Title V Air Operation Permit Revision
Permit No. 0570442-018-AV

## APPLICANT

The applicant for this project is Gulf Marine Repair/Hendry Marine Industries. The applicant's responsible official and mailing address are: C.R. Watts, Vice President, Gulf Marine Repair/Hendry Marine Industries, 1800 Grant Street, Tampa, Florida 33605.

## FACILITY DESCRIPTION

The applicant operates two ship building and repair facilities, which are located in Hillsborough County at 1800 Grant Street, Tampa, Florida.

Gulf Marine Repair (GMR) and Hendry Marine Industries, which are located next to each other at the Port of Tampa, conduct ship building and repair operations. The process includes blasting and painting of ships and miscellaneous metal parts. GMR and Hendry Marine Industries operate at Berth Nos. 247, 248, 249, 250, 251, 252 and 253.

Gulf Marine Repair Ship Building and Repair Operations

The activities at GMR include the blasting and coating of marine vessels, which includes external and internal blasting and painting. The abrasive blasting material is stored on-site in prepackaged bags from the manufacturer or in fully enclosed trucks. When needed, the material is transferred into one of four 40-ton storage silos. The silos are pneumatically loaded at a rate of 11.5 tons per hour. The blasting equipment includes five blasting pots, each with a capacity of 40 tons. Compressed air for propelling the abrasive blasting material is provided by up to eight diesel fuel fired compressors.

Particulate matter emissions from the storage silo loading are limited by passing the displaced air through fabric filters (or baghouses). Compressor emissions are controlled by the use of diesel fuel only and by a limitation on the amount of diesel fuel used in any 12 month period. Particulate matter emissions from the blasting are minimized by limiting the amount of abrasive material used in any 12 month period, through the use of tarps/barriers that surround the blasting area, and through other reasonable precautions. When blasting an internal section of a ship, the displaced air is passed through a filter device or a tarp enclosure that covers the exhaust points from the internal blasting prior to exhausting to the atmosphere.

A partially-enclosed blasting/coating booth is used to help prepare miscellaneous metal parts prior to being installed on a ship. The booth is closed on all sides except the east side, which has a curtain/tarp that is capable of being opened and closed as needed to move metal parts in or out of the booth. The curtain/tarp is required to remain closed during any blasting or coating activities to control airborne emissions. Metal parts are blasted within the booth using blasting nozzles powered by diesel fuel fired compressors. Particulate matter emissions from the blasting operation are controlled by the building enclosure and are vented to a 40,000 acfm Industrial Vacuum Equipment Corp., Model 80-HF-4TSE, baghouse on the west side of the booth.

The booth also has a vacuum system, an Industrial Vacuum Equipment Corp., Model Hurricane 500EM Quiet Cube, with a hose to collect spent blast material from the booth. The 2,350 acfm vacuum system is also located on the west side of the booth and collects the spent blast material in two collection pots. Its operation has been determined to be insignificant based on the expected sporadic use of the system and the low airflow fan rate. During coating operations, spray nozzles are used to apply coatings to the metal parts and the baghouse can remain off but the curtain/tarp must remain closed to prevent overspray.

A portable small parts blasting/coating area is also present at the site and is comprised of tarps hung on raised wires to contain particulate matter emissions from the blasting and painting of miscellaneous parts. The small parts blasting/coating area may be used to process the parts that cannot be accommodated in the blasting/coating booth. A

separate partially-enclosed storage building is also located on site to store the spent blast material until it is shipped offsite.

After blasting, the surfaces are sprayed with a series of marine coatings, which may contain one or more volatile organic compounds (VOCs) and/or hazardous air pollutants (HAPs). Coating activities covered include the painting of the main deck, the superstructure, the hull exterior, and the ship interior. In addition, a permanent coating building is present for the painting of miscellaneous metal parts. The coating building is located over an impervious surface, and is open on two sides, with tarps/curtains for control of overspray from those openings during coating operations. VOC and HAP emissions are controlled through various coating content restrictions and by limits on usage in any 12-month period.

