MINOR SOURCE AIR PERMIT APPLICATION

Jacksonville Facility
2922 St Augustine Road
Jacksonville, Florida 32207
30° 17.971' N, 81° 38.633' W
Duval County, Florida

RECEIVED
MAY 19 2017
Environmental Quality Division

May 5, 2017
Terracon Project No. 94167B06

BRAND
ENERGY & INFRASTRUCTURE SERVICES

Prepared for:
Brand Energy and Infrastructure Services
Jacksonville, Florida

Prepared by:
Terracon Consultants, Inc.
Dallas, Texas

Offices Nationwide
Employee-Owned
Established in 1965
terracon.com
Terracon
Geotechnical ■ Environmental ■ Construction Materials ■ Facilities

TABLE OF CONTENTS

1.0 INTRODUCTION 3
2.0 SITE PROCESS DESCRIPTION 4
3.0 SITE REGULATORY REVIEW 5
3.1 "Major Source" Status 5
3.2 Rule Chapter 62-210.300 Permits Required 5
3.3 Rule Chapter 62-212.100 General Preconstruction Review Requirements 5
3.4 Rule Chapter 62-296.320 General Pollutant Emission Limiting Standards 5
3.5 Rule Chapter 62-296.511 Solvent Metal Cleaning 5
3.6 Rule Chapter 62-296.513 Surface Coating of Miscellaneous Metal Parts and Products 5
3.7 Rule Chapter 62-296.700 Reasonable Available Control Technology (RACT) for Particulate Matter 6
3.8 Rule Chapter 62-296.712 Miscellaneous Manufacturing Process Operations 6
3.9 Federal Regulations 7
3.9.1 New Source Performance Standards Review 7
3.9.2 National Emission Standards for Hazardous Air Pollutants (NESHAP) Review 7
3.9.3 National Emission Standards for Hazardous Air Pollutants for Source Categories 7
4.0 DATA USED FOR CALCULATIONS 9
4.1 Precautions to Prevent Emissions of Unconfined Particulate Matter 9
4.2 Equipment Inventory 10
4.3 Anticipated Production Data 10
5.0 FEES 11

1.0 INTRODUCTION

Brand Energy and Infrastructure Services (Brand Energy) owns and operates the Jacksonville Facility located at 2922 St. Augustine Road, Jacksonville, Florida, 32207 in Duval County, Florida. Currently the facility consists of warehouse and office space. Brand Energy proposes to add a surface coating operation and an abrasive blasting operation to the site.

The objective of this document is to provide a complete air emissions authorization application to satisfy air permitting requirements for the new air emission sources at the Jacksonville Facility. The main objectives of this application are to:

- Identify the potential emissions (hourly and annual) from the site;
- Evaluate the New Source Review (NSR) permitting status of the site;
- Evaluate the Title V major source status of the site;
- Identify applicable Federal New Source Performance Standards (NSPS), Federal National Emission Standards for Hazardous Air Pollutants (NESHAP), and State regulatory requirements, and
- Address other regulatory issues, as appropriate.

2.0 SITE PROCESS DESCRIPTION

The site operates under Standard Industrial Classification (SIC) Code 1799 – Special Trade Contractors. The site operates 10 hours per day, 5 days per week, for 51 weeks per year (i.e., 2,550 hours per year). The existing site does not currently have an air permit.

The site currently consists of the following facilities:

- Warehouse;
- Office space; and
- Outdoor storage.

Brand Energy proposes to begin the following facilities at the site:

- Outdoor surface coating; and
- Outdoor abrasive blasting.

Brand Energy intends to bring new metal piping from a factory to their facility. Brand Energy will prepare the pipes for coating by performing abrasive blasting operations outdoors. Brand Energy would then perform coating operations on the parts which will also occur outdoors. The coating would be applied via spray guns and solvents are used for cleaning. The completed pipes would be sent to client facilities for installation.

Appendix A contains Process Flow Diagrams that depict these two operations.

3.0 SITE REGULATORY REVIEW

3.1 "Major Source" Status

Site-wide emission calculations are provided in Appendix C. The site is located in Duvall County. Based on the site-wide emissions and site information, the site is:

- Located in an "attainment" for criteria standards;
- Not a major source under New Source Review (NSR) permitting or Title V permitting programs; and
- An "area source" for the purposes of Federal National Emission Standards for Hazardous Air Pollutants (NESHAPs).

3.2 Rule Chapter 62-210.300 Permits Required

The facility is subject to this rule. This application is to obtain a permit for this site.

3.3 Rule Chapter 62-212.100 General Preconstruction Review Requirements

The facility is subject to this rule. This application is to obtain a permit for this site.

3.4 Rule Chapter 62-296.320 General Pollutant Emission Limiting Standards

Paragraph 1 of this rule (dealing with volatile organic compounds) and paragraph 4 (dealing with General Particulate Emission Limiting Standards) apply to this facility.

3.5 Rule Chapter 62-296.511 Solvent Metal Cleaning

The emission limiting standards and control technology set forth in Rule 62-296.511, F.A.C., shall apply to cold cleaning, open-top vapor degreasing, and conveyorized degreasing operations. Brand Energy's Jacksonville facility does not perform any of these operations. Therefore, this rule does not apply.

3.6 Rule Chapter 62-296.513 Surface Coating of Miscellaneous Metal Parts and Products

62-296.513(1)(a)(5) specifies that the emission limiting standards set forth in subsection 62-296.513(2), F.A.C., shall apply to surface coating of industrial machinery, such as pumps, compressors, conveyor components, fans, blowers and transformers. Therefore, the facility is subject to this rule.

3.7 Rule Chapter 62-296.700 Reasonable Available Control Technology (RACT) for Particulate Matter

Any existing emissions unit that emits particulate matter and is located in a particulate matter air quality maintenance area or in the area of influence of such an air quality maintenance area, except an emissions unit which has received a determination of Best Available Control Technology pursuant to Rule 17-2.630 (repealed) or 62-296.330, F.A.C., or received a permit in connection with Rule 17-2.500 (transferred), 17-2.510 (transferred), 62-212.400 or 62-212.500, F.A.C., shall limit the emission of particulate matter through the application of Reasonably Available Control Technology (RACT) as specified in Rules 62-296.701 through 62-296.712, F.A.C., or Rules 62-296.401 through 62-296.415, F.A.C.

Exemptions. The following facilities and emissions units which are located within a particulate matter air quality maintenance area or area of influence are exempt from the provisions of this rule:

(a) Any facility with total maximum allowable emissions of particulate matter of less than 15 tons per year and 5 pounds per hour.
(b) Any facility whose owner or operator demonstrates to the Department that the impact within the designated air quality maintenance area of the total maximum allowable particulate matter emissions from such facility will not exceed 1 $\mu g/m^3$, annual average, and 5 $\mu g/m^3$, 24-hour average.
(c) Any emissions unit which has total allowable emissions of particulate matter of less than one ton per year.
(d) Any emissions unit of unconfined particulate matter which is located more than five kilometers outside the boundary of a particulate matter air quality maintenance area.
(e) Any emissions unit of unconfined particulate matter from open stockpiling of materials, vehicular traffic and other emissions from roads and plant grounds, or construction activities.

This facility is located in Duval County. It is not a maintenance area. Therefore, this rule does not apply.

3.8 Rule Chapter 62-296.712 Miscellaneous Manufacturing Process Operations

The emission limitations and other requirements of Rule 62-296.712, F.A.C., shall apply to miscellaneous manufacturing process operations for which a specific RACT emission limitation has not been established in Rules 62-296.401 through 62-296.415, F.A.C., or Rules 62-296.701 through Rule 62-296.711, F.A.C., including but not limited to such operations as heat treating furnaces, waste heat evaporators, corebaking ovens, mixing kettles, blast furnaces, puddling furnaces, dryers, stills, roasters, and all other methods or forms of manufacturing or processing which emit particulate matter.

This rule applies to this facility.

3.9 Federal Regulations

3.9.1 New Source Performance Standards Review

The applicability of *40 CFR Part 60, "Standards of Performance for New Stationary Sources"* for the facility is evaluated as follows:

- 40 CFR 60 Subpart IIII, "Standards of Performance for Stationary Compression Ignition Internal Combustion Engines"

  This subpart does not apply as there are no stationary internal combustion engines at the facility.

- 40 CFR 60 Subpart JJJJ, "Standards of Performance for Stationary Spark Ignition Internal Combustion Engines"

  This subpart does not apply as there are no stationary internal combustion engines at the facility.

3.9.2 National Emission Standards for Hazardous Air Pollutants (NESHAP) Review

The applicability of *40 CFR Part 61, "National Emission Standards for Hazardous Air Pollutants"* for the facility is evaluated as follows:

- There are no NESHAPs that apply to this site.

3.9.3 National Emission Standards for Hazardous Air Pollutants for Source Categories

The applicability of *40 CFR Part 63, "National Emission Standards for Hazardous Air Pollutants for Source Categories"* for the facility is evaluated as follows:

- 40 CFR 63 Subpart MMMM, "Surface Coating of Miscellaneous Metal Parts and Products"

  This subpart does not apply as this facility is an area source of HAPs. The facility is not subject to this rule.

- 40 CFR 63 Subpart ZZZZ, "National Emission Standard for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines"

  This subpart does not apply as there are no internal combustion engines at this site.

- 40 CFR 63 Subpart PPPP, "Surface Coating of Plastic Parts and Products"

  This subpart does not apply as this facility does not include coating operations of plastic items. This facility is an area source of HAPs. The facility is not subject to this rule.

- 40 CFR 63 Subpart HHHHHH, "Paint Stripping and Miscellaneous Surface Coating Operations at Area Sources"

  The facility is an area source of HAPs. The coating operations at this facility do emit a "Target HAPs" as defined in 40 CFR 63.11180 (Cadmium). The facility does apply the coatings to metal parts. The parts do not qualify as "facility maintenance" since they are brought in from another facility. Therefore this rule does apply.

4.0 DATA USED FOR CALCULATIONS

Site-wide emission summary and calculation sheets are provided in Appendix C.

4.1 Precautions to Prevent Emissions of Unconfined Particulate Matter

As discussed in Section II.C of the application form, this paragraph of the application includes Precautions to Prevent Emissions of Unconfined Particulate Matter.

62-296.320(4)(c) FAC – Unconfined Emissions of Particulate Matter has the following provisions:

1. 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.

