May 3, 2023

Ms. Michelle McCloskey
Permit Support Section
Kentucky Division for Air Quality
300 Sower Boulevard, 2nd Floor
Frankfort, KY 40601

**RE: Application to Renew Conditional Major Operating Permit**
**Permit ID: F-18-013**
**Source ID: 21-015-00102 / AI ID: 254**
**Sweco, Division of M-I, LLC**

Dear Ms. McCloskey,

Sweco, Division of M-I, LLC (Sweco) submits the enclosed application to renew Kentucky Division for Air Quality permit F-18-013 for the facility located at 8029 Dixie Highway in Florence, Boone County, Kentucky. The enclosed application includes a project description, applicable DEP7007 forms, and supporting documentation.

If you have any questions regarding the submittal, please contact me at (859) 727-5561 or jladow@slb.com.

Respectfully,

Jason LaDow
HSE & Facilities Manager, GCTC

Cc: William Shane, ALL4 LLC

# Application to Renew Conditional Major Operating Permit F-18-013

## Sweco, Division of M-I, LLC

## AI: 254

May 2023

Submitted by:

Sweco, Division of M-I, LLC
8029 Dixie Highway
Florence, Kentucky 41042

Submitted to:

Kentucky Energy and Environment Cabinet
Division for Air Quality – Permit Review Branch
300 Sower Boulevard, 2nd Floor
Frankfort, Kentucky 40601

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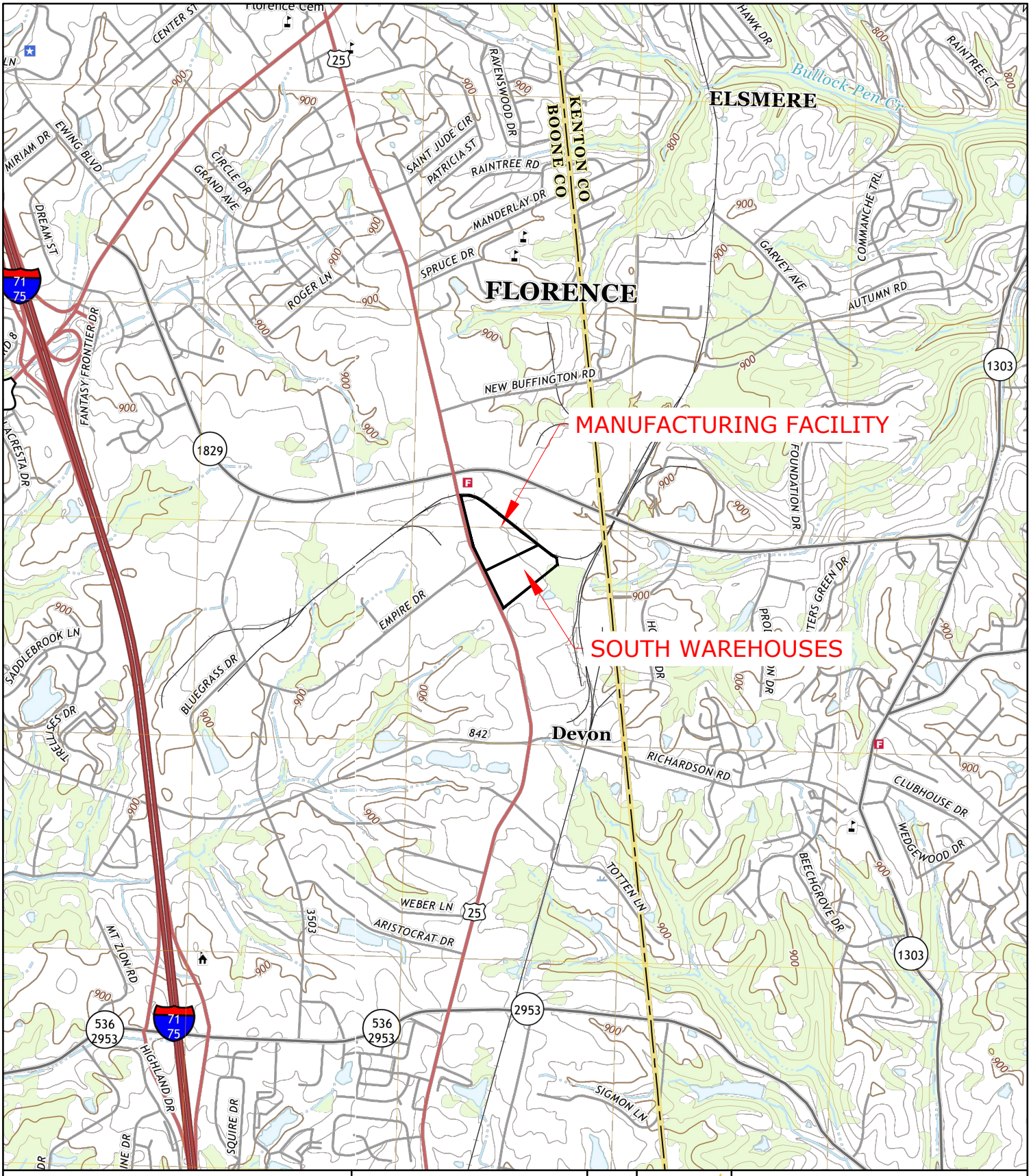
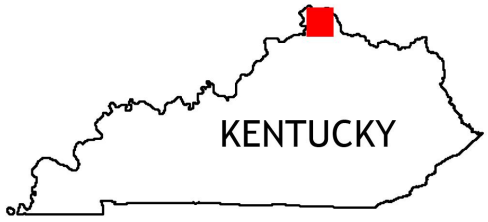
# 1. INTRODUCTION

Sweco, Division of M-I, LLC (Sweco), submits this application to the Kentucky Division for Air Quality (KYDAQ) to renew the Conditional Major Operating Permit issued to the manufacturing facility located at 8029 U.S. Highway 25 in Florence, Kentucky (Facility). In support of this application, a facility location map is included as Figure 1-1, a map identifying the locations of emissions points in Building A is included as Figure 1-2, and a map identifying the locations of emissions points in Buildings B & C is included as Figure 1-3. Applicable DEP7007 Forms are included as Appendix A and a copy of a January 2020 application identifying Insignificant Activities (IA) associated with the metal back screen process is included as Appendix B. Sweco requests that the IA associated with the metal back screen process be incorporated into the permit upon reissuance.

The existing Conditional Major Operating Permit, F-18-013 expires on November 3, 2023. Per Section 12(2) of 401 KAR 52:030, this application is being submitted at least six months prior to the expiration date.