Hendry Marine Industries' Ship Building and Repair

Hendry's operations consist of various abrasive blasting and coating operations associated with ship maintenance and repair. The facility operates the activities through the use of submergible dry docks. The blasting activities involve the use of abrasive blasting material to prepare metal surfaces for painting. The abrasive blasting system consists of the following:

1) Up to two storage silos for blasting, pneumatically loaded, and equipped with a fabric sock filter. Normal loading rate is 11.5 tons/hour. Maximum loading pressure is 16 psia.
2) Up to two 24-ton capacity blasting pots.
3) A maximum of four blasting lines per pot, each with one .5" blasting nozzle operating at 100 psig. and capable of delivering 2,149 pounds/hour of abrasive material each. A total of eight blasting lines may be in use simultaneously.
4) One diesel compressor fired on No. 2 fuel oil.

Particulate matter emissions from the abrasive blasting operation are controlled by application practices and total enclosure using portable screens/tarps, which are required at all times when blasting a ship. When blasting an internal section of a ship, the displaced air is passed through a filter device or a tarp enclosure that covers the exhaust points from the internal blasting prior to exhausting to the atmosphere. A portable blasting/coating containment area is also present for the blasting and painting of miscellaneous parts.

After blasting, the surfaces are sprayed with a series of marine coatings, which may contain one or more volatile organic compounds (VOCs) and/or hazardous air pollutants (HAPs). VOC and HAP emissions from the coatings are controlled through the use of low solvent coatings and application practices (e.g. airless, brush, roller, HVLP) and limitations on the usage of coatings. The facility uses airless spray guns along with corresponding pumps as part of the coating operation. Paint overspray is controlled by application practices and total enclosure using portable screens/tarps, which are required at all times when painting a ship.

Several tanks (diesel, propane, oxygen, etc.) are located on the site for various applications but are considered insignificant due to their low level of emissions.

GMR or Hendry Marine Industries is also authorized to operate at the Hendry's property, Hooker's Point site. The property is located directly south of the main yard and supports up to 3 additional dry docks. Operation at this site also include up to an additional 8 diesel compressors, 4 abrasive material silos, and 5 blasting pots. A maximum of 16 external blasting nozzles and 18 internal blasting nozzles can be operated on a single ship at any time. The facility can operate up to a total of 40 internal or external blasting nozzles at one time.

The combined facility, GMR/ Hendry Marine Industries, is a major source of HAPs and is subject to 40 CFR 63, Subpart II - National Emission Standards for Shipbuilding and Ship Repair (Surface Coating). The combined facility is not subject to 40 CFR 63, Subpart MMMM, for the surface coating of miscellaneous metal parts and products since the facility is already subject to the Subpart II pursuant to 40 CFR 63.3881(c)(12).

In addition, the facility is subject to PM-RACT because the maximum hourly facility-wide PM PTE is greater than 5 lbs/hr and 15 tons/year. Although the silo loading is exempt from PM-RACT pursuant to Rule 62-296.700(2)(c), F.A.C., it is subject to the 5% opacity standard of Chapter 1-3.52, Paragraph 2, Rules of the EPC. The diesel

compressors are subject to the 20% opacity standard of Rule 62-296.320, F.A.C. because there is no source specific category in Rule 62-296.700, F.A.C.

The abrasive blasting of ship interiors and exteriors is not subject to PM-RACT, since it is often not reasonable to enclose and vent PM emissions to a control device. However, the abrasive blasting of miscellaneous metal parts in the blasting/coating booth and blasting in the containment area prior to attachment to the ship is subject to the 5% opacity standard of Rule 62-296.712(2), F.A.C. Furthermore, the facility is subject to VOC-RACT Rule 62-296.513, F.A.C., for the surface coating operation of ship interiors and miscellaneous parts, excluding the coating of the exterior of an assembled ship.

This facility also includes miscellaneous insignificant emissions units and/or activities.