2. Any permit issued to a facility with emissions of unconfined particulate matter shall specify the reasonable precautions to be taken by that facility to control the emissions of unconfined particulate matter.

3. Reasonable precautions include the following:
   a. Paving and maintenance of roads, parking areas and yards.

   b. Application of water or chemicals to control emissions from such activities as demolition of buildings, grading roads, construction, and land clearing.

   c. Application of asphalt, water, oil, chemicals or other dust suppressants to unpaved roads, yards, open stock piles and similar activities.

   d. Removal of particulate matter from roads and other paved areas under the control of the owner or operator of the facility to prevent re-entrainment, and from buildings or work areas to prevent particulate from becoming airborne.

   e. Landscaping or planting of vegetation.

   f. Use of hoods, fans, filters, and similar equipment to contain, capture and/or vent particulate matter.

   g. Confining abrasive blasting where possible.

   h. Enclosure or covering of conveyor systems.

4. In determining what constitutes reasonable precautions for a particular facility, the Department shall consider the cost of the control technique or work practice, the

environmental impacts of the technique or practice, and the degree of reduction of emissions expected from a particular technique or practice.

Some of these requirements are applicable to operations at this site. Brand Energy proposes to curtail abrasive blasting operations during high-wind events. In conjunction with Bullet 3.c above, Brand Energy proposes to use watering and/or the application of dust suppressant for unpaved roads and yards.

4.2 Equipment Inventory

Site equipment information was provided and verified by Brand Energy personnel. A Site Diagram is provided in Appendix A.

4.3 Anticipated Production Data

Anticipated production data was provided by Brand Energy personnel.

5.0 FEES

This section contains a check to cover the application fee for this project.

List of Appendices

A: Exhibits

- Exhibit 1: Aerial Map
- Exhibit 2: Plot Plan
- Exhibit 3: Process Flow Diagram – Coating
- Exhibit 4: Process Flow Diagram – Abrasive Blasting

B: State Forms

- Form 1: Florida DEP Form 62_210_900(3)

C: Site-Wide Emission Calculations

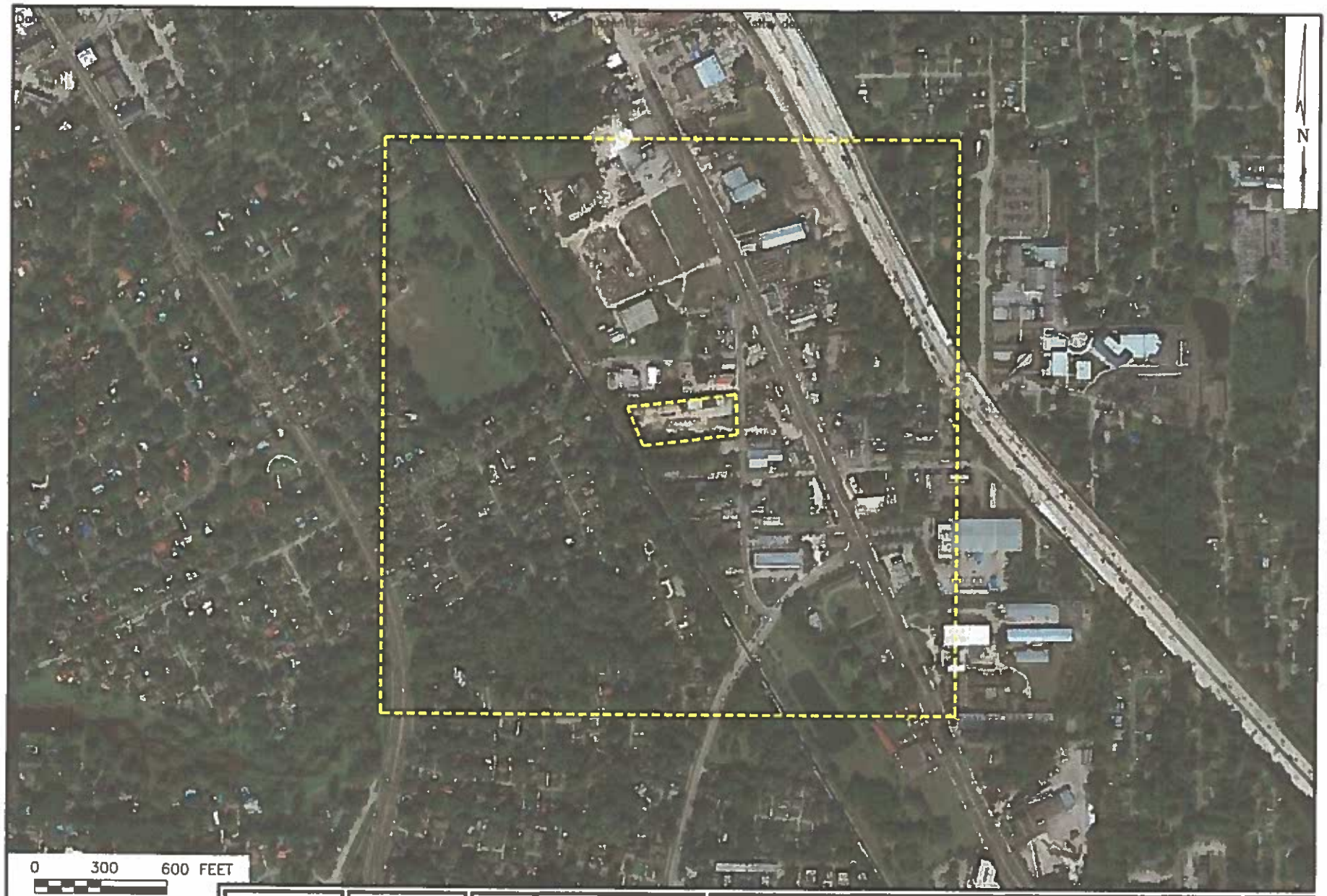
- Table 1: Facility Wide Emissions Summary
- Table 2: Surface Coating Usage and Emissions Summary
- Table 3: Surface Coating Emission Calculations
- Table 4: Abrasive Blasting Emission Calculations

D: Safety Data Sheets

E: Technical Documents

Appendix A

Exhibits



THIS DRAWING SHOULD NOT BE USED SEPARATELY FROM ORIGINAL REPORT.

Project Mngr:	JJC
Drawn By:	CDD
Checked By:	JJC
Approved By:	JJC

Project No.	94167B06
Scale:	AS SHOWN
Date:	05/05/17

Terracon
Consulting Engineers and Scientists
(Registration No.: F-3272)
2501 EAST LOOP 820 N. FORT WORTH, TX 76118
PH. (817) 268-8600 FAX. (817) 268-8602

AERIAL

BRAND ENERGY - JACKSONVILLE FACILITY
2922 ST. AUGUSTINE ROAD
30.399545, -82.643868
JACKSONVILLE, FLORIDA

EXHIBIT

1

0 50 100 FEET

APPROXIMATE SCALE

THIS DRAWING SHOULD NOT BE USED SEPARATELY FROM ORIGINAL REPORT.

Project Mngr:	JJC
Drawn By:	CDD
Checked By:	JJC
Approved By:	JJC
Project No.	94167806
Scale:	AS SHOWN
Date:	05/05/17

Terracon
Consulting Engineers and Scientists
(Registration No.: F-3272)
2501 EAST LOOP 820 N. FORT WORTH, TX 76118
PH. (817) 258-8600 FAX. (817) 258-8602

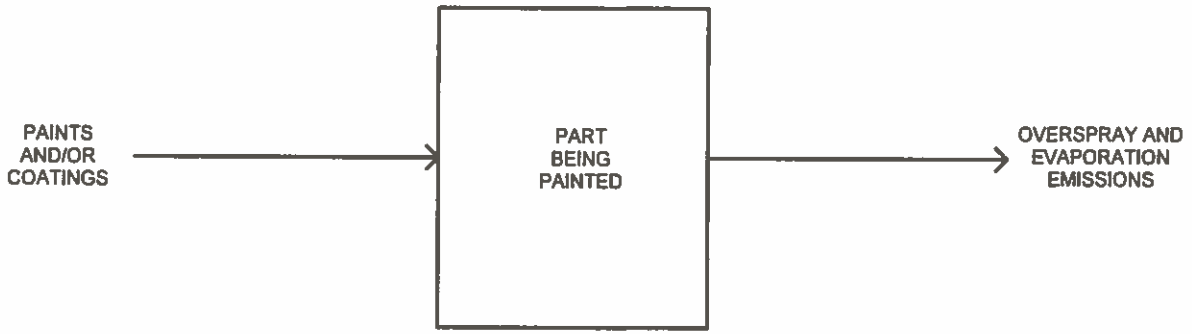
SITE DIAGRAM

BRAND ENERGY - JACKSONVILLE FACILITY
2922 ST. AUGUSTINE ROAD
30.399545, -82.643868
JACKSONVILLE, FLORIDA

EXHIBIT

2

Date: 12/30/16 N:\Projects\2016\94167B06\CAD\94167B06.dwg Layout: FLOW Current Layer: —Existing (site details)



THIS DRAWING SHOULD NOT BE USED SEPARATELY FROM ORIGINAL REPORT.

Project Mngr:	JJC
Drawn By:	CDD
Checked By:	JJC
Approved By:	JJC
Project No.	94167B06
Scale:	AS SHOWN
Date:	12/30/16

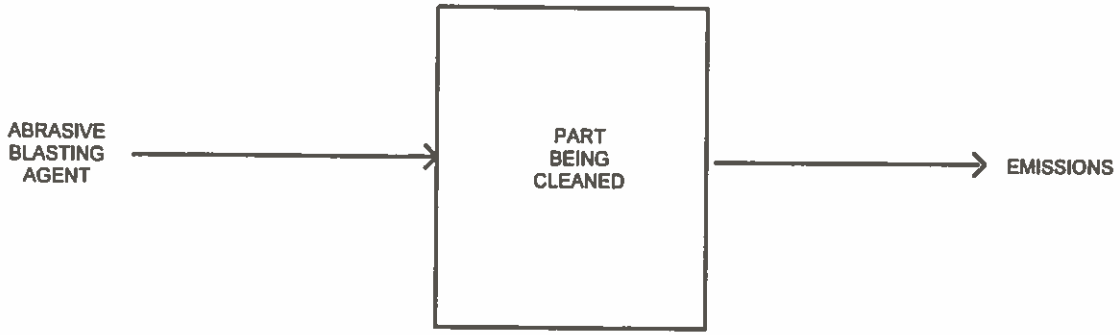
Terracon
Consulting Engineers and Scientists
(Registration No.: F-3272)
2501 EAST LOOP 820 N. FORT WORTH, TX 76118
PH. (817) 268-8600 FAX. (817) 268-8602

COATING PROCESS FLOW DIAGRAM

BRAND ENERGY - JACKSONVILLE FACILITY
2922 ST. AUGUSTINE ROAD
30.399545, -82.643868
JACKSONVILLE, FLORIDA

EXHIBIT 3

Date: 12/30/16 N:\Projects\2016\94167B06\CAD\94167B06.dwg Layout: BLASTING FLOW Current Layer: -Existing (site details)



THIS DRAWING SHOULD NOT BE USED SEPARATELY FROM ORIGINAL REPORT.

