250 million British thermal units per hour heat input, coal cleaning

plants (with thermal dryers), Kraft pulp mills, portland cement plants, primary zinc smelters, iron and steel mill plants, primary aluminum ore reduction plants, primary copper smelters, municipal incinerators capable of charging more than 250 tons of refuse per day, hydrofluoric, sulfuric, and nitric acid plants, petroleum refineries, lime plants, phosphate rock processing plants, coke oven batteries, sulfur recovery plants, carbon black plants (furnace process), primary lead smelters, fuel conversion plants, sintering plants, secondary metal production plants, chemical process plants, fossil fuel boilers (or combinations thereof) totaling more than 250 million British thermal units per hour heat input, petroleum storage and transfer units
with a total storage capacity exceeding 300,000 barrels, taconite ore processing plants, glass fiber processing plants, and charcoal production plants.). Projects at existing or new major stationary sources are subject to PSD preconstruction review. In addition, proposed projects at existing minor sources are subject to PSD preconstruction review if potential emissions *from the proposed project* will exceed the PSD major stationary source thresholds.

Once a project becomes subject to PSD preconstruction review, each PSD pollutant is reviewed for PSD applicability based on emissions thresholds known as the "significant emission rates" defined in Rule 62-210.200, F.A.C. for the following pollutants: carbon monoxide (CO); nitrogen oxides (NO_X); sulfur dioxide (SO_2); particulate matter (PM); particulate matter with a mean particle diameter of 10 microns or less (PM_{10}); volatile organic compounds (VOC); lead (Pb); Fluorides (F); sulfuric acid mist (SAM); hydrogen sulfide (H_2S); total reduced sulfur (TRS), including H_2S; reduced sulfur compounds, including H_2S; municipal waste combustor organics measured as total tetra- through octa-chlorinated dibenzo-p-dioxins and dibenzofurans; municipal waste combustor metals measured as particulate matter; municipal waste combustor acid gases measured as SO_2 and hydrogen chloride (HCl); municipal solid waste landfills emissions measured as nonmethane organic compounds (NMOC); and mercury (Hg). Pollutant emissions from the project exceeding these rates are considered "significant" and the applicant must employ the Best Available Control Technology (BACT) to minimize emissions of each such pollutant and evaluate the air quality impacts. Although a facility or project may be *major* with respect to PSD for only one regulated pollutant, it may be required to install BACT controls for several "significant" regulated pollutants.

PSD Applicability for Project

Pursuant to Rule 62-212.400, F.A.C., BAE Systems Southeast Shipyard provided information to show that the project will not exceed the significant emissions rates that require preconstruction review for the Prevention of Significant Deterioration (PSD) of Air Quality. Since there is not an emissions increase associated with this project an analysis of the baseline actual to the projected actual emission rate was not required.

3. FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION (FDEP) REVIEW

Brief Discussion of Emissions and PSD Applicability

The applicant applied to the Department for an air construction permit for project which involves 1): Adding a new paint booth to the existing Indoor Surface Coating (EU ID No. 20) emissions unit and;

2): A portion of the coating operations conducted for marine vessels in the Open Air Surface Coating (EU ID No. 18) will be moved to the new paint booth in the Indoor Surface Coating (EU No. 020) unit which will result in a revision of the VOC emission caps on EU Nos. 018 and 020 respectively. The project is not expected to have an impact on the facility emission rates of any pollutant. The emission caps for the EUs will be changed as follows:

EU No. 018

From: 211.06 TPY

To: 206.7 TPY

EU No. 020

From: 175.88 TPY

To: 180.24 TPY

Based on the supporting information provided by the applicant, conclusions presented by the applicant, and the emissions summary presented in the application Department agrees that the project does not trigger PSD preconstruction review. The project is not expected to have an impact on the emission rates of any pollutant. Based upon this conclusion no further PSD review is required.

Since a baseline actual to a projected actual emission rate comparison was not required for this project the applicant shall **not** be required to provide reports summarizing actual emissions of pollutants in accordance with the requirements of Rule 62-210.370, F.A.C. for each year during the 5-year period following completion of the project.

RACT Applicability

EU Nos. 018 and 020 (including the new paint booth) remain subject to the VOC limitations found in the RACT requirements of Rule 62-296.513, F.A.C. and Rule 2.1101, JEPB. These rules limit the maximum VOC content per gallon of coating.

NSPS Applicability

A project for an existing unit may trigger the federal New Source Performance Standards (NSPS) in two ways.

A. The project is considered a modification when the project results in an increase in the hourly mass emissions rate of an NSPS-regulated pollutant.

B. Pursuant to 40 CFR 60.15, a project is considered reconstruction when the fixed capital costs of the replacement components exceed 50% of the fixed capital costs for a comparable new replacement unit.

No NSPS regulation categories apply to the operations covered under this project.

NESHAP Applicability

The Indoor Surface Coating operation (EU No. 020) and the Open Air Surface Coating operation (EU No. 018) are currently regulated under 40 CFR 63 - Subpart II, NATIONAL EMISSION STANDARDS FOR SHIP BUILDING AND REPAIR (SURFACE COATING), incorporated by reference in Rule 62-204.800, F.A.C., and Rule 2.301, JEPB.

This project will not change the applicability status of the NESHAP to the Indoor Surface Coating operation (EU No. 020) nor the Open Air Surface Coating operation (EU No. 018).

APPLICABILITY OF PREVIOUS PERMITS

Existing Permits and Regulations: The conditions of this permit supplements all other previously issued air construction and operation permits for this emission unit. These conditions are in addition to all other applicable permit conditions and regulatory requirements. The Permittee shall continue to comply with the conditions of those permits, which include restrictions and standards regarding capacities, production, operation, fuels, emissions, monitoring, recordkeeping, reporting and the like.

4. PRELIMINARY DETERMINATION

The Department makes a preliminary determination that the proposed project will comply with all applicable state and federal air pollution regulations as conditioned by the draft permit. This determination is based on a technical review of the complete application, reasonable assurances provided by the applicant, and the conditions specified in the draft permit. No air quality modeling analysis is required because the project does not result in a significant increase in emissions. Jerry Woosley is the project specialist responsible for reviewing the application and drafting the permit. Additional details of this analysis may be obtained by contacting the project specialist at the Florida Department of Environmental Protection, Northeast District Office, Waste and Air Management Program, 8800 Baymeadows Way West, Suite 100, Jacksonville, FL 32256, Phone: (904) 256-1700.