## REGULATED EMISSIONS UNIT IDENTIFICATION NUMBERS AND DESCRIPTIONS

| EU No. | Brief Description |
|---|---|
| 001 | Exterior Coating |
| 002 | Interior Coating |
| 003 | Abrasive Blasting including Diesel Compressors |
| 004 | Abrasive Silos and Blasting Pots |
| 008 | Blasting/Coating Booth |

## APPLICABLE REGULATIONS

Based on the Title V air operation permit revision application received August 18, 2017, this facility is a major source of hazardous air pollutants (HAP). A summary of applicable regulations is shown in the following table:

| Regulation | EU No(s). |
|---|---|
| *Federal Rule Citations* | |
| 40 CFR 63, Subpart A, NESHAP General Provisions | 001, 002, 008 |
| 40 CFR 63, Subpart II | 001, 002, 008 |
| *State Rule Citations* | |
| Rule 62-296.513, F.A.C. | 001, 002, 008 |
| Rule 62-296.712, F.A.C. | 003, 004, 008 |
| *Local Rule Citations* | |
| Ch. 1-3, Rules of the EPCHC | 003, 004, 008 |

This facility also includes miscellaneous insignificant emissions units and/or activities.

## PROJECT DESCRIPTION

The purpose of this permitting project is to revise the Title V Permit No. 0570442-017-AV to provide operational flexibility to the facility by authorizing different types of blast media material usage.

## PROCESSING SCHEDULE AND RELATED DOCUMENTS

Initial Title V Air Operation Permit issued June 14, 1996
Title V Air Operation Permit Renewal issued May 15, 2015
Application for a Title V Air Operation Permit Revision received August 18, 2017

## PRIMARY REGULATORY REQUIREMENTS

Standard Industrial Classification (SIC) Code: 3731 – Ship Building and Repair.

North American Industry Classification System (NAICS): 336611 - Ship Building and Repair.

HAP: The facility is identified as a major source of hazardous air pollutants (HAP).

Title V: The facility is a Title V major source of air pollution in accordance with Chapter 62-213, Florida Administrative Code (F.A.C.).

PSD: The facility is not a Prevention of Significant Deterioration (PSD)-major source of air pollution in accordance with Rule 62-212.400, F.A.C.

NSPS: The facility does not operate units subject to the New Source Performance Standards (NSPS) of 40 Code of Federal Regulations (CFR) 60.

NESHAP: The facility does operate units subject to the National Emissions Standards for Hazardous Air Pollutants (NESHAP) of 40 CFR 63. The coating operations are subject to 40 CFR 63, Subpart II - National Emission Standards for Shipbuilding and Ship Repair (Surface Coating). The facility is not subject to 40 CFR 63, Subpart MMMM, for the surface coating of miscellaneous metal parts and products since the facility is already subject to the Subpart II pursuant to 40 CFR 63.3881(c)(12).

CAM: Compliance Assurance Monitoring (CAM) does not apply to any of the units at the facility.

GHG: The facility is not identified as a major source of green house gas (GHG) pollutants.

## PROJECT REVIEW

In order to allow the facility flexibility in the types of materials used when performing abrasive blasting of a vessel, Specific Condition Nos. FW6.A) and B.16. were added to the permit, along with the following changes. Changes to the permit made as part of this revision are shown in ~~strike through~~ format for deletions and in double underline format for additions. For ease of identification, all changes have also been highlighted in yellow within the permit document.

**1.** Appendices D-1 (40 CFR 63, Subpart II Definitions), F-1 (Flow Diagram of Compliance Procedures, F-2 (Example Monograph for Estimating the Maximum Allowable Thinning Ratio) and SS-1 (Stack Sampling Facilities) were removed from the permit as follows because they are duplicate appendices. The information in Appendices D-1, F-1, and F-2 are included in Appendix NESHAP, Subpart II. In addition, the information in Appendix SS-1 is included in Appendix TR (Facility-wide Testing Requirements).

Page i, IV. Appendices.