Project Mngr:	JJC
Drawn By:	CDD
Checked By:	JJC
Approved By:	JJC
Project No.	94167B06
Scale:	AS SHOWN
Date:	12/30/16

Terracon
Consulting Engineers and Scientists
(Registration No. F-3272)
2501 EAST LOOP 820 N. FORT WORTH, TX 76118
PH. (817) 284-8600 FAX. (817) 284-8602

ABRASIVE BLASTING PROCESS FLOW DIAGRAM

BRAND ENERGY - JACKSONVILLE FACILITY
ABRASIVE BLASTING PROCESS FLOW DIAGRAM
30.399545, -82.643868
JACKSONVILLE, FLORIDA

EXHIBIT

4

APPENDIX B

Application Form

Department of Environmental Protection

Division of Air Resources Management

RECEIVED
MAY 19 2017
Environmental Quality Division

APPLICATION FOR AIR PERMIT - NON-TITLE V SOURCE

See Instructions for Form No. 62-210.900(3)

I. APPLICATION INFORMATION

Identification of Facility

1. Facility Owner/Company Name: Brand Energy and Infrastructure Services	
2. Site Name: Jacksonville Facility	
3. Facility Identification Number: [ ] Unknown	
4. Facility Location: Street Address or Other Locator: 2922 St Augustine Road City: Jacksonville County: Duval Zip Code: 32207	
5. Relocatable Facility? [ ] Yes [X] No	6. Existing Permitted Facility? [ ] Yes [X] No

Application Contact

1. Name and Title of Application Contact: Ron Berini Division Manager
2. Application Contact Mailing Address: Organization/Firm: Brand Energy and Infrastructure Services Street Address: 2922 St. Augustine Road City: Jacksonville State: FL Zip Code: 32207
3. Application Contact Telephone Numbers: Michael Allman Telephone: (404) 285 - 7308 Fax: ( )
4. Application Contact E-mail Address: mallman@beis.com

Application Processing Information (DEP Use)

1. Date of Receipt of Application:	
2. Permit Number:	

Purpose of Application

Air Operation Permit Application

This Application for Air Permit is submitted to obtain: (Check one)

[ ] Initial non-Title V air operation permit for one or more existing, but previously unpermitted, emissions units.

[ ] Initial non-Title V air operation permit for one or more newly constructed or modified emissions units.

Current construction permit number:_____

[ ] Non-Title V air operation permit revision to address one or more newly constructed or modified emissions units.

Current construction permit number:_____

Operation permit number to be revised:_____

[ ] Initial non-Title V air operation permit under Rule 62-210.300(2)(b), F.A.C., for an existing facility seeking classification as a synthetic non-Title V source.

Current operation/construction permit number(s):

_____

[ ] Non-Title V air operation permit revision for a synthetic non-Title V source. Give reason for revision; e.g., to address one or more newly constructed or modified emissions units.

Operation permit number to be revised:_____

Reason for revision:_____

Air Construction Permit Application

This Application for Air Permit is submitted to obtain: (Check one)

[X] Air construction permit to construct or modify one or more emissions units.

[ ] Air construction permit to make federally enforceable an assumed restriction on the potential emissions of one or more existing, permitted emissions units.

[ ] Air construction permit for one or more existing, but unpermitted, emissions units.

Owner/Authorized Representative

1. Name and Title of Owner/Authorized Representative:
Ron Berini, Division Manager

2. Owner/Authorized Representative Mailing Address:
Organization/Firm: Brand Energy Infrastructure Services
Street Address: 2922 St. Augustine Road
City: Jacksonville State: FL Zip Code: 32207

3. Owner/Authorized Representative Telephone Numbers:
Telephone: (904) 683 - 0545 Fax: ( ) -

4. Owner/Authorized Representative E-mail Address: ron.berini@beis.com

5. Owner/Authorized Representative Statement:

I, the undersigned, am the owner or authorized representative of the facility addressed in this application. I hereby certify, based on information and belief formed after reasonable inquiry, that the statements made in this application are true, accurate and complete and that, to the best of my knowledge, any estimates of emissions reported in this application are based upon reasonable techniques for calculating emissions. The air pollutant emissions units and air pollution control equipment described in this application will be operated and maintained so as to comply with all applicable standards for control of air pollutant emissions found in the statutes of the State of Florida and rules of the Department of Environmental Protection and revisions thereof. I understand that a permit, if granted by the Department, cannot be transferred without authorization from the Department, and I will promptly notify the Department upon sale or legal transfer of any permitted emissions unit.*

Signature Date 5-9-17

* Attach letter of authorization if not currently on file.

Professional Engineer Certification

1. Professional Engineer Name: John C Malkowski
Registration Number: 59404

2. Professional Engineer Mailing Address:
Organization/Firm: Terracon Consultants, Inc
Street Address: 1675 Lee Road
City: Winter Park State: FL Zip Code: 32789-2207

3. Professional Engineer Telephone Numbers:
Telephone: (407) 618 - 8359 Fax: ( ) -

4. Professional Engineer E-mail Address: John.Malkowski@terracon.com

5. Professional Engineer Statement:

I, the undersigned, hereby certify, except as particularly noted herein, that:*

(1) To the best of my knowledge, there is reasonable assurance that the air pollutant emissions unit(s) and the air pollution control equipment described in this Application for Air Permit, when properly operated and maintained, will comply with all applicable standards for control of air pollutant emissions found in the Florida Statutes and rules of the Department of Environmental Protection; and

(2) To the best of my knowledge, any emission estimates reported or relied on in this application are true, accurate, and complete and are either based upon reasonable techniques available for calculating emissions or, for emission estimates of hazardous air pollutants not regulated for an emissions unit addressed in this application, based solely upon the materials, information and calculations submitted with this application.

If the purpose of this application is to obtain an air construction permit for one or more proposed new or modified emissions units (check here [ ], if so), I further certify that the engineering features of each such emissions unit described in this application have been designed or examined by me or individuals under my direct supervision and found to be in conformity with sound engineering principles applicable to the control of emissions of the air pollutants characterized in this application.

If the purpose of this application is to obtain an initial air operation permit or operation permit revision for one or more newly constructed or modified emissions units (check here [X], if so), I further certify that, with the exception of any changes detailed as part of this application, each such emissions unit has been constructed or modified in substantial accordance with the information given in the corresponding application for air construction permit and with all provisions contained in such permit.

Signature

(seal)

JOHN C. MALKOWSKI LICENSE No. 59404 STATE OF FLORIDA PROFESSIONAL ENGINEER

Date 5/5/17

* Attach any exception to certification statement.

Scope of Application

Emissions Unit ID	Description of Emissions Unit	Permit Type	Processing Fee
A001	Abrasive Blasting	AC1F	$1000
C001	Coating	AC1E	$1000

Application Processing Fee

Check one: [X] Attached - Amount: $2,000.00 . [ ] Not Applicable_

Construction/Modification Information

1. Description of Proposed Project or Alterations:

The site currently consists of the following facilities:

- Warehouse;
- Office space; and
- Outdoor storage.

Brand Energy proposes to install the following facilities at the site:

- Outdoor painting; and
- Outdoor abrasive blasting.

Brand Energy intends to bring new metal piping from a factory to their facility. Brand Energy will prepare the pipes for coating by performing abrasive blasting operations outdoors. Brand Energy would then perform coating operations on the parts. The coating would be applied via spray guns. The spray guns would be cleaned by hand. There will not be any hand-wipe cleaning activities using the solvent. The completed pipes would be sent to client facilities for installation.

2. Projected or Actual Date of Commencement of Construction: February 1, 2017

3. Projected Date of Completion of Construction: February 15, 2017

Application Comment

The site operates under Standard Industrial Classification (SIC) Code 1799 – Special Trade Contractors. The site operates 10 hours per day, 5 days per week, for 51 weeks per year (i.e., 2,550 hours per year). The existing site does not currently have an air permit as it is currently a warehouse with office space.

II. FACILITY INFORMATION

A. GENERAL FACILITY INFORMATION

Facility Location and Type

1. Facility UTM Coordinates: Zone: 17 East (km): 438.0826 North (km): 3,352.134			
2. Facility Latitude/Longitude: Latitude (DD/MM/SS): 30° 17" 57.80" N Longitude (DD/MM/SS): 81°38" 38.03"W			
3. Governmental Facility Code: 0	4. Facility Status Code: C	5. Facility Major Group SIC Code: 17	6. Facility SIC(s): 1799
7. Facility Comment (limit to 500 characters):			

Facility Contact

1. Name and Title of Facility Contact: Ron Berini, Division Manager
2. Facility Contact Mailing Address: Organization/Firm: Brand Energy and Infrastructure Services Street Address: 2922 St. Augustine Road City: Jacksonville State: FL Zip Code: 32207
3. Facility Contact Telephone Numbers: Telephone: (904) 683 - 0545 Fax: ( ) -
4. Facility Contact E-mail Address: ron.berini@beis.com

Facility Regulatory Classifications

Check all that apply:

1. [ ] Small Business Stationary Source?	[ ] Unknown
2. [X] Synthetic Non-Title V Source?	
3. [X] Synthetic Minor Source of Pollutants Other than HAPs?	
4. [X] Synthetic Minor Source of HAPs?	
5. [ ] One or More Emissions Units Subject to NSPS?	
6. [X] One or More Emission Units Subject to NESHAP Recordkeeping or Reporting?	
7. Facility Regulatory Classifications Comment (limit to 200 characters): NESHAP HHHHHH	

Rule Applicability Analysis

See Section 3.2 through 3.8 of application narrative for a discussion of applicable rules.