QUADRANGLE INFORMATION

EASTERN QUAD: (SITE)
INDEPENDENCE, KY - 2019
WESTERN QUAD:
UNION, KY - 2019

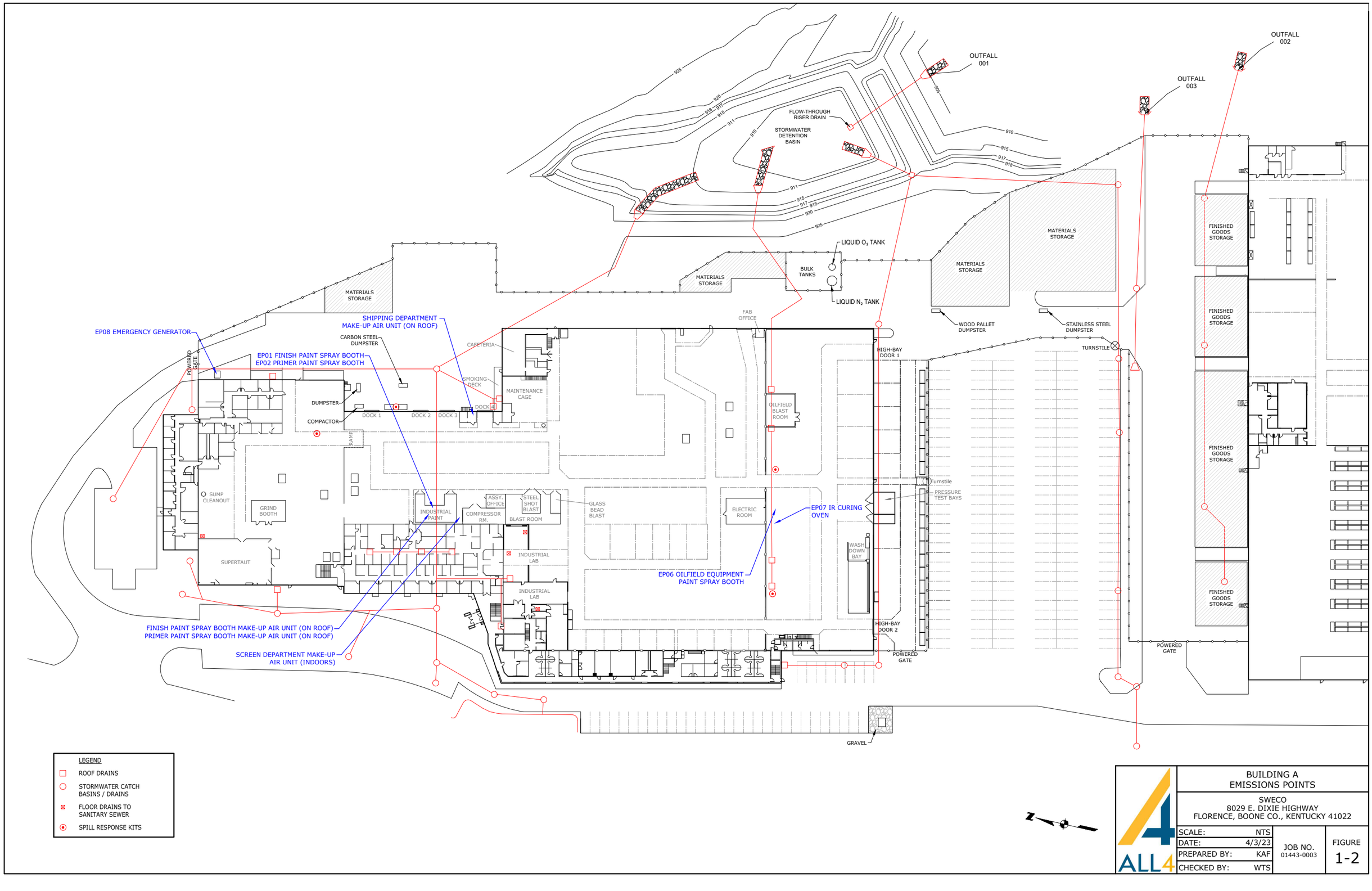
SITE LOCATION MAP

SWECO
8029 and 8045 E. DIXIE HIGHWAY
FLORENCE, BOONE CO., KENTUCKY 41022

| | |
|---|---|
| SCALE: | 1"=2000' |
| DATE: | 4/3/23 |
| PREPARED BY: | KAF |
| CHECKED BY: | WTS |

JOB NO. 01443-0003

FIGURE 1-1



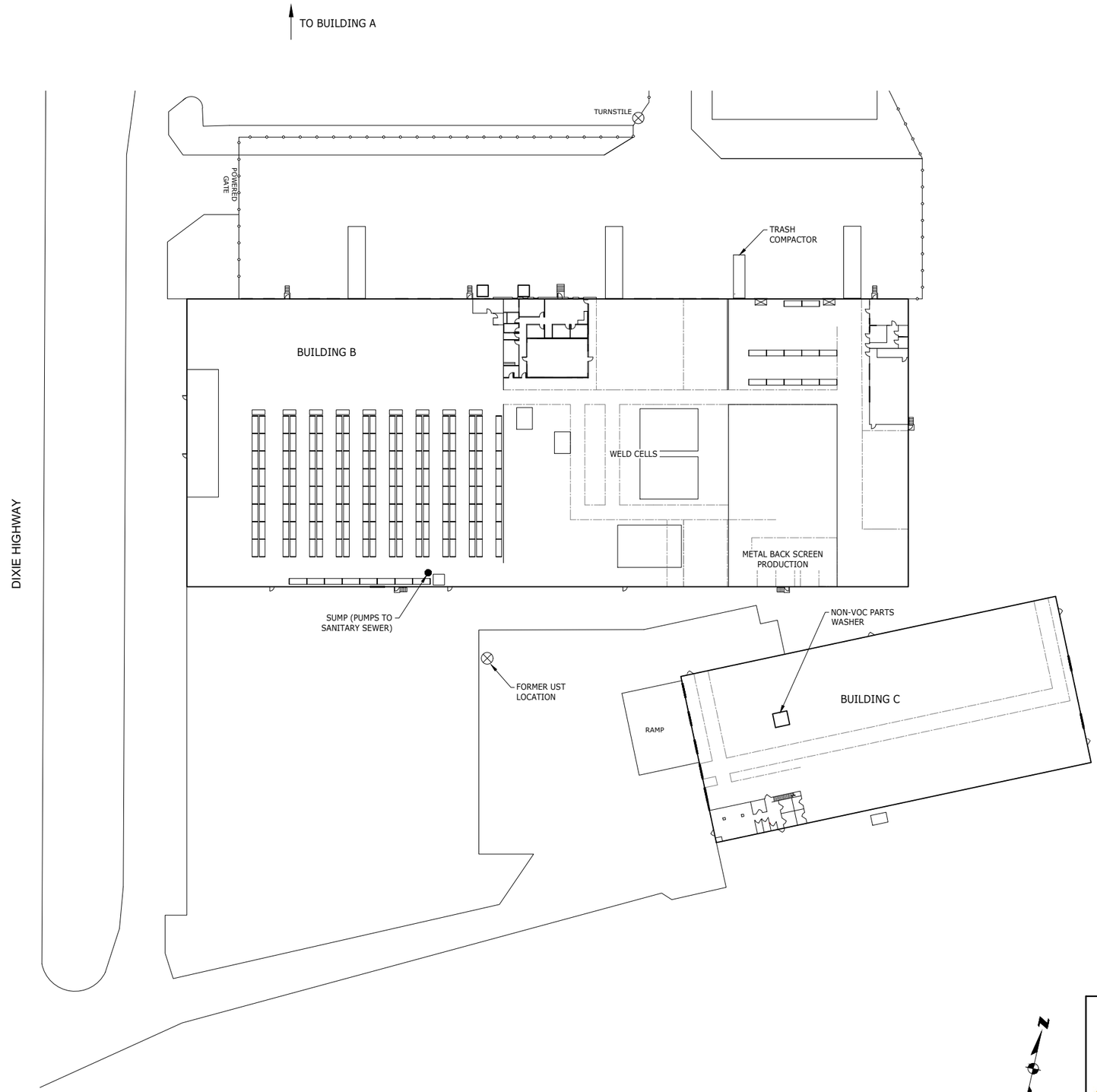

# BUILDING A EMISSIONS POINTS

SWECO
8029 E. DIXIE HIGHWAY
FLORENCE, BOONE CO., KENTUCKY 41022

| | |
|---|---|
| SCALE: | NTS |
| DATE: | 4/3/23 |
| PREPARED BY: | KAF |
| CHECKED BY: | WTS |

JOB NO. 01443-0003

FIGURE 1-2




BUILDINGS B & C
EMISSIONS POINTS

SWECO
8029 E. DIXIE HIGHWAY
FLORENCE, BOONE CO., KENTUCKY 41022

| | |
|---|---|
| SCALE: | NTS |
| DATE: | 4/4/23 |
| PREPARED BY: | KAF |
| CHECKED BY: | WTS |

JOB NO. 01443-0003

FIGURE 1-3

# 2. SOURCE DESCRIPTION

Sweco manufactures and repairs high quality filtration machinery and filtration screens for various industries including the food industry, the pharmaceutical industry, the oilfield drilling and production industry, and other manufacturing and production industries. The facility is included in Standard Industrial Classification (SIC) Code 3569, General Industry Machinery and Equipment.