Appendix A, Glossary.
Appendix I, List of Insignificant Emissions Units and/or Activities
Appendix NESHAP, Subpart A – General Provisions Applicability to Subpart II
Appendix NESHAP, Subpart II
Appendix RR, Facility-wide Reporting Requirements
Appendix TR, Facility-wide Testing Requirements
Appendix TV, Title V General Conditions
~~Appendix D-1, 40 CFR Subpart II Definitions~~
~~Appendix F-1, Flow Diagram of Compliance Procedures~~
~~Appendix F-2, Example Monograph for Estimating the Maximum Allowable Thinning Ratio~~
Appendix OM-1: Operation and Maintenance (O&M) Plan
~~Appendix SS-1, Stack Sampling Facilities~~
EPC Shipyard BMP

**2.** Specific Condition Nos. FW6.A) and B) were updated as follows to allow the facility the flexibility to use additional blast materials with notification to the EPCHC.

FW6. Unconfined Particulate Matter. No person shall cause, let, permit, suffer or allow the emissions of unconfined particulate matter from any activity, including vehicular movement; transportation of materials; construction; alteration; demolition or wrecking; or industrially related activities such as loading, unloading, storing or handling; without taking reasonable precautions to prevent such emissions. Reasonable precautions to prevent emissions of unconfined particulate matter at this facility include: [Rules 62-296.320(4)(c) and 62-213.410, F.A.C.; and Construction Permit No. 0570442-015-AC]

A) Use of coal slag, steel shot, ebony grit or metallic slag for abrasive blasting material. ~~unless prior notification is provided to the Environmental Protection Commission of Hillsborough County (EPC) to use another material, including any new type of metallic slag. Ebony Grit (manufactured by Opta Minerals USA) has been approved by the EPC as a metallic slag that can be used as a blasting media at the facility.~~ <u>If new blast media material is to be used, the facility shall provide a notification to the EPCHC prior to the usage of this new material and include the corresponding SDS information</u>.

B) ~~Providing written notice to the EPC at least 7 days prior to scheduled use of any new blasting material (including any new type of metallic slag) not previously recognized for use at the facility.~~

**3.** Section III. Subsection C. was removed from the permit because the Specific Conditions in this section were duplicate conditions. The same Specific Conditions are included in Section III. Subparts A and B.

**4.** Specific Condition No. B.6. was updated as follows to include the requirement that the facility determine the applicability of 40 CFR 60 Subpart IIII in addition to 40 CFR 63 Subpart ZZZZ, prior to installing any stationary diesel compressor.

B.6. If a stationary diesel compressor ~~greater than 500 HP~~ is added to the facility, the permittee shall determine the applicability of <u>40 CFR 60 Subpart IIII and</u> 40 CFR 63 Subpart ZZZZ, and provide notification of the result to the permitting authority prior to initiating any installation of such a unit. [40 CFR 63.6585, and Rule 62-4.070(3), F.A.C.]

**5.** Specific Condition No. B.15.D) was deleted and Specific Condition No. B.16. was added as follows to require a visible emissions test each time a new blast media is used at the facility.

B.15. During each calendar year (January 1st – December 31st), unless otherwise specified by rule, order, or permit, the permittee shall have a formal compliance test conducted as follows to demonstrate compliance with Specific Condition B.6. [Rule 62-297.310(8)(a)1., F.A.C.; and Permit No. 0570442-015-AC]:

~~D) The permittee shall also perform a visible emission test on the blasting operation upon initial blasting with any new metallic slag that has been recognized by the EPC in accordance with Facility-Wide Condition FW6.~~

B.16. <u>New Blast Media Material: If a new blast media material is to be used, the facility shall notify EPCHC and provide an SDS of the new material. The facility shall perform a VE test the first time the new blast media material is used at the facility and submit the results to the EPCHC. [Rule 62-4.070(3), F.A.C.]</u>

## CONCLUSION

This project revises Title V air operation permit No. 0570442-017-AV, which was effective on May 15, 2015. This Title V air operation permit revision is issued under the provisions of Chapter 403, Florida Statues (F.S.), and Chapters 62-4, 62-210, and 62-213, F.A.C.