B. FACILITY POLLUTANTS

List of Pollutants Emitted

1. Pollutant Emitted	2. Pollutant Classif.	3. Requested Emissions Cap lb/hour	tons/year	4. Basis for Emissions Cap	5. Pollutant Comment
PM	SM	6.55	16.70	ESCTIII	
PM10	SM	3.72	9.5	ESCTIII	
PM2.5	SM	1.61	4.10	ESCTIII	
VOC	SM	6.02	15.36	ESCTIII	
H027 Cadmium	SM	0.97	1.29	ESCTIII	
H113 Manganese	SM	0.0007	0.0009	ESCTIII	
H021 Beryllium	SM	0.00001	0.00002	ESCTIII	
H186 Xylene	SM	3.81	9.71	ESCTIII	
H085 Ethyl Benzene	SM	0.73	1.87	ESCTIII	
H169 Toluene	SM	1.76	4.5	ESCTIII	
H115 Methanol	SM	0.11	0.28	ESCTIII	
H053 Cumene	SM	0.01	0.04	ESCTIII	
H132 Naphthalene	SM	0.13	0.34	ESCTIII	
H123 MIBK	SM	0.68	1.73	ESCTIII	
H095 Formaldehyde	SM	0.02	0.04	ESCTIII	
H102 Hexamethylene Diisocyanate	SM	0.01	0.03	ESCTIII	

C. FACILITY SUPPLEMENTAL INFORMATION

Supplemental Requirements

1. Area Map Showing Facility Location: [X] Attached, Document ID:_____ [ ] Not Applicable [ ] Waiver Requested
2. Facility Plot Plan: [X] Attached, Document ID:_____ [ ] Not Applicable [ ] Waiver Requested
3. Process Flow Diagram(s): [X] Attached, Document ID:_____ [ ] Not Applicable [ ] Waiver Requested
4. Precautions to Prevent Emissions of Unconfined Particulate Matter: [X] Attached, Document ID:_____ [ ] Not Applicable [ ] Waiver Requested
5. Supplemental Information for Construction Permit Application: [ ] Attached, Document ID:_____ [ ] Not Applicable
6. Supplemental Requirements Comment: Items 1, 2, and 3 are in Appendix A. Item 4 is presented in Section 4.1.

III. EMISSIONS UNIT INFORMATION

A separate Emissions Unit Information Section (including subsections A through G as required) must be completed for each emissions unit addressed in this Application for Air Permit. If submitting the application form in hard copy, indicate, in the space provided at the top of each page, the number of this Emissions Unit Information Section and the total number of Emissions Unit Information Sections submitted as part of this application.

A. GENERAL EMISSIONS UNIT INFORMATION

Emissions Unit Description and Status

1. Type of Emissions Unit Addressed in This Section: (Check one)

[ ] This Emissions Unit Information Section addresses, as a single emissions unit, a single process or production unit, or activity, which produces one or more air pollutants and which has at least one definable emission point (stack or vent).

[ ] This Emissions Unit Information Section addresses, as a single emissions unit, a group of process or production units and activities which has at least one definable emission point (stack or vent) but may also produce fugitive emissions.

[X] This Emissions Unit Information Section addresses, as a single emissions unit, one or more process or production units and activities which produce fugitive emissions only.

2. Description of Emissions Unit Addressed in This Section (limit to 60 characters):

Abrasive Blasting

3. Emissions Unit Identification Number: ID: A001		[X] No ID [ ] ID Unknown
4. Emissions Unit Status Code: C	5. Initial Startup Date: May 1, 2017	6. Emissions Unit Major Group SIC Code: 17

7. Emissions Unit Comment: (Limit to 500 Characters)

Emissions Unit Information Section ___1___ of ___2___

Emissions Unit Control Equipment

1. Control Equipment/Method Description (limit to 200 characters per device or method):	
2. Control Device or Method Code(s):	

Emissions Unit Details

1. Package Unit: Manufacturer:	Model Number:	
2. Generator Nameplate Rating:	MW	
3. Incinerator Information: Dwell Temperature: Dwell Time: Incinerator Afterburner Temperature:		 °F seconds °F

Emissions Unit Operating Capacity and Schedule

1. Maximum Heat Input Rate:		mmBtu/hr
2. Maximum Incineration Rate:	lb/hr	tons/day
3. Maximum Process or Throughput Rate:	1,682 lb blast media/hr	
4. Maximum Production Rate:		
5. Requested Maximum Operating Schedule:		
	20 hours/day	5 days/week
	51 weeks/year	5,100 hours/year
6. Operating Capacity/Schedule Comment (limit to 200 characters):		

B. EMISSION POINT (STACK/VENT) INFORMATION

Emission Point Description and Type

1. Identification of Point on Plot Plan or Flow Diagram? Yes	2. Emission Point Type Code: 4	
3. Descriptions of Emission Points Comprising this Emissions Unit for VE Tracking (limit to 100 characters per point): Fugitive emissions from outdoor abrasive blasting operations		
4. ID Numbers or Descriptions of Emission Units with this Emission Point in Common:		
5. Discharge Type Code:	6. Stack Height: feet	7. Exit Diameter: feet
8. Exit Temperature: °F	9. Actual Volumetric Flow Rate: acfm	10. Water Vapor: %
11. Maximum Dry Standard Flow Rate: dscfm	12. Nonstack Emission Point Height: feet	
13. Emission Point UTM Coordinates: Zone: East (km): North (km):		
14. Emission Point Comment (limit to 200 characters):		

C. SEGMENT (PROCESS/FUEL) INFORMATION

Segment Description and Rate: Segment _1____ of ___1__

1. Segment Description (Process/Fuel Type) (limit to 500 characters): Fugitive particulate matter from outdoor surface coating operations		
2. Source Classification Code (SCC): 30900203	3. SCC Units: ton	
4. Maximum Hourly Rate: 0.84	5. Maximum Annual Rate: 4,287	6. Estimated Annual Activity Factor:
7. Maximum % Sulfur:	8. Maximum % Ash:	9. Million Btu per SCC Unit:
10. Segment Comment (limit to 200 characters):		

Segment Description and Rate: Segment _____ of _____

1. Segment Description (Process/Fuel Type) (limit to 500 characters):		
2. Source Classification Code (SCC):	3. SCC Units:	
4. Maximum Hourly Rate:	5. Maximum Annual Rate:	6. Estimated Annual Activity Factor:
7. Maximum % Sulfur:	8. Maximum % Ash:	9. Million Btu per SCC Unit:
10. Segment Comment (limit to 200 characters):		

Emissions Unit Information Section ___1___ of __2___

Pollutant Detail Information Page __1____ of ___2___

D. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION

Potential Emissions

1. Pollutant Emitted: Particulate Matter	2. Pollutant Regulatory Code: NS	
3. Primary Control Device Code:	4. Secondary Control Device Code: 0	5. Total Percent Efficiency of Control:
6. Potential Emissions: 5.45 lb/hour 13.89		7. Synthetically Limited? [X]
8. Emission Factor: 27 lb/ton Reference: AP-42, Section 13.2		9. Emissions Method Code: 3
10. Calculation of Emissions (limit to 600 characters): (27 lb/ton)*(0.84 ton/hr)*(0.24 Sand to Grit EF adjustment)=5.45 lb/hr (27 lb/ton)*(4,287 ton/year)*(0.24 Sand to Grit EF adjustment)=13.89 ton/year		
11. Pollutant Potential Emissions Comment (limit to 200 characters): The blasting media used at this site (Black Beauty®) is coal-fired boiler slag. The text in AP-42 Section 13.2.6.3 indicate that emissions from grit are 24% of the corresponding published emission factors from sand.		

Allowable Emissions Allowable Emissions __1____ of ___1___

1. Basis for Allowable Emissions Code:	2. Future Effective Date of Allowable Emissions:
3. Requested Allowable Emissions and Units:	4. Equivalent Allowable Emissions: lb/hour tons/year
5. Method of Compliance (limit to 60 characters):	
6. Allowable Emissions Comment (Desc. of Operating Method) (limit to 200 characters):	

Emissions Unit Information Section __1__ **of** __2__

Pollutant Detail Information Page __2__ **of** __2__

D. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION

Potential Emissions

1. Pollutant Emitted: PM10	2. Pollutant Regulatory Code: NS	
3. Primary Control Device Code:	4. Secondary Control Device Code: 0	5. Total Percent Efficiency of Control:
6. Potential Emissions: 2.62 lb/hour 6.69 tons/year		7. Synthetically Limited? [X]
8. Emission Factor: 13.0 lb/ton Reference: AP-42 Section 13.2		9. Emissions Method Code: 3

10. Calculation of Emissions (limit to 600 characters):
(13 lb/ton)*(0.84 ton/hr)*(0.24 Sand to Grit EF adjustment)=2.62 lb/hr
(13 lb/ton)*(4,287 ton/year)*(0.24 Sand to Grit EF adjustment)=6.69 ton/year

11. Pollutant Potential Emissions Comment (limit to 200 characters):
The blasting media used at this site (Black Beauty®) is coal-fired boiler slag. The text in AP-42 Section 13.2.6.3 indicate that emissions from grit are 24% of the corresponding published emission factors from sand.