## *2.1 REQUESTED CHANGES*

Sweco is not proposing to change any permitted emissions point (EP). Operations at the Finish Paint Spray Booth (EP 01), Primer Paint Spray Booth (EP 02), Oil Field Equipment Paint Spray Booth (EP 06), and IR Curing Oven (EP07) will continue as represented in previous applications submitted to KYDAQ. Additionally, no changes are proposed for the 125 kW Emergency Generator (EP 08).

Sweco has made changes to IA at the Facility which are identified in Table 2-1 below. These changes are also represented in the attached Form DEP7007DD. Sweco requests that the list of IA in Section C of the permit be updated to match the changes identified below. Note that Sweco is only requesting the changes identified in Table 2-1; there are no requested changes for IA not listed in the table.

**Table 2-1:**
**Updates to Insignificant Activities**

| IA ID | Current Description (Permit F-18-013) | Requested Update |
|---|---|---|
| IA-11 | Roll Forming Machine | Update description to "Roll Forming Machines (2) (0.011 ton/hr steel ea.)" |
| IA-12 | Press Break (2) | Update description to "Press Breaks (2) (175 & 600 ton Cincinnati)" |
| IA-20 | Screen Department Air Make-Up Unit | Update description to "Screen Department Air Make-Up Unit (1.3608 MMBtu/hr)" |

| IA ID | Current Description (Permit F-18-013) | Requested Update |
|---|---|---|
| IA-27 | Parts Washer (Non-VOC) | Update description to "Parts Washers (Non-VOC) (2) Safety-Kleen Models 90 & 91" |
| IA-32 | Roll Forming Machine (2) 0.011 lb steel/hr | Update description to "Roll Forming Machine (3) (0.011 ton/hr steel ea.)" |
| IA-34 | Heat Presses (2) | Update description to "Heat Presses (4)" |
| IA-39 | Mazak Machining Center | Update description to "Mazak Machines (Nexus 8800, 575C Machining Center, Lathe EZ12MSY)" |
| IA-41 | Ton Cincinnati Press Brake | Update description to "90 Ton Cincinnati Press Brake" |
| IA-46 | Press Brakes (4) | Update description to "Press Brakes (2) (60 & 90 ton Cincinnati)" |
| IA-47 | Etcher | Update description to "Etchers (2)" |
| IA-50 | Manual Press | Delete – Manual Press removed from facility |
| IA-51 | Calendar Machine | Delete – Calendar Machine removed from facility |
| IA-54 | Heat Press | Update description to "Competitive Heat Press" |
| IA-58 | Press Brake | Delete – 5 press brakes total, already listed at IA-12, IA-41, and IA-46 |
| IA-60 | Robotic MIG Welder | Delete – duplicated equipment, already listed at IA-35 |
| IA-61 | Wire Straightener | Delete – duplicated equipment, already listed at IA-36 |
| IA-62 | Screen Presses (4) | Delete – 4 heat presses total, already listed at IA-34, IA-53, and IA-54 |
| IA-63 | Calendaring Machine | Delete – duplicated equipment, already listed at IA-40 |
| IA-64(1) | In-Line Conveyor Blast | Add – identified in application submitted to DAQ dated 1/27/2020 |
| IA-65(1) | Preheat Oven (0.8 MMbtu/hr) | Add – identified in application submitted to DAQ dated 1/27/2020 |
| IA-66(1) | Fluidized Bed Powder Coating | Add – identified in application submitted to DAQ dated 1/27/2020 |

Notes:

(1) An application was submitted to KYDAQ in January 2020 for IA associated with the metal back screen process. These IA are identified as IA-64, 65 and 66 and are listed in Table 2-1 and on the attached Form DEP7007DD. Sweco requests that these IA be incorporated into the permit upon reissuance.

# 3. REGULATORY REVIEW

In accordance with Section 4(2)(c) of 401 KAR 52:030, this application only includes information that is new or different from the most recent source-wide permit application. As previously stated, Sweco is not proposing to change any permitted EP. Sweco has made changes to IA and requests that the list of IA in Section C of the permit be updated to match the changes identified in Table 2-1 and the attached From DEP7007DD. Detailed estimates of emissions are not provided for IA per 401 KAR 52:030 Section 6(2)(c).

The facility proposes to continue to voluntarily accept the permit limitation of less than 18 tons for source-wide volatile organic compound (VOC) emissions per rolling 12 month period. In addition, the facility will continue to voluntarily accept the permit limitations of source-wide hazardous air pollutant (HAP) emissions of less than 9 tons of each individual HAP per rolling 12 month total and 22.5 tons of combined HAP per rolling 12 month total to be classified as a Conditional Major facility and operate under the Federally Enforceable State Operating Permit program defined in 401 KAR 52:030.

# APPENDIX A –
# DEP7007 FORMS

Division for Air Quality

300 Sower Boulevard

Frankfort, KY 40601

(502) 564-3999

# DEP7007AI

## Administrative Information

___ Section AI.1: Source Information

___ Section AI.2: Applicant Information

___ Section AI.3: Owner Information

___ Section AI.4: Type of Application

___ Section AI.5: Other Required Information

___ Section AI.6: Signature Block

___ Section AI.7: Notes, Comments, and Explanations

**Additional Documentation**

__ Additional Documentation attached

**Source Name:** **Sweco, Division of M-I LLC**

**KY EIS (AFS) #:** **21-015-00102**

**Permit #:** **F-18-018**

**Agency Interest (AI) ID:** **254**

**Date:** **May 2023**

## Section AI.1: Source Information

| | | | | | | |
|---|---|---|---|---|---|---|
| **Physical Location Address:** | **Street:** | 8029 Dixie Highway | | | | |
| | **City:** | Florence | **County:** | Boone | **Zip Code:** | 41042 |
| **Mailing Address:** | **Street or P.O. Box:** | 8029 Dixie Highway P.O. Box 1509 | | | | |
| | **City:** | Florence | **State:** | Boone | **Zip Code:** | 41042 |

**Standard Coordinates for Source Physical Location**

**Longitude:** 38.978060° (decimal degrees) **Latitude:** -84.618330° (decimal degrees)

**Primary (NAICS) Category:** All Other Miscellaneous General Purpose Machinery Manufacturing **Primary NAICS #:** 333999

**Classification (SIC) Category:** General Industrial Machinery **Primary SIC #:** 3569

**Briefly discuss the type of business conducted at this site:** The facility manufactures and repairs high quality filtration machinery and filtration screens for the food industry, the pharmaceutical industry, the oilfield drilling and production industry, and other manufacturing and production industries.

**Description of Area Surrounding Source:** __ Rural Area __ Industrial Park __ Residential Area __ Urban Area _X_ Industrial Area __ Commercial Area

**Is any part of the source located on federal land?** __ Yes _X_ No

**Number of Employees:** 303

**Approximate distance to nearest residence or commercial property:** 150 feet **Property Area:** 18.2 acres **Is this source portable?** __ Yes _X_ No

**What other environmental permits or registrations does this source currently hold or need to obtain in Kentucky?**

| | | | | |
|---|---|---|---|---|
| **NPDES/KPDES:** | _X_ Currently Hold | __ Need | __ N/A | **KYR003521** |
| **Solid Waste:** | __ Currently Hold | __ Need | _X_ N/A | |
| **RCRA:** | _X_ Currently Hold | __ Need | __ N/A | **KYD981473572 - Small Quantity Generator (SQG)** |
| **UST:** | __ Currently Hold | __ Need | _X_ N/A | |

**Type of Regulated Waste Activity:**
__ Mixed Waste Generator _X_ Generator _X_ Recycler __ Other: _____
__ U.S. Importer of Hazardous Waste __ Transporter __ Treatment/Storage/Disposal Facility __ N/A

## Section AI.2: Applicant Information

**Applicant Name:** Sweco, Division of M-I LLC

**Title:** (if individual)

**Mailing Address:**
**Street or P.O. Box:** 8029 Dixie Highway P.O. Box 1509
**City:** Florence **State:** KY **Zip Code:** 41042