Allowable Emissions Allowable Emissions __2____ of __2____

1. Basis for Allowable Emissions Code:	2. Future Effective Date of Allowable Emissions:
3. Requested Allowable Emissions and Units:	4. Equivalent Allowable Emissions: lb/hour tons/year
5. Method of Compliance (limit to 60 characters):	
6. Allowable Emissions Comment (Desc. of Operating Method) (limit to 200 characters):	

E. VISIBLE EMISSIONS INFORMATION
(Only Emissions Units Subject to a VE Limitation)

Visible Emissions Limitation: Visible Emissions Limitation __1____ of ___1___

1. Visible Emissions Subtype: VE20	2. Basis for Allowable Opacity: [X] Rule [ ] Other
3. Requested Allowable Opacity: Normal Conditions: 20 % Exceptional Conditions: 20 % Maximum Period of Excess Opacity Allowed: 6 min/hour	
4. Method of Compliance: EPA Method 22	
5. Visible Emissions Comment (limit to 200 characters):	

F. CONTINUOUS MONITOR INFORMATION
(Only Emissions Units Subject to Continuous Monitoring)

Continuous Monitoring System: Continuous Monitor _____ of _____

1. Parameter Code:	2. Pollutant(s):
3. CMS Requirement:	[ ] Rule [ ] Other
4. Monitor Information: Manufacturer: Model Number: Serial Number:	
5. Installation Date:	6. Performance Specification Test Date:
7. Continuous Monitor Comment (limit to 200 characters):	

G. EMISSIONS UNIT SUPPLEMENTAL INFORMATION

Supplemental Requirements

1. Process Flow Diagram [X] Attached, Document ID:_____ [ ] Not Applicable [ ] Waiver Requested
2. Fuel Analysis or Specification [ ] Attached, Document ID:___SDS_ [X] Not Applicable [ ] Waiver Requested
3. Detailed Description of Control Equipment [X] Attached, Document ID:_____ [ ] Not Applicable [ ] Waiver Requested
4. Description of Stack Sampling Facilities [ ] Attached, Document ID:_____ [X] Not Applicable [ ] Waiver Requested
5. Compliance Test Report [ ] Attached, Document ID:_____ [ ] Previously submitted, Date:_____ [X] Not Applicable
6. Procedures for Startup and Shutdown [ ] Attached, Document ID:_____ [X] Not Applicable [ ] Waiver Requested
7. Operation and Maintenance Plan [ ] Attached, Document ID:_____ [X] Not Applicable [ ] Waiver Requested
8. Supplemental Information for Construction Permit Application [ ] Attached, Document ID:_____ [X] Not Applicable
9. Other Information Required by Rule or Statute [ ] Attached, Document ID:_____ [X] Not Applicable
10. Supplemental Requirements Comment: Item 1 is in Appendix A. Item 3 is in Section 4.1.

III. EMISSIONS UNIT INFORMATION

A separate Emissions Unit Information Section (including subsections A through G as required) must be completed for each emissions unit addressed in this Application for Air Permit. If submitting the application form in hard copy, indicate, in the space provided at the top of each page, the number of this Emissions Unit Information Section and the total number of Emissions Unit Information Sections submitted as part of this application.

A. GENERAL EMISSIONS UNIT INFORMATION

Emissions Unit Description and Status

1. Type of Emissions Unit Addressed in This Section: (Check one) [ ] This Emissions Unit Information Section addresses, as a single emissions unit, a single process or production unit, or activity, which produces one or more air pollutants and which has at least one definable emission point (stack or vent). [ ] This Emissions Unit Information Section addresses, as a single emissions unit, a group of process or production units and activities which has at least one definable emission point (stack or vent) but may also produce fugitive emissions. [X] This Emissions Unit Information Section addresses, as a single emissions unit, one or more process or production units and activities which produce fugitive emissions only.		
2. Description of Emissions Unit Addressed in This Section (limit to 60 characters): Surface Coating		
3. Emissions Unit Identification Number: ID: C001		[X] No ID [ ] ID Unknown
4. Emissions Unit Status Code: C	5. Initial Startup Date: 5/1/2017	6. Emissions Unit Major Group SIC Code: 17
7. Emissions Unit Comment: (Limit to 500 Characters)		

Emissions Unit Information Section __2____ of ___2___

Emissions Unit Control Equipment

1. Control Equipment/Method Description (limit to 200 characters per device or method):	
2. Control Device or Method Code(s):	

Emissions Unit Details

1. Package Unit: Manufacturer:	Model Number:	
2. Generator Nameplate Rating:	MW	
3. Incinerator Information: Dwell Temperature: Dwell Time: Incinerator Afterburner Temperature:		°F seconds °F

Emissions Unit Operating Capacity and Schedule

1. Maximum Heat Input Rate:		mmBtu/hr
2. Maximum Incineration Rate:	lb/hr	tons/day
3. Maximum Process or Throughput Rate:	1.2 gal of coating applied/hr	
4. Maximum Production Rate:		
5. Requested Maximum Operating Schedule:		
	20 hours/day	5 days/week
	51 weeks/year	5,100 hours/year
6. Operating Capacity/Schedule Comment (limit to 200 characters):		

B. EMISSION POINT (STACK/VENT) INFORMATION

Emission Point Description and Type

1. Identification of Point on Plot Plan or Flow Diagram? Yes	2. Emission Point Type Code: 4	
3. Descriptions of Emission Points Comprising this Emissions Unit for VE Tracking (limit to 100 characters per point): Fugitive emissions from coating operations		
4. ID Numbers or Descriptions of Emission Units with this Emission Point in Common:		
5. Discharge Type Code:	6. Stack Height: feet	7. Exit Diameter: feet
8. Exit Temperature: °F	9. Actual Volumetric Flow Rate: acfm	10. Water Vapor: %
11. Maximum Dry Standard Flow Rate: dscfm	12. Nonstack Emission Point Height: feet	
13. Emission Point UTM Coordinates: Zone: East (km): North (km):		
14. Emission Point Comment (limit to 200 characters):		

Emissions Unit Information Section __2____ of ___2___

C. SEGMENT (PROCESS/FUEL) INFORMATION

Segment Description and Rate: Segment _____ of _____

1. Segment Description (Process/Fuel Type) (limit to 500 characters): Fugitive emissions from coating operations		
2. Source Classification Code (SCC): 40200101	3. SCC Units: Gallons Used	
4. Maximum Hourly Rate: 1.2	5. Maximum Annual Rate: 6,120	6. Estimated Annual Activity Factor:
7. Maximum % Sulfur:	8. Maximum % Ash:	9. Million Btu per SCC Unit:
10. Segment Comment (limit to 200 characters):		

Segment Description and Rate: Segment _____ of _____

1. Segment Description (Process/Fuel Type) (limit to 500 characters):		
2. Source Classification Code (SCC):	3. SCC Units:	
4. Maximum Hourly Rate:	5. Maximum Annual Rate:	6. Estimated Annual Activity Factor:
7. Maximum % Sulfur:	8. Maximum % Ash:	9. Million Btu per SCC Unit:
10. Segment Comment (limit to 200 characters):		

Emissions Unit Information Section __2____ of ___2___

Pollutant Detail Information Page ___1___ of ___4___

D. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION

Potential Emissions

1. Pollutant Emitted: VOC	2. Pollutant Regulatory Code: WP	
3. Primary Control Device Code: 102	4. Secondary Control Device Code: 0	5. Total Percent Efficiency of Control:
6. Potential Emissions: 6.02 lb/hour 15.36 tons/year		7. Synthetically Limited? [ ]
8. Emission Factor: Calculations provided in Appendix C		9. Emissions Method Code: 2
10. Calculation of Emissions (limit to 600 characters): Calculations provided in Appendix C		
11. Pollutant Potential Emissions Comment (limit to 200 characters): Using the highest application rate combined with highest case VOC content from all of the SDS that the facility anticipates using.		

Allowable Emissions Allowable Emissions _____ of _____

1. Basis for Allowable Emissions Code:	2. Future Effective Date of Allowable Emissions:
3. Requested Allowable Emissions and Units:	4. Equivalent Allowable Emissions: lb/hour tons/year
5. Method of Compliance (limit to 60 characters):	
6. Allowable Emissions Comment (Desc. of Operating Method) (limit to 200 characters):	

D. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION

Potential Emissions

1. Pollutant Emitted: PM		2. Pollutant Regulatory Code: WP
3. Primary Control Device Code:	4. Secondary Control Device Code:	5. Total Percent Efficiency of Control:
6. Potential Emissions: 6.55 lb/hour 16.70 tons/year		7. Synthetically Limited? [X]
8. Emission Factor: Calculations provided in Appendix C		9. Emissions Method Code: 2
10. Calculation of Emissions (limit to 600 characters): Calculations provided in Appendix C		
11. Pollutant Potential Emissions Comment (limit to 200 characters): Using the highest application rate combined of the coating with the highest density with highest case MIBK content from all of the SDS that the facility anticipates using.		

Allowable Emissions Allowable Emissions _____ of _____

1. Basis for Allowable Emissions Code:	2. Future Effective Date of Allowable Emissions:
3. Requested Allowable Emissions and Units:	4. Equivalent Allowable Emissions: lb/hour tons/year
5. Method of Compliance (limit to 60 characters):	
6. Allowable Emissions Comment (Desc. of Operating Method) (limit to 200 characters):	

D. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION

Potential Emissions

1. Pollutant Emitted: PM10	2. Pollutant Regulatory Code: WP	
3. Primary Control Device Code:	4. Secondary Control Device Code:	5. Total Percent Efficiency of Control:
6. Potential Emissions: 3.72 lb/hour 9.5 tons/year		7. Synthetically Limited? [X]
8. Emission Factor: Calculations provided in Appendix C		9. Emissions Method Code: 2
10. Calculation of Emissions (limit to 600 characters): Calculations provided in Appendix C		
11. Pollutant Potential Emissions Comment (limit to 200 characters): Using the highest application rate combined of the coating with the highest density with highest cadmium content from all of the SDS that the facility anticipates using.		

Allowable Emissions Allowable Emissions _____ of _____

1. Basis for Allowable Emissions Code:	2. Future Effective Date of Allowable Emissions:
3. Requested Allowable Emissions and Units:	4. Equivalent Allowable Emissions: lb/hour tons/year
5. Method of Compliance (limit to 60 characters):	
6. Allowable Emissions Comment (Desc. of Operating Method) (limit to 200 characters):	

D. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION

Potential Emissions

1. Pollutant Emitted: H027 Cadmium	2. Pollutant Regulatory Code: WP	
3. Primary Control Device Code:	4. Secondary Control Device Code:	5. Total Percent Efficiency of Control:
6. Potential Emissions: 0.47 lb/hour 1.2 tons/year		7. Synthetically Limited? [X]
8. Emission Factor: Calculations provided in Appendix C		9. Emissions Method Code: 2
10. Calculation of Emissions (limit to 600 characters): Calculations provided in Appendix C		
11. Pollutant Potential Emissions Comment (limit to 200 characters): Using the highest application rate combined of the coating with the highest density with worst case xylene content from all of the SDS that the facility anticipates using.		