**Email:** (if individual)

**Phone:** (859) 283-8400

**Technical Contact**

**Name:** Jason LaDow

**Title:** HSE & Facilities Manager

**Mailing Address:**
**Street or P.O. Box:** 8029 Dixie Highway P.O. Box 1509
**City:** Florence **State:** KY **Zip Code:** 41042

**Email:** jladow@slb.com

**Phone:** (859) 240-7522

**Air Permit Contact for Source**

**Name:** Jason LaDow

**Title:** HSE & Facilities Manager

**Mailing Address:**
**Street or P.O. Box:** 8029 Dixie Highway P.O. Box 1509
**City:** Florence **State:** KY **Zip Code:** 41042

**Email:** jladow@slb.com

**Phone:** (859) 240-7522

## Section AI.3: Owner Information

__ **Owner same as applicant**

**Name:** M-I LLC

**Title:**

**Mailing Address:** **Street or P.O. Box:** 5950 North Course Drive

**City:** Houston **State:** TX **Zip Code:** 77072

**Email:**

**Phone:** (832) 295-2549

**List names of owners and officers of the company who have an interest in the company of 5% or more.**

| Name | Position |
|---|---|
| M-I LLC | 100% |
| | |
| | |

## Section AI.4: Type of Application

**Current Status:** __ Title V _X_ Conditional Major __ State-Origin __ General Permit __ Registration __ None

**Requested Action:** *(check all that apply)*

| | | | |
|---|---|---|---|
| __ Name Change | __ Initial Registration | __ Significant Revision | __ Administrative Permit Amendment |
| _X_ Renewal Permit | __ Revised Registration | __ Minor Revision | __ Initial Source-wide Operating Permit |
| __ 502(b)(10) Change | __ Extension Request | __ Addition of New Facility | __ Portable Plant Relocation Notice |
| __ Revision | __ Off Permit Change | __Landfill Alternate Compliance Submittal | __ Modification of Existing Facilities |
| __ Ownership Change | __ Closure | | |

**Requested Status:** __ Title V _X_ Conditional Major __ State-Origin __ PSD __ NSR __ Other: _____

**Is the source requesting a limitation of potential emissions?** _X_ Yes __ No

| Pollutant: | Requested Limit: | Pollutant: | Requested Limit: |
|---|---|---|---|
| __ Particulate Matter | | _X_ Single HAP | 9 tpy (existing limit) |
| _X_ Volatile Organic Compounds (VOC) | 18 tpy (existing limit) | _X_ Combined HAPs | 22.5 tpy (existing limit) |
| __ Carbon Monoxide | | __ Air Toxics (40 CFR 68, Subpart F) | |
| __ Nitrogen Oxides | | __ Carbon Dioxide | |
| __ Sulfur Dioxide | | __ Greenhouse Gases (GHG) | |
| __ Lead | | __ Other | |

**For New Construction:**

**Proposed Start Date of Construction:** *(MM/YYYY)* NA

**Proposed Operation Start-Up Date:** *(MM/YYYY)* NA

**For Modifications:**

**Proposed Start Date of Modification:** *(MM/YYYY)* NA

**Proposed Operation Start-Up Date:** *(MM/YYYY)* NA

**Applicant is seeking coverage under a permit shield.** **__ Yes** **_X_ No**

**Identify any non-applicable requirements for which permit shield is sought on a separate attachment to the application.**

## Section AI.5 Other Required Information

**Indicate the documents attached as part of this application:**

| | |
|---|---|
| __ DEP7007A Indirect Heat Exchangers and Turbines | __ DEP7007CC Compliance Certification |
| __ DEP7007B Manufacturing or Processing Operations | _X_ DEP7007DD Insignificant Activities |
| __ DEP7007C Incinerators and Waste Burners | __ DEP7007EE Internal Combustion Engines |
| __ DEP7007F Episode Standby Plan | __ DEP7007FF Secondary Aluminum Processing |
| __ DEP7007J Volatile Liquid Storage | __ DEP7007GG Control Equipment |
| __ DEP7007K Surface Coating or Printing Operations | __ DEP7007HH Haul Roads |
| __ DEP7007L Mineral Processes | __ Confidentiality Claim |
| __ DEP7007M Metal Cleaning Degreasers | __ Ownership Change Form |
| __ DEP7007N Source Emissions Profile | __ Secretary of State Certificate |
| __ DEP7007P Perchloroethylene Dry Cleaning Systems | __ Flowcharts or diagrams depicting process |
| __ DEP7007R Emission Offset Credit | __ Digital Line Graphs (DLG) files of buldings, roads, etc. |
| __ DEP7007S Service Stations | _X_ Site Map |
| __ DEP7007T Metal Plating and Surface Treatment Operations | _X_ Map or drawing depicting location of facility |
| __ DEP7007V Applicable Requirements and Compliance Activities | __ Safety Data Sheet (SDS) |
| __ DEP7007Y Good Engineering Practice and Stack Height Determination | __ Emergency Response Plan |
| __ DEP7007AA Compliance Schedule for Non-complying Emission Units | __ Other: |
| __ DEP7007BB Certified Progress Report | |

## Section AI.6: Signature Block

**I, the undersigned, hereby certify under penalty of law, that I am a responsible official*, and that I have personally examined, and am familiar with, the information submitted in this document and all its attachments. Based on my inquiry of those individuals with primary responsibility for obtaining the information, I certify that the information is on knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false or incomplete information, including the possibility of fine or imprisonment.**

| | |
|---|---|
| **Authorized Signature** | 5/8/23<br>**Date** |
| Jason LaDow<br>**Type or Printed Name of Signatory** | HSE & Facilities Manager<br>**Title of Signatory** |

*Responsible official as defined by 401 KAR 52:001.

| Section AI.7: Notes, Comments, and Explanations |
| --- |
| No changes are proposed to Emissions Points 01 - Finish Paint Spray Booth, 02 - Primer Paint Spray Booth, 06 - Oil Field Equipment Paint Spray Booth, 07 - IR Curing Oven, or EP 08 - Emergency Generator. |
| Updates to Insignficant Activites are identified in the attached From DEP7007DD. |
| |
| |
| |
| |
| |
| |
| |
| |

Division for Air Quality
300 Sower Boulevard
Frankfort, KY 40601
(502) 564-3999

# DEP7007DD

## Insignificant Activities

___ Section DD.1: Table of Insignificant Activities

___ Section DD.2: Signature Block

___ Section DD.3: Notes, Comments, and Explanations

**Source Name:** **Sweco, Division of M-I, LLC**

**KY EIS (AFS) #:** **21-015-00102**

**Permit #:** **F-18-018**

**Agency Interest (AI) ID:** **254**

**Date:** **May 2023**

## Section DD.1: Table of Insignificant Activities

*Identify each activity with a unique Insignificant Activity number (IA #); for example: 1, 2, 3… etc.

| Insignificant Activity # | Description of Activity including Rated Capacity | Serial Number or Other Unique Identifier | Applicable Regulation(s) | Calculated Emissions |
|---|---|---|---|---|
| 11 | Roll Forming Machines (2) (0.011 ton/hr steel ea.) | | 401 KAR 59:010 | Not provided per 401 KAR 52:030 Section 6(2)(c) |
| 12 | Press Breaks (2) | 175 & 600 ton Cincinnati press breaks | 401 KAR 59:010 | Not provided per 401 KAR 52:030 Section 6(2)(c) |
| 20 | Screen Department Air Make-Up Unit (1.3608 MMbtu/hr) | | 401 KAR 59:015 | Not provided per 401 KAR 52:030 Section 6(2)(c) |
| 27 | Parts Washers (Non-VOC) (2) | Safety-Kleen Models 90 & 91 | NA | Not provided per 401 KAR 52:030 Section 6(2)(c) |

Division for Air Quality
300 Sower Boulevard
Frankfort, KY 40601
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# DEP7007DD

## Insignificant Activities

___ Section DD.1: Table of Insignificant Activities
___ Section DD.2: Signature Block
___ Section DD.3: Notes, Comments, and Explanations

**Source Name:** **Sweco, Division of M-I, LLC**
**KY EIS (AFS) #:** **21-015-00102**
**Permit #:** **F-18-018**
**Agency Interest (AI) ID:** **254**
**Date:** **May 2023**

## Section DD.1: Table of Insignificant Activities

*Identify each activity with a unique Insignificant Activity number (IA #); for example: 1, 2, 3… etc.

| Insignificant Activity # | Description of Activity including Rated Capacity | Serial Number or Other Unique Identifier | Applicable Regulation(s) | Calculated Emissions |
|---|---|---|---|---|
| 32 | Roll Forming Machine (3) (0.011 ton/hr steel ea.) | | 401 KAR 59:010 | Not provided per 401 KAR 52:030 Section 6(2)(c) |
| 34 | Heat Presses (4) | | NA | Not provided per 401 KAR 52:030 Section 6(2)(c) |
| 39 | Mazak Machines | Nexus 8800, 575C Machining Center, Lathe EZ12MSY | NA | Not provided per 401 KAR 52:030 Section 6(2)(c) |
| 41 | Press Break | 90 Ton Cincinnati press break | 401 KAR 59:010 | Not provided per 401 KAR 52:030 Section 6(2)(c) |
| 46 | Press Breaks (2) | 60 & 90 ton Cincinnati press breaks | 401 KAR 59:010 | Not provided per 401 KAR 52:030 Section 6(2)(c) |

Division for Air Quality
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# DEP7007DD

## Insignificant Activities

___ Section DD.1: Table of Insignificant Activities

___ Section DD.2: Signature Block

___ Section DD.3: Notes, Comments, and Explanations

**Source Name:** **Sweco, Division of M-I, LLC**

**KY EIS (AFS) #:** **21-015-00102**

**Permit #:** **F-18-018**

**Agency Interest (AI) ID:** **254**

**Date:** **May 2023**

## Section DD.1: Table of Insignificant Activities

*Identify each activity with a unique Insignificant Activity number (IA #); for example: 1, 2, 3… etc.

| Insignificant Activity # | Description of Activity including Rated Capacity | Serial Number or Other Unique Identifier | Applicable Regulation(s) | Calculated Emissions |
|---|---|---|---|---|
| 47 | Etchers (2) | | NA | Not provided per 401 KAR 52:030 Section 6(2)(c) |
| 50 | Manual Press | Delete – Manual Press removed from facility | Delete – Manual Press removed from facility | Delete – Manual Press removed from facility |
| 51 | Calendar Machine | Delete – Calendar Machine removed from facility | Delete – Calendar Machine removed from facility | Delete – Calendar Machine removed from facility |
| 54 | Heat Press | Competitive Heat Press | NA | Not provided per 401 KAR 52:030 Section 6(2)(c) |
| 58 | Press Break | Delete – 5 press brakes total, already listed at IA-12, IA-41, and IA-46 | Delete – 5 press brakes total, already listed at IA-12, IA-41, and IA-46 | Delete – 5 press brakes total, already listed at IA-12, IA-41, and IA-46 |

Division for Air Quality
300 Sower Boulevard
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(502) 564-3999

# DEP7007DD

## Insignificant Activities

___ Section DD.1: Table of Insignificant Activities
___ Section DD.2: Signature Block
___ Section DD.3: Notes, Comments, and Explanations

**Source Name:** **Sweco, Division of M-I, LLC**
**KY EIS (AFS) #:** **21-015-00102**
**Permit #:** **F-18-018**
**Agency Interest (AI) ID:** **254**
**Date:** **May 2023**

## Section DD.1: Table of Insignificant Activities

*Identify each activity with a unique Insignificant Activity number (IA #); for example: 1, 2, 3… etc.

| Insignificant Activity # | Description of Activity including Rated Capacity | Serial Number or Other Unique Identifier | Applicable Regulation(s) | Calculated Emissions |
|---|---|---|---|---|
| 60 | Robotic MIG Welder | Delete – duplicated equipment, already listed at IA-35 | Delete – duplicated equipment, already listed at IA-35 | Delete – duplicated equipment, already listed at IA-35 |
| 61 | Wire Straightener | Delete – duplicated equipment, already listed at IA-36 | Delete – duplicated equipment, already listed at IA-36 | Delete – duplicated equipment, already listed at IA-36 |
| 62 | Screen Presses (4) | Delete – 4 heat presses total, already listed at IA-34, IA-53, and IA-54 | Delete – 4 heat presses total, already listed at IA-34, IA-53, and IA-54 | Delete – 4 heat presses total, already listed at IA-34, IA-53, and IA-54 |
| 64 | In-Line Conveyor Blast | Metal Back Screen Production In-Line Conveyor Blast | NA | See application submitted to DAQ dated 1/27/2020 |
| 65 | Preheat Oven (0.8 MMbtu/hr) | Metal Back Screen Production Preheat Oven 0.8 MMBtu/hr | NA | See application submitted to DAQ dated 1/27/2020 |
| 66 | Fluidized Bed Powder Coating | Metal Back Screen Production Fluidized Bed Powder Coating | NA | See application submitted to DAQ dated 1/27/2020 |

Division for Air Quality
300 Sower Boulevard
Frankfort, KY 40601
(502) 564-3999

# DEP7007DD

## Insignificant Activities

___ Section DD.1: Table of Insignificant Activities
___ Section DD.2: Signature Block
___ Section DD.3: Notes, Comments, and Explanations

**Source Name:** **Sweco, Division of M-I, LLC**
**KY EIS (AFS) #:** **21-015-00102**
**Permit #:** **F-18-018**
**Agency Interest (AI) ID:** **254**
**Date:** **May 2023**

## Section DD.2: Signature Block

I, THE UNDERSIGNED, HEREBY CERTIFY UNDER PENALTY OF LAW, THAT I AM A RESPONSIBLE OFFICIAL, AND THAT I HAVE PERSONALLY EXAMINED, AND AM FAMILIAR WITH, THE INFORMATION SUBMITTED IN THIS DOCUMENT AND ALL ITS ATTACHMENTS. BASED ON MY INQUIRY OF THOSE INDIVIDUALS WITH PRIMARY RESPONSIBILITY FOR OBTAINING THE INFORMATION, I CERTIFY THAT THE INFORMATION IS ON KNOWLEDGE AND BELIEF, TRUE, ACCURATE, AND COMPLETE. I AM AWARE THAT THERE ARE SIGNIFICANT PENALTIES FOR SUBMITTING FALSE OR INCOMPLETE INFORMATION, INCLUDING THE POSSIBILITY OF FINE OR IMPRISONMENT.

**Authorized Signature** 5/8/23 **Date**

**By:**

Jason LaDow — **Type/Print Name of Signatory**

HSE & Facilities Manager — **Title of Signatory**

| **Section DD.3: Notes, Comments, and Explanations** |
| --- |
| Insignificant activities not listed in Section DD.1 are not changing from the existing permit and should remain. Only the IA listed in Section DD.1 are requested to be modified as part of the permit renewal. |
| |
| |
| |
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| |
| |
| |
| |
| |

# APPENDIX B –
# JANUARY 2020 KYDAQ APPLICATION

Christopher Spiers
FMPC Quality Systems & HSE Manager
8029 Dixie Hwy
Florence, KY 41042
Spiers1@slb.com 859-283-8473

Schlumberger

January 27, 2020

Mr. James Morse
Permit Support Section
Kentucky Division for Air Quality
300 Sower Boulevard, 2nd Floor
Frankfort, KY 40601

RE: Application to Add Insignificant Activities to Conditional Major Permit F-18-013
Sweco, Division of M-I, LLC
Source ID: 21-015-00102, Agency Interest No.: 254

Dear Mr. Morse:

Please find enclosed information and supporting documentation for the addition of a metal back screen production process to the Sweco facility located at 8029 Dixie Highway in Florence, Kentucky. Sweco is notifying the Kentucky Division for Air Quality (KDAQ) that it intends to install the equipment in January 2020 and begin product trials in April 2020.

Included with this packet is information necessary to process this request. If you have any questions or require any additional information during your review, please feel free to contact me at (859) 283-8473 or spiers1@slb.com.