Allowable Emissions Allowable Emissions _____ of _____

1. Basis for Allowable Emissions Code:	2. Future Effective Date of Allowable Emissions:
3. Requested Allowable Emissions and Units:	4. Equivalent Allowable Emissions: lb/hour tons/year
5. Method of Compliance (limit to 60 characters):	
6. Allowable Emissions Comment (Desc. of Operating Method) (limit to 200 characters):	

D. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION

Potential Emissions

1. Pollutant Emitted: H186 Xylene	2. Pollutant Regulatory Code: WP	
3. Primary Control Device Code:	4. Secondary Control Device Code:	5. Total Percent Efficiency of Control:
6. Potential Emissions: 3.81 lb/hour 9.71 tons/year		7. Synthetically Limited? [X]
8. Emission Factor: Calculations provided in Appendix C		9. Emissions Method Code: 2
10. Calculation of Emissions (limit to 600 characters): Calculations provided in Appendix C		
11. Pollutant Potential Emissions Comment (limit to 200 characters): Using the highest application rate combined of the coating with the highest density with worst case xylene content from all of the SDS that the facility anticipates using.		

Allowable Emissions Allowable Emissions _____ of _____

1. Basis for Allowable Emissions Code:	2. Future Effective Date of Allowable Emissions:
3. Requested Allowable Emissions and Units:	4. Equivalent Allowable Emissions: lb/hour tons/year
5. Method of Compliance (limit to 60 characters):	
6. Allowable Emissions Comment (Desc. of Operating Method) (limit to 200 characters):	

D. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION

Potential Emissions

1. Pollutant Emitted: H085 Ethyl Benzene	2. Pollutant Regulatory Code: WP	
3. Primary Control Device Code:	4. Secondary Control Device Code:	5. Total Percent Efficiency of Control:
6. Potential Emissions: 0.73 lb/hour 1.87 tons/year		7. Synthetically Limited? [X]
8. Emission Factor: Calculations provided in Appendix C		9. Emissions Method Code: 2
10. Calculation of Emissions (limit to 600 characters): Calculations provided in Appendix C		
11. Pollutant Potential Emissions Comment (limit to 200 characters): Using the highest application rate combined of the coating with the highest density with worst case xylene content from all of the SDS that the facility anticipates using.		

Allowable Emissions Allowable Emissions _____ of _____

1. Basis for Allowable Emissions Code:	2. Future Effective Date of Allowable Emissions:
3. Requested Allowable Emissions and Units:	4. Equivalent Allowable Emissions: lb/hour tons/year
5. Method of Compliance (limit to 60 characters):	
6. Allowable Emissions Comment (Desc. of Operating Method) (limit to 200 characters):	

D. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION

Potential Emissions

1. Pollutant Emitted: H169 Toluene	2. Pollutant Regulatory Code: WP	
3. Primary Control Device Code:	4. Secondary Control Device Code:	5. Total Percent Efficiency of Control:
6. Potential Emissions: 1.76 lb/hour 4.5 tons/year		7. Synthetically Limited? [X]
8. Emission Factor: Calculations provided in Appendix C		9. Emissions Method Code: 2
10. Calculation of Emissions (limit to 600 characters): Calculations provided in Appendix C		
11. Pollutant Potential Emissions Comment (limit to 200 characters): Using the highest application rate combined of the coating with the highest density with worst case xylene content from all of the SDS that the facility anticipates using.		

Allowable Emissions Allowable Emissions _____ of _____

1. Basis for Allowable Emissions Code:	2. Future Effective Date of Allowable Emissions:
3. Requested Allowable Emissions and Units:	4. Equivalent Allowable Emissions: lb/hour tons/year
5. Method of Compliance (limit to 60 characters):	
6. Allowable Emissions Comment (Desc. of Operating Method) (limit to 200 characters):	

D. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION

Potential Emissions

1. Pollutant Emitted: H115 Methanol	2. Pollutant Regulatory Code: WP	
3. Primary Control Device Code:	4. Secondary Control Device Code:	5. Total Percent Efficiency of Control:
6. Potential Emissions: 0.11 lb/hour 0.28 tons/year		7. Synthetically Limited? [X]
8. Emission Factor: Calculations provided in Appendix C		9. Emissions Method Code: 2
10. Calculation of Emissions (limit to 600 characters): Calculations provided in Appendix C		
11. Pollutant Potential Emissions Comment (limit to 200 characters): Using the highest application rate combined of the coating with the highest density with worst case xylene content from all of the SDS that the facility anticipates using.		

Allowable Emissions Allowable Emissions _____ of _____

1. Basis for Allowable Emissions Code:	2. Future Effective Date of Allowable Emissions:
3. Requested Allowable Emissions and Units:	4. Equivalent Allowable Emissions: lb/hour tons/year
5. Method of Compliance (limit to 60 characters):	
6. Allowable Emissions Comment (Desc. of Operating Method) (limit to 200 characters):	

D. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION

Potential Emissions

1. Pollutant Emitted: H053 Cumene	2. Pollutant Regulatory Code: WP	
3. Primary Control Device Code:	4. Secondary Control Device Code:	5. Total Percent Efficiency of Control:
6. Potential Emissions: 0.01 lb/hour 0.04 tons/year		7. Synthetically Limited? [X]
8. Emission Factor: Calculations provided in Appendix C		9. Emissions Method Code: 2
10. Calculation of Emissions (limit to 600 characters): Calculations provided in Appendix C		
11. Pollutant Potential Emissions Comment (limit to 200 characters): Using the highest application rate combined of the coating with the highest density with worst case xylene content from all of the SDS that the facility anticipates using.		

Allowable Emissions Allowable Emissions _____ of _____

1. Basis for Allowable Emissions Code:	2. Future Effective Date of Allowable Emissions:
3. Requested Allowable Emissions and Units:	4. Equivalent Allowable Emissions: lb/hour tons/year
5. Method of Compliance (limit to 60 characters):	
6. Allowable Emissions Comment (Desc. of Operating Method) (limit to 200 characters):	

D. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION

Potential Emissions

1. Pollutant Emitted: H132 Naphthalene	2. Pollutant Regulatory Code: WP	
3. Primary Control Device Code:	4. Secondary Control Device Code:	5. Total Percent Efficiency of Control:
6. Potential Emissions: 0.13 lb/hour 0.34 tons/year		7. Synthetically Limited? [X]
8. Emission Factor: Calculations provided in Appendix C		9. Emissions Method Code: 2
10. Calculation of Emissions (limit to 600 characters): Calculations provided in Appendix C		
11. Pollutant Potential Emissions Comment (limit to 200 characters): Using the highest application rate combined of the coating with the highest density with worst case xylene content from all of the SDS that the facility anticipates using.		

Allowable Emissions Allowable Emissions _____ of _____

1. Basis for Allowable Emissions Code:	2. Future Effective Date of Allowable Emissions:
3. Requested Allowable Emissions and Units:	4. Equivalent Allowable Emissions: lb/hour tons/year
5. Method of Compliance (limit to 60 characters):	
6. Allowable Emissions Comment (Desc. of Operating Method) (limit to 200 characters):	

D. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION

Potential Emissions

1. Pollutant Emitted: H123 MIBK	2. Pollutant Regulatory Code: WP	
3. Primary Control Device Code:	4. Secondary Control Device Code:	5. Total Percent Efficiency of Control:
6. Potential Emissions: 0.68 lb/hour 1.73 tons/year		7. Synthetically Limited? [X]
8. Emission Factor: Calculations provided in Appendix C		9. Emissions Method Code: 2
10. Calculation of Emissions (limit to 600 characters): Calculations provided in Appendix C		
11. Pollutant Potential Emissions Comment (limit to 200 characters): Using the highest application rate combined of the coating with the highest density with worst case xylene content from all of the SDS that the facility anticipates using.		

Allowable Emissions Allowable Emissions _____ of _____

1. Basis for Allowable Emissions Code:	2. Future Effective Date of Allowable Emissions:
3. Requested Allowable Emissions and Units:	4. Equivalent Allowable Emissions: lb/hour tons/year
5. Method of Compliance (limit to 60 characters):	
6. Allowable Emissions Comment (Desc. of Operating Method) (limit to 200 characters):	

D. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION

Potential Emissions

1. Pollutant Emitted: H095 Formaldehyde	2. Pollutant Regulatory Code: WP	
3. Primary Control Device Code:	4. Secondary Control Device Code:	5. Total Percent Efficiency of Control:
6. Potential Emissions: 0.02 lb/hour 0.04 tons/year		7. Synthetically Limited? [X]
8. Emission Factor: Calculations provided in Appendix C		9. Emissions Method Code: 2
10. Calculation of Emissions (limit to 600 characters): Calculations provided in Appendix C		
11. Pollutant Potential Emissions Comment (limit to 200 characters): Using the highest application rate combined of the coating with the highest density with worst case xylene content from all of the SDS that the facility anticipates using.		

Allowable Emissions Allowable Emissions _____ of _____

1. Basis for Allowable Emissions Code:	2. Future Effective Date of Allowable Emissions:
3. Requested Allowable Emissions and Units:	4. Equivalent Allowable Emissions: lb/hour tons/year
5. Method of Compliance (limit to 60 characters):	
6. Allowable Emissions Comment (Desc. of Operating Method) (limit to 200 characters):	

D. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION

Potential Emissions

1. Pollutant Emitted: H102 Hexamethylene Diisocyanate	2. Pollutant Regulatory Code: WP	
3. Primary Control Device Code:	4. Secondary Control Device Code:	5. Total Percent Efficiency of Control:
6. Potential Emissions: 0.01 lb/hour 0.03 tons/year		7. Synthetically Limited? [X]
8. Emission Factor: Calculations provided in Appendix C		9. Emissions Method Code: 2
10. Calculation of Emissions (limit to 600 characters): Calculations provided in Appendix C		
11. Pollutant Potential Emissions Comment (limit to 200 characters): Using the highest application rate combined of the coating with the highest density with worst case xylene content from all of the SDS that the facility anticipates using.		