Respectfully,
Sweco, Division of M-I, LLC

Chris Spiers
FMPC Quality Systems & HSE Manager

Cc: William Shane, Smith Management Group

**APPLICATION TO ADD INSIGNIFICANT ACTIVITIES TO A CONDITIONAL MAJOR PERMIT**

**SWECO, DIVISION OF M-I, LLC**
**FLORENCE, BOONE COUNTY, KENTUCKY**

TABLE OF CONTENTS

**INTRODUCTION**

The Sweco facility in Florence, Kentucky plans to add a metal back screen production process in January 2020. The process is currently performed by an outside vendor. Equipment associated with this process will be installed in the 8045 Building (Building B) as shown on **Figure 2b**. The screens in the process consist of stainless steel mesh attached to 12 and 14 gauge perforated plates and tubing. At maximum capacity, the facility could produce up to 64,440 coated parts or screens per year depending on the screen type. However, actual production is expected to be closer to 52,000 coated parts per year with 34,000 screens. Product trials are expected to begin soon after equipment installation starting in January and completing in March 2020, with production to begin later in 2020.

The metal back screen production process will include the following equipment:

- In-line Conveyor Blast (IA-64). The blasting operation will use either G120 steel grit **or** 120 aluminum oxide. Copies of the SDS for G120 steel grit and 120 Aluminum Oxide are included in **Attachment C**. Maximum blasting rate of blast media is 20 $ft^3$/hr for all 10 guns; however, this does not represent actual usage rate because the blast media is recycled. Actual usage of blast media is reported to be 200 lb/hr for steel grit and 383 lb/hr for aluminum oxide. PTE calculations consider usage of 120 aluminum oxide in order to calculate total particulate matter (PT) emissions and G120 steel grit in order to calculate HAP emissions. The conveyor blast is equipped with a containment booth with dust collector with a reported rating of 99% efficiency at 0.5 micron. The conveyor blast will not be operated without the dust collector being in place and operational according to manufacturer's recommended specifications.
- Pre-Heat Conveyor Oven (IA-65). Parts must be preheated in order for the powder to successfully fuse to the part. This unit is a gas-fired oven rated at 1.2 MMBtu/hr. The facility will install an 12 inch diameter stack for the oven.
- Fluidized Bed Powder Coating (IA-66). A fluidized bed is created by forcing air up through the powder, making it flow like a liquid. This process will not use any solvent, thinners, or other additives. The MSDS for the powder coating material is provided in **Attachment C**. Sweco anticipates usage of 50,000 pounds of powder coating per year. The powder tank must initially be charged with enough powder to completely cover the part. After that, makeup powder is added to the powder tank as coating is used on the parts.
- Electric Heat Press – 4 total units. These presses are used for curing of coated screens and are similar to the existing Fusion Press (IA-53), although the Fusion Press is larger than the proposed presses. One press will be installed in March 2020 and the remaining three presses will be installed later in 2020.

All components of the metal back screen process PTE calculations are provided as an attachment to this submission and are also summarized in **Table 1** below. The PTE from the metal back screen process generator will not cause the facility's permitting status as a Conditional Major facility to change.

**Table 1: PTE Summary for Metal Back Screen Production**

| Pollutant | Metal Back Screen PTE Uncontrolled (ton/yr) [(1)] | Updated Facility-Wide PTE (ton/yr) [(2)] |
|---|---|---|
| PT | 1.18 | 6.30 |
| PM10 | 2.52E-02 | 12.3 |
| PM2.5 | 2.52E-02 | 3.04 |
| NOx | 2.58E-01 | 1.67 |

| Table 1: PTE Summary for Metal Back Screen Production | | |
|---|---|---|
| **Pollutant** | **Metal Back Screen PTE Uncontrolled (ton/yr) [(1)]** | **Updated Facility-Wide PTE (ton/yr) [(2)]** |
| CO | 4.33E-01 | 0.737 |
| SO2 | 3.09E-03 | 0.096 |
| VOC | 2.78E-01 | 39.7 |
| Ammonia | 1.65E-02 | 1.65E-02 |
| Lead | 2.58E-06 | 7.01E-03 |
| Benzene | 0 | 2.99E-04 |
| Toluene | 0 | 11.1 |
| Xylenes | 0 | 14.9 |
| Cumene | 0 | 0.513 |
| Ethyl Benzene | 0 | 2.92 |
| MIBK | 0 | 1.17 |
| Manganese | 7.25E-03 | 7.25E-03 |
| Phosphorus | 3.02E-04 | 3.02E-04 |
| Nickel | 1.21E-03 | 1.21E-03 |
| CO2 | 618.35 | 618.35 |
| N2O | 1.13E-02 | 1.13E-02 |
| CH4 | 1.19E-02 | 1.19E-02 |
| Combined HAPs | 8.77E-03 | 30.59 |

(1) Emissions assume that the metal back screen production process will be operated full-time (8,760 hours per year).

(2) Calculated as Maximum Potential (tpy) emissions listed on 2018 Emissions Inventory Survey plus uncontrolled PTE from Metal Back Screen Production. The facility has accepted emissions limitations of ≤ 18 tpy for VOC, ≤ 9 tpy for a single HAP, and ≤ 22.5 tpy for combined HAPs.

# DEP7007 FORMS

Division for Air Quality

300 Sower Boulevard

Frankfort, KY 40601

(502) 564-3999

# DEP7007AI

## Administrative Information

___ Section AI.1: Source Information

___ Section AI.2: Applicant Information

___ Section AI.3: Owner Information

___ Section AI.4: Type of Application

___ Section AI.5: Other Required Information

___ Section AI.6: Signature Block

___ Section AI.7: Notes, Comments, and Explanations

**Additional Documentation**

__ Additional Documentation attached

**Source Name:** **Sweco, Division of M-I LLC**

**KY EIS (AFS) #:** **21-015-00102**

**Permit #:** **F-18-013**

**Agency Interest (AI) ID:** **254**

**Date:** **January 2020**

## Section AI.1: Source Information

| | | | | | | |
|---|---|---|---|---|---|---|
| **Physical Location Address:** | **Street:** | 8029 Dixie Highway | | | | |
| | **City:** | Florence | **County:** | Boone | **Zip Code:** | 41042 |
| **Mailing Address:** | **Street or P.O. Box:** | 8029 Dixie Highway P.O. Box 1509 | | | | |
| | **City:** | Florence | **State:** | Boone | **Zip Code:** | 41042 |

### Standard Coordinates for Source Physical Location

**Longitude:** 38.978060° (decimal degrees) **Latitude:** -84.618330° (decimal degrees)

**Primary (NAICS) Category:** All Other Miscellaneous General Purpose Machinery Manufacturing **Primary NAICS #:** 333999

**Classification (SIC) Category:** General Industrial Machinery **Primary SIC #:** 3569

**Briefly discuss the type of business conducted at this site:** The facility manufactures and repairs high quality filtration machinery and filtration screens for various industries including the food industry, the pharmaceutical industry, the oilfield drilling and production industry, and other manufacturing and production industries.

**Description of Area Surrounding Source:** __ Rural Area __ Industrial Park __ Residential Area __ Urban Area _X_ Industrial Area __ Commercial Area

**Is any part of the source located on federal land?** __ Yes _X_ No

**Number of Employees:** 290

**Approximate distance to nearest residence or commercial property:** 150

**Property Area:** 18.2

**Is this source portable?** __ Yes _X_ No

**What other environmental permits or registrations does this source currently hold or need to obtain in Kentucky?**

| | | | | |
|---|---|---|---|---|
| **NPDES/KPDES:** | _X_ Currently Hold | __ Need | __ N/A | **KYR003521** |
| **Solid Waste:** | __ Currently Hold | __ Need | _X_ N/A | |
| **RCRA:** | _X_ Currently Hold | __ Need | __ N/A | **KYD981473572 - Small Quantity Generator (SQG)** |
| **UST:** | __ Currently Hold | __ Need | _X_ N/A | |

**Type of Regulated Waste Activity:**

__ Mixed Waste Generator _X_ Generator _X_ Recycler __ Other: _____

__ U.S. Importer of Hazardous Waste __ Transporter __ Treatment/Storage/Disposal Facility __ N/A

## Section AI.2: Applicant Information

**Applicant Name:** Sweco, Division of M-I LLC

**Title:** (if individual)

**Mailing Address:**
**Street or P.O. Box:** 8029 Dixie Highway P.O. Box 1509
**City:** Florence **State:** KY **Zip Code:** 41042

**Email:** (if individual)

**Phone:** (859) 283-8400

**Technical Contact**

**Name:** Jason LaDow

**Title:** Facilities Manager

**Mailing Address:**
**Street or P.O. Box:** 8029 Dixie Highway P.O. Box 1509
**City:** Florence **State:** KY **Zip Code:** 41042

**Email:** jladow@slb.com

**Phone:** (859) 727-5561

**Air Permit Contact for Source**

**Name:** Chris Spiers

**Title:** QHSE Manager

**Mailing Address:**
**Street or P.O. Box:** 8029 Dixie Highway P.O. Box 1509
**City:** Florence **State:** KY **Zip Code:** 41042

**Email:** spiers1@slb.com

**Phone:** (859) 283-8473

## Section AI.3: Owner Information

__ **Owner same as applicant**

**Name:** M-I LLC

**Title:**

**Mailing Address:** **Street or P.O. Box:** 5950 North Course Drive

**City:** Houston **State:** TX **Zip Code:** 77072

**Email:**

**Phone:** (832) 295-2549

**List names of owners and officers of the company who have an interest in the company of 5% or more.**

| Name | Position |
|---|---|
| M-I LLC | 100% |
| | |
| | |

## Section AI.4: Type of Application

**Current Status:** __ Title V _X_ Conditional Major __ State-Origin __ General Permit __ Registration __ None

**Requested Action:** *(check all that apply)*

__ Name Change __ Initial Registration __ Significant Revision __ Administrative Permit Amendment
__ Renewal Permit __ Revised Registration __ Minor Revision __ Initial Source-wide OperatingPermit
__ 502(b)(10) Change __ Extension Request __ Addition of New Facility __ Portable Plant Relocation Notice
__ Revision __ Off Permit Change __Landfill Alternate Compliance Submittal _X_ Modification of Existing Facilities
__ Ownership Change __ Closure

**Requested Status:** __ Title V _X_ Conditional Major __ State-Origin __ PSD __ NSR __ Other: _____

**Is the source requesting a limitation of potential emissions?** _X_ Yes __ No

| Pollutant: | Requested Limit: | Pollutant: | Requested Limit: |
|---|---|---|---|
| __ Particulate Matter | | _X_ Single HAP | 9 tpy (existing limit) |
| _X_ Volatile Organic Compounds (VOC) | 18 tpy (existing limit) | _X_ Combined HAPs | 22.5 tpy (existing limit) |
| __ Carbon Monoxide | | __ Air Toxics (40 CFR 68, Subpart F) | |
| __ Nitrogen Oxides | | __ Carbon Dioxide | |
| __ Sulfur Dioxide | | __ Greenhouse Gases (GHG) | |
| __ Lead | | __ Other | |

**For New Construction:**

**Proposed Start Date of Construction:** *(MM/YYYY)* January 2020

**Proposed Operation Start-Up Date:** *(MM/YYYY)* product trials - April 2020

**For Modifications:**

**Proposed Start Date of Modification:** *(MM/YYYY)*

**Proposed Operation Start-Up Date:** *(MM/YYYY)*

**Applicant is seeking coverage under a permit shield.** **__ Yes** **_X_ No**

**Identify any non-applicable requirements for which permit shield is sought on a separate attachment to the application.**

## Section AI.5 Other Required Information

**Indicate the documents attached as part of this application:**

__ DEP7007A Indirect Heat Exchangers and Turbines
__ DEP7007B Manufacturing or Processing Operations
__ DEP7007C Incinerators and Waste Burners
__ DEP7007F Episode Standby Plan
__ DEP7007J Volatile Liquid Storage
__ DEP7007K Surface Coating or Printing Operations
__ DEP7007L Mineral Processes
__ DEP7007M Metal Cleaning Degreasers
_X_ DEP7007N Source Emissions Profile
__ DEP7007P Perchloroethylene Dry Cleaning Systems
__ DEP7007R Emission Offset Credit
__ DEP7007S Service Stations
__ DEP7007T Metal Plating and Surface Treatment Operations
__ DEP7007V Applicable Requirements and Compliance Activities
__ DEP7007Y Good Engineering Practice and Stack Height Determination
__ DEP7007AA Compliance Schedule for Non-complying Emission Units
__ DEP7007BB Certified Progress Report
__ DEP7007CC Compliance Certification
_X_ DEP7007DD Insignificant Activities
__ DEP7007EE Internal Combustion Engines
__ DEP7007FF Secondary Aluminum Processing
__ DEP7007GG Control Equipment
__ DEP7007HH Haul Roads
__ Confidentiality Claim
__ Ownership Change Form
__ Secretary of State Certificate
__ Flowcharts or diagrams depicting process
__ Digital Line Graphs (DLG) files of buildings, roads, etc.
_X_ Site Map
_X_ Map or drawing depicting location of facility
_X_ Safety Data Sheet (SDS)
__ Emergency Response Plan
_X_ Other: Equipment spec sheets, PTE calculations

## Section AI.6: Signature Block

**I, the undersigned, hereby certify under penalty of law, that I am a responsible official*, and that I have personally examined, and am familiar with, the information submitted in this document and all its attachments. Based on my inquiry of those individuals with primary responsibility for obtaining the information, I certify that the information is on knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false or incomplete information, including the possibility of fine or imprisonment.**

Chris Spiers
**Authorized Signature**

Jan 27, 2020
**Date**

Chris Spiers
**Type or Printed Name of Signatory**

FMPC Quality Systems & HSE Manager
**Title of Signatory**

*Responsible official as defined by 401 KAR 52:001.

## Section AI.7: Notes, Comments, and Explanations

The metal back screen production process will have one new stack for the natural gas fired Preheat Oven. Stack details are provided in Form DEP7007N.

Division for Air Quality
300 Sower Boulevard
Frankfort, KY 40601
(502) 564-3999

# DEP7007DD

## Insignificant Activities

___ Section DD.1: Table of Insignificant Activities
___ Section DD.2: Signature Block
___ Section DD.3: Notes, Comments, and Explanations

| | |
|---|---|
| **Source Name:** | **Sweco, Division of M-I LLC** |
| **KY EIS (AFS) #:** | **21-015-00102** |
| **Permit #:** | **F-18-013** |
| **Agency Interest (AI) ID:** | **254** |
| **Date:** | **January 2020** |

## Section DD.1: Table of Insignificant Activities

*Identify each activity with a unique Insignificant Activity number (IA #); for example: 1, 2, 3… etc.

| Insignificant Activity # | Description of Activity including Rated Capacity | Serial Number or Other Unique Identifier | Applicable Regulation(s) | Calculated Emissions |
|---|---|---|---|---|
| IA-64 | In-Line Conveyor Blast up to 383 lb/hr | Metal Back Screen Production In-Line Conveyor Blast | NA | PT = 1.16 tpy; Mn = 7.25E-03 tpy; P = 3.02E-04 tpy; Ni = 1.21E-03 tpy (See Attachment A for PTE calculations) |
| IA-65 | Preheat Oven (Natural Gas Fired ) 1.2 MMBtu/hr | Metal Back Screen Production Preheat Oven 1.2 MMBtu/hr | NA | See Attachment A for PTE calculations from natural gas combustion |
| IA-66 | Fluidized Bed Powder Coating 50,000 lb/yr | Metal Back Screen Production Fluidized Bed Powder Coating | NA | 0.25 tpy VOC (See Attachment A for PTE calculations) |
| n/a | Electric Presses (4) | Metal Back Screen Production Electric Presses | NA | n/a - emissions not expected from this activity |
| | | | | |