Allowable Emissions Allowable Emissions _____ of _____

1. Basis for Allowable Emissions Code:	2. Future Effective Date of Allowable Emissions:
3. Requested Allowable Emissions and Units:	4. Equivalent Allowable Emissions: lb/hour tons/year
5. Method of Compliance (limit to 60 characters):	
6. Allowable Emissions Comment (Desc. of Operating Method) (limit to 200 characters):	

E. VISIBLE EMISSIONS INFORMATION
(Only Emissions Units Subject to a VE Limitation)

Visible Emissions Limitation: Visible Emissions Limitation _____ of _____

1. Visible Emissions Subtype: VE20	2. Basis for Allowable Opacity: [X] Rule [ ] Other
3. Requested Allowable Opacity: Normal Conditions: 20 % Exceptional Conditions: 20 % Maximum Period of Excess Opacity Allowed: 6 min/hour	
4. Method of Compliance: Method 22	
5. Visible Emissions Comment (limit to 200 characters):	

F. CONTINUOUS MONITOR INFORMATION
(Only Emissions Units Subject to Continuous Monitoring)

Continuous Monitoring System: Continuous Monitor _____ of _____

1. Parameter Code:	2. Pollutant(s):
3. CMS Requirement:	[ ] Rule [ ] Other
4. Monitor Information: Manufacturer: Model Number: Serial Number:	
5. Installation Date:	6. Performance Specification Test Date:
7. Continuous Monitor Comment (limit to 200 characters):	

G. EMISSIONS UNIT SUPPLEMENTAL INFORMATION

Supplemental Requirements

1. Process Flow Diagram [X] Attached, Document ID:_____ [ ] Not Applicable [ ] Waiver Requested
2. Fuel Analysis or Specification [ ] Attached, Document ID:__SDS__ [ ] Not Applicable [X] Waiver Requested
3. Detailed Description of Control Equipment [X] Attached, Document ID:_____ [ ] Not Applicable [ ] Waiver Requested
4. Description of Stack Sampling Facilities [ ] Attached, Document ID:_____ [X] Not Applicable [ ] Waiver Requested
5. Compliance Test Report [ ] Attached, Document ID:_____ [ ] Previously submitted, Date:_____ [X] Not Applicable
6. Procedures for Startup and Shutdown [ ] Attached, Document ID:_____ [X] Not Applicable [ ] Waiver Requested
7. Operation and Maintenance Plan [ ] Attached, Document ID:_____ [X] Not Applicable [ ] Waiver Requested
8. Supplemental Information for Construction Permit Application [ ] Attached, Document ID:_____ [X] Not Applicable
9. Other Information Required by Rule or Statute [ ] Attached, Document ID:_____ [X] Not Applicable
10. Supplemental Requirements Comment: Item 1 is in Appendix A. Item 3 is in Section 4.1.

APPENDIX C

Site Wide Emission Calculations

Table 1
Facility wide Emission Summary
Brand Energy - Jacksonville Facility
Terracon Project Number 94167B06

Table 1a - Potential Facility-wide Emission Limits (lb/hr)

Emission Unit	VOC	TSP	PM_{10}	$PM_{2.5}$	Total HAPs
Surface Coating	6.02	1.10	1.10	1.10	8.09
Abrasive Blasting		5.45	2.62	0.50	0.003
Total	**6.02**	**6.55**	**3.72**	**1.61**	**8.09**

Table 1b - Potential Facility-wide Emission Limits (ton/year)

Emission Unit	VOC	TSP	PM_{10}	$PM_{2.5}$	Total HAPs
Surface Coating	15.36	2.81	2.81	2.81	20.63
Abrasive Blasting		13.89	6.69	1.29	0.01
Total	**15.36**	**16.70**	**9.50**	**4.10**	**20.64**

Table 2
Surface Coating Operations Usage and Emission Summary
Brand Energy - Jacksonville Facility
Terracon Project Number 94167B06

Coating Operations Usage Summary

Daily Coating Usage	24	gallons/day
Number of Hours of Operation per Day	20	hours/day
Hourly Coating Usage	1.2	gallons/hour
Number of Days of Operation per Year	255	days/year
Annual Coating Usage	6,120	gallons/year
Annual Hours of Operation	5,100	hours/year
Hourly Fresh Solvent Usage	0.5	gallons/hour
Hourly Spent Solvent Recovered	0.4	gallons/hour
Hourly Solvent Loss	0.1	gallons/hour
Daily Solvent Loss	2	gallons/day
Annual Solvent Loss	510	gallons/year

Coating Operations Emissions Summary

	lb/hr	tons/year
VOC		
Coating Operations	5.22	13.31
Solvent Usage	0.80	2.05
Total	6.02	15.36
Maximum Indiviual HAP		
Coating Operations	3.08	7.86
Solvent Usage	0.73	1.85
Total	3.81	9.71
Total HAP		
Coating Operations	6.69	17.07
Solvent Usage	1.40	3.56
Total	8.09	20.63

PM Emissions from Coating Operations

Maximum Solids Content	13.12	lb/gal
Transfer Efficiency	65%	
Fallout	80%	
Hourly PM Emissions	1.10	lb/hr
Annual PM Emissions	2.81	tons/year

Table 3
Surface Coating Operations Emission Calculations
Brand Energy - Jacksonville Facility
Terracon Project Number 94167B06

Parameter/Chemical	CAS No.	Coatings (lb/gal)										Coating Emissions	
		Heat-Flex HI-Temp 500	Heat-Flex HI-Temp 1200	HI-Solids Polyurethane - Gloss (Part S)	Macropoxy 646-100 N Epoxy (Part A)	Macropoxy 646-100 N Epoxy (Part B)	Thermaline 4900	Thermaline 4700	Carbothane 133 HB	Carbomastic 15 (Part A and B)	Maximum	lb/hr	tons/year
Density		9.84	16.14	10.98	13.41	13.27	8.91	9.54	11.21	11.70	16.14		
VOC		3.45	3.2	2.39	0.29	1.03	4.35	3.78	3.22	0.74	4.35	5.22	13.31
Solids Content		6.39	12.94	8.59	13.12	12.24	4.56	5.76	7.99	10.96	13.12		
Volatile Hazardous Air Pollutants													
Xylene	1330-20-7	2.17	1.78	0.22	0.13	0.24	2.25	2.57	1.47	0.32	2.57	3.08	7.86
Ethyl benzene	100-41-4	0.20	0.31	0.02	0.03	0.04	0.53	0.61	0.35	0.08	0.61	0.73	1.87
Toluene	108-88-3						1.47	0.02	0.32	0.24	1.47	1.76	4.50
Methanol	67-56-1						0.03	0.09			0.09	0.11	0.28
Cumene	98-82-8	0.01									0.01	0.01	0.04
Naphthalene	91-20-3		0.09					0.01			0.09	0.10	0.27
Cyclohexane	108-94-1			0.11							0.11	0.13	0.34
Methyl Isobutyl Ketone	108-10-1					0.57					0.57	0.68	1.73
Formaldehyde	50-00-0					0.01					0.01	0.02	0.04
Methyl Ethyl Ketone	78-93-3										0.00	0.00	0.00
Other Volatile Compounds													
Medium Aromatic Hydrocarbons	64742-94-5		0.57								0.57	0.68	1.73
Methyl n-Amyl Ketone	110-43-0		0.33	1.76							1.76	2.11	5.38
Bis(pentamethyl-4-piperidyl)sebacate	41556-26-7			0.02							0.02	0.03	0.07
n-Butyl Acetate	123-86-4			0.22			0.02	0.06	0.16		0.22	0.26	0.67
Polyamide	68410-23-1				1.01						1.01	1.21	3.08
Triethylene Tetramine	112-24-3				0.09						0.09	0.10	0.27
Epoxy Polymer	25068-38-6					1.90					1.90	2.28	5.81
Isobutanol	78-83-1						0.04	0.14			0.14	0.17	0.43
PM Acetate	108-65-6						0.01		0.90	0.10	0.90	1.08	2.75
Heavy Aromatic Naphtha	64742-94-5							0.24			0.24	0.29	0.73
Ethanol	64-17-5							0.04			0.04	0.05	0.12
Aliphatic Hydrocarbon	8052-41-3								0.02		0.02	0.02	0.06
Solids													
Crystalline Silica, respirable powder	14808-60-7	0.10		0.65		7.50					7.50	9.00	22.96
Titanium Dioxide	13463-67-7	0.20		3.41	5.03						5.03	6.03	15.39
Cadmium Red/Yellow (HAPs)	12626-36-7/ 1306-23-6	0.39									0.39	0.47	1.20
Methylstyrenated Phenolic Resin	68512-30-1				2.35						2.35	2.82	7.18
Mixed Metal Oxide Yellow Pigment (HAPS)	68186-90-3						0.04	0.03			0.04	0.05	0.12
Black Pigment	68186-91-4							0.14			0.14	0.17	0.43
Hexamethylene Diisocyanate (HAPS)	822-06-0								0.01		0.01	0.01	0.03
Non-HAP Solids							4.52	5.59	7.98	10.96	10.96	13.15	33.54
Exempt Solvents													
p-Chlorobenzotrifluoride	98-56-6	2.95			2.82						2.95	3.54	9.03
Acetone	67-64-1					0.76					0.76	0.91	2.33

Table 3
Surface Coating Operations Emission Calculations
Brand Energy - Jacksonville Facility
Terracon Project Number 94167B06