Division for Air Quality
300 Sower Boulevard
Frankfort, KY 40601
(502) 564-3999

# DEP7007DD

## Insignificant Activities

___ Section DD.1: Table of Insignificant Activities
___ Section DD.2: Signature Block
___ Section DD.3: Notes, Comments, and Explanations

| | |
|---|---|
| **Source Name:** | **Sweco, Division of M-I LLC** |
| **KY EIS (AFS) #:** | **21-015-00102** |
| **Permit #:** | **F-18-013** |
| **Agency Interest (AI) ID:** | **254** |
| **Date:** | **January 2020** |

## Section DD.2: Signature Block

I, THE UNDERSIGNED, HEREBY CERTIFY UNDER PENALTY OF LAW, THAT I AM A RESPONSIBLE OFFICIAL, AND THAT I HAVE PERSONALLY EXAMINED, AND AM FAMILIAR WITH, THE INFORMATION SUBMITTED IN THIS DOCUMENT AND ALL ITS ATTACHMENTS. BASED ON MY INQUIRY OF THOSE INDIVIDUALS WITH PRIMARY RESPONSIBILITY FOR OBTAINING THE INFORMATION, I CERTIFY THAT THE INFORMATION IS ON KNOWLEDGE AND BELIEF, TRUE, ACCURATE, AND COMPLETE. I AM AWARE THAT THERE ARE SIGNIFICANT PENALTIES FOR SUBMITTING FALSE OR INCOMPLETE INFORMATION, INCLUDING THE POSSIBILITY OF FINE OR IMPRISONMENT.

Chris Spiers — **Authorized Signature**

Jan 27, 2020 — **Date**

**By:**

Chris Spiers — **Type/Print Name of Signatory**

FMPC Quality Systems & HSE Manager — **Title of Signatory**

Division for Air Quality

300 Sower Boulevard
Frankfort, KY 40601
(502) 564-3999

# DEP7007N

## Source Emissions Profile

__ Section N.1: Emission Summary
__ Section N.2: Stack Information
__ Section N.3: Fugitive Information
__ Section N.4: Notes, Comments, and Explanations

**Additional Documentation**

__ Complete DEP7007AI

**Source Name:** Sweco, Division of M-I LLC
**KY EIS (AFS) #:** 21-015-00102
**Permit #:** F-18-013
**Agency Interest (AI) ID:** 254
**Date:** January 2020

## N.1: Emission Summary

| Emission Unit # | Emission Unit Name | Process ID | Process Name | Control Device Name | Control Device ID | Stack ID | Maximum Design Capacity *(SCC Units/hour)* | Pollutant | Uncontrolled Emission Factor *(lb/SCC Units)* | Emission Factor Source (e.g. AP-42, Stack Test, Mass Balance) | Capture Efficiency *(%)* | Control Efficiency *(%)* | Hourly Emissions | | Annual Emissions | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | | | | | Uncontrolled Potential *(lb/hr)* | Controlled Potential *(lb/hr)* | Uncontrolled Potential *(tons/yr)* | Controlled Potential *(tons/yr)* |
| IA-65 | Metal Back Screen Production | | Preheat Oven | NA | NA | IA-65 | 1.2 MMBtu/hr | See Attachment A for PTE calculations from natural gas combustion | | | | | | | | |
| | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | |
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| | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | |

## Section N.2: Stack Information

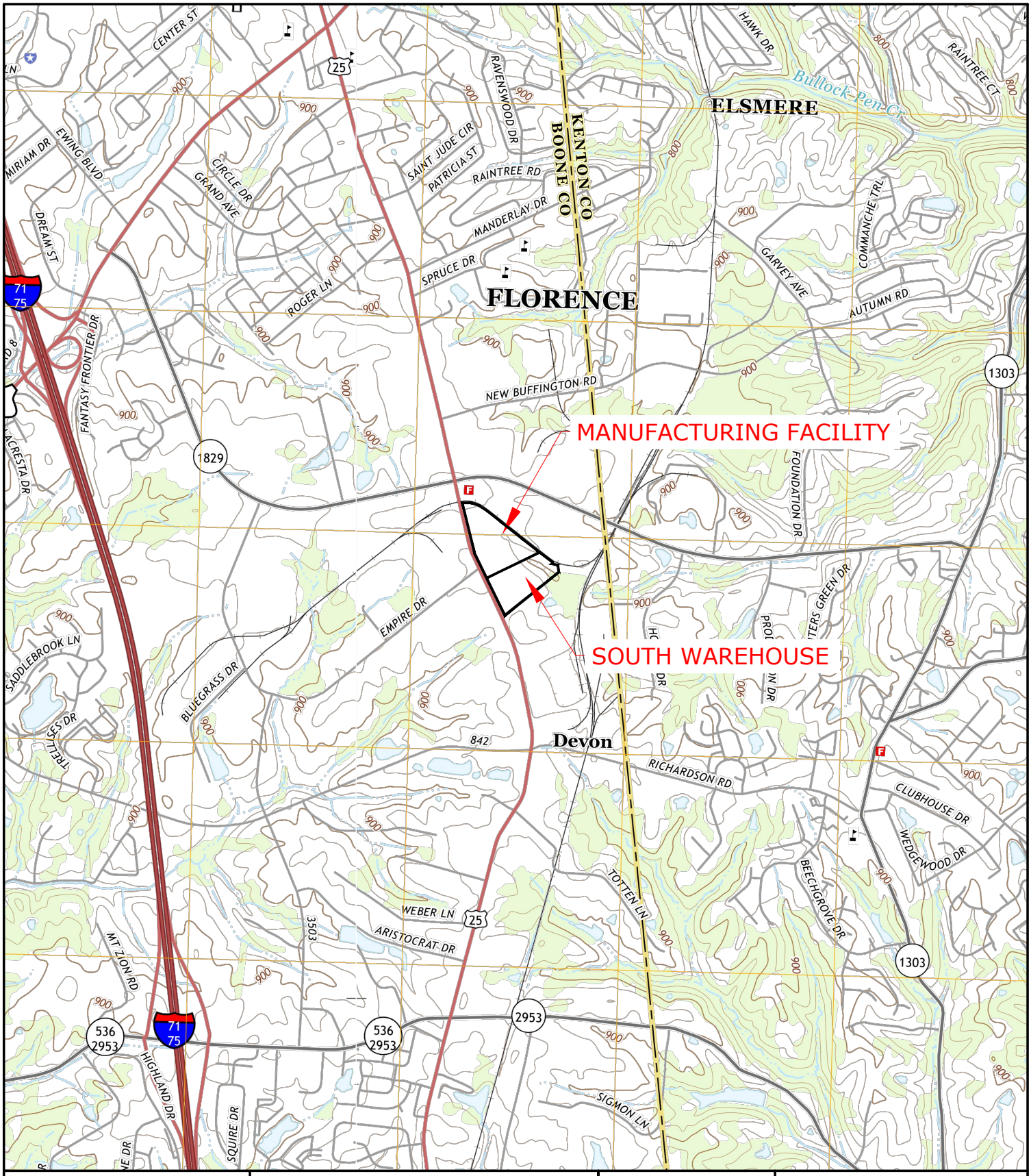
### UTM Zone:

| Stack ID | Identify all Emission Units (with Process ID) and Control Devices that Feed to Stack | Stack Physical Data | | | Stack UTM Coordinates | | Stack Gas Stream Data | | |
|---|---|---|---|---|---|---|---|---|---|
| | | Equivalent Diameter *(ft)* | Height *(ft)* | Base Elevation *(ft)* | Northing *(m)* | Easting *(m)* | Flowrate *(acfm)* | Temperature *( ° F)* | Exit Velocity *(ft/sec)* |
| IA-65 | Metal Back Screen Production Preheat Oven | 1 | 30 | | 38.975930°N | -84.616090°W | TBD | TBD | TBD |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |

# FIGURES

## Figure 1 Site Location Map

## Figure 2 Facility Layout – Buildings B & C




SMG
Smith Management Group
1405 Mercer Road