Parameter/Chemical	CAS No.	Solvents				Solvent Emissions		Total Emissions	
		Thinner for Polyurethanes Slow	Methyl ethyl ketone	Xylene	Maximum	lb/hr	tons/year	lb/hr	tons/year
Density		8.03	6.72	7.25	8.03				
VOC		8.03	6.72	7.25	8.03	0.80	2.05	6.02	15.36
Solids Content									
Volatile Hazardous Air Pollutants									
Xylene	1330-20-7			7.25	7.25	0.73	1.85	3.81	9.71
Ethyl benzene	100-41-4							0.73	1.87
Toluene	108-88-3							1.76	4.50
Methanol	67-56-1							0.11	0.28
Cumene	98-82-8							0.01	0.04
Naphthalene	91-20-3							0.10	0.27
Cyclohexane	108-94-1							0.13	0.34
Methyl Isobutyl Ketone	108-10-1							0.68	1.73
Formaldehyde	50-00-0							0.02	0.04
Methyl Ethyl Ketone	78-93-3		6.72		6.72	0.67	1.71	0.67	1.71
Other Volatile Compounds									
Medium Aromatic Hydrocarbons	64742-94-5							0.68	1.73
Methyl n-Amyl Ketone	110-43-0							2.11	5.38
Bis(pentamethyl-4-piperidyl)sebacate	41556-26-7							0.03	0.07
n-Butyl Acetate	123-86-4							0.26	0.67
Polyamide	68410-23-1							1.21	3.08
Triethylene Tetramine	112-24-3							0.10	0.27
Expoxy Polymer	25068-38-6							2.28	5.81
Isobutanol	78-83-1							0.17	0.43
PM Acetate	108-65-6	8.03			8.03	0.80	2.05	1.88	4.80
Heavy Aromatic Naphtha	64742-94-5							0.29	0.73
Ethanol	64-17-5							0.05	0.12
Aliphatic Hydrocarbon	8052-41-3							0.02	0.06
Solids									
Crystalline Silica, respirable powder	14808-60-7							9.00	22.96
Titanium Dioxide	13463-67-7							6.03	15.39
Cadmium Red/Yellow (HAPs)	12626-36-7/ 1306-23-6							0.47	1.20
Methylstyrenated Phenolic Resin	68512-30-1							2.82	7.18
Mixed Metal Oxide Yellow Pigment (HAPS)	68186-90-3							0.05	0.12
Black Pigment	68186-91-4							0.17	0.43
Hexamethylene Diisocyanate (HAPS)	822-06-0							0.01	0.03
Non-HAP Solids								13.15	33.54
Exempt Solvents									
p-Chlorobenzotrifluoride	98-56-6							3.54	9.03
Acetone	67-64-1							0.91	2.33

Table 4
Abrasive Blasting Emission Calculations
Brand Energy - Jacksonville Facility
Terracon Project Number 94167B06

Table 4a - Abrasive Blasting Emissions

Pollutant	Sand Blasting Emission Factor (lb/ton)	Hourly Usage (tons/hour)	Annual Usage (tons/year)	Emission Factor Adjustment (Sand to Grit)	Hourly Emissions (lb/hr)	Annual Emissions (tn/yr)
PM	27.0	0.841	4,287	24.0%	5.45	13.89
PM_{10}	13.0	0.841	4,287	24.0%	2.62	6.69
$PM_{2.5}$	2.5	0.841	4,287	24.0%	0.50	1.29
Manganese					0.0027	0.0069
Beryllium					0.0001	0.0001
Cadmium					0.0001	0.0001
Total HAP					0.0028	0.0072

NOTES:

1. Emission factors from AP-42, Section 13.2.6, *Abrasive Blasting*, September 1997, Table 13.2.6-1
2. Emission factors assume sand blasting with a wind speed of 5 mph.
3. The blasting media used at this site (Black Beauty®) is coal-fired boiler slag. The text in AP-42 Section 13.2.6.3 indicate that emissions from grit are 24% of the corresponding emissions from sand. The emission factor using grit is higher than the emission factor for garnet, therefore the emissions have been calculated using the emission factor for grit.
4. Hourly usage and annual usage from Brand Energy personnel.
5. Black Beauty has a maximum manganese content of 0.05 wt %, beryllium content of 0.001 wt %, and cadmium content of 0.001 wt %.

Table 4b - Blast Media Usage

Property	Value	Units
Specific Gravity	2.8	
Density of Blast Media	23.352	lbs/gal
Capacity of Spray Gun	1.2	gal/min
Capacity of Spray Gun	28.0224	lbs/min
Capacity of Spray Gun	1681.344	lbs/hr
Capacity of Spray Gun	0.840672	tons/hr
Annual Operational Hours	5,100	From Table 2b
Annual Consumption	8,574,854	lbs/yr
Annual Consumption	4,287	tons/yr

APPENDIX D

Safety Data Sheets

MATERIAL SAFETY DATA SHEETS MARKED "CONFIDENTIAL"

APPENDIX E

Technical Documents

BLASTMASTER® 160 CU. FT. ABRASIVE BLASTING POTS

BUILT MARCO TOUGH
MARCO MANUFACTURED

PART NUMBERS AND SCHEMATICS GUIDE

Company Profile

Since 1944, Marco has developed a strong tradition of providing innovative and reliable products and services to the surface preparation and protective coatings industries. We are the world's premier provider of Abrasives, Blasting Equipment, Coating Equipment, Engineered Systems, Rental Equipment, Safety Equipment, Service, and Repair.

Through innovative designs and a total commitment to quality, Marco manufactures products that increase production rates, create a safer workplace, and reduce maintenance costs. Marco's industry experience, manufacturing capabilities, legendary customer service, product availability, logistics services, and technology leadership is your assurance that we deliver high quality products and services, providing the best value to you, our customer.

The Marco Difference

- **Industry Experience** – With Marco on your team, you have access to expertise which can only come from decades of industry leadership. We have organized our engineering department, production specialists, customer operations, and safety support into a "Center of Competence." As a Marco customer, you have access to hundreds of years of cumulative experience related to your operations.
- **Manufacturing Excellence** – Marco is a U.S. based, ISO 9001:2008 certified manufacturer of equipment for the Surface Preparation and Protective Coatings industries. Marco's engineers benchmark the industry to ensure that we design and manufacture superior products that set the "Gold Standard" for performance, safety, and quality.
- **Legendary Customer Service** – Marco's legendary customer service team is staffed by friendly, highly-trained individuals who are focused on providing the highest level of product support, order accuracy, and customer satisfaction.
- **Product Availability** – We stock over 10,000 SKU's and have over 45 shipping locations to serve North American and International markets for all major brands of blasting and painting equipment. As the largest provider of surface preparation and protective coatings equipment in the world, our inventory levels and product availability are unmatched.
- **Logistics Services** – Marco's in-house logistics team is dedicated to moving your shipment anywhere in the world. We move over 14,000 truckloads every year, allowing you to save on freight costs by leveraging our buying power. Lower your process costs with a single invoice, which includes product and freight.
- **Technology Leadership** – Our website provides: Operator's Manuals, Part Numbers and Schematics Guides, MSDS information, and Features and Specifications Guides, providing access to information 24/7. Our Extranet application allows you to receive quotes and place orders online. Our Intranet maintains a complete record of your purchase history to assist with ongoing support of your existing equipment and future purchasing decisions.

Vision Statement

Marco is the world's premier provider of Abrasives, Blasting Equipment, Coating Equipment, Engineered Systems, Rental Equipment, Safety Equipment, Service, and Repair.

Mission Statement

Marco provides strong leadership and innovation to the surface preparation and protective coatings industries We dedicate our efforts to the continuous improvement of our products, services, processes, people, and most importantly, the quality of our customer's experience.

Quality Statement

Marco is committed to providing superior quality in the design, manufacturing, distribution, rental, service, and repair of our products. Our ISO 9001:2008 certification extends throughout all operations in all locations. Continuous improvement of our processes and supply chain Integration comprise the core of our business strategy for delivering exceptional quality and value in all Marco products and services.

Management Philosophy

We are a company dedicated to the success of every customer and associate. We discuss, debate, challenge, measure, and test our ideas. We will be boundless and limitless in our passion to improve. Through sound leadership and dedicated associates, we will ensure a long term, profitable future for Marco, our associates, customers, and suppliers.

Instructions-Parts

Repair Kits
Accessory Kits
See page 25

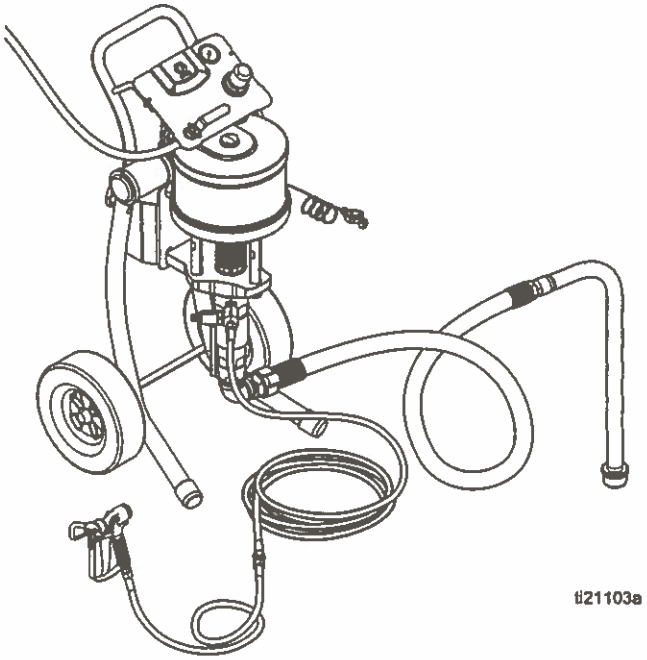
Merkur®
High Pressure Sprayer

332245F
EN

For protective coating applications in hazardous or non-hazardous locations. For professional use only.

See page 2 for model information, including maximum working pressures.

Important Safety Instructions
Read all warnings and instructions in this manual. Save these instructions.



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PROVEN QUALITY. LEADING TECHNOLOGY.

Models

Merkur X48 Package

Part	Gun		Hoses		Accessories			Maximum Inlet Air Pressure psi (MPa, bar)	Maximum Fluid Working Pressure psi (MPa, bar)	Maximum Fluid Flow Rate gpm (lpm)
	Gun	Tip Size	Gun Fluid Hose	Gun Fluid Whip Hose	Suction Tube	Fluid Filter	Drain Valve Kit			
16U920	XTR504	0.019	✔	✔	✔		✔	100	4800 (33, 330)	1.2 (4.5)

Merkur X72 Package

Part	Gun		Hoses		Accessories			Maximum Inlet Air Pressure psi (MPa, bar)	Maximum Fluid Working Pressure psi (MPa, bar)	Maximum Fluid Flow Rate gpm (lpm)
	Gun	Tip Size	Gun Fluid Hose	Gun Fluid Whip Hose	Suction Tube	Fluid Filter	Drain Valve Kit			
16U918	XTR704	0.019	✔	✔	✔		✔	100	7200 (50, 500)	0.8 (3)

Bare Package

Bare packages do not include a gun or hose.

Part	Description	Maximum Inlet Air Pressure psi (MPa, bar)	Maximum Fluid Working Pressure psi (MPa, bar)	Maximum Fluid Flow Rate gpm (lpm)
16V174	Merkur X72	100	7200 (50, 500)	0.8 (3)
16V175	Merkur X48	100	4800 (33, 330)	1.2 (4.5)

Maximum Recommended Tip Size

Model	Tip Size
Merkur X72	0.021
Merkur X48	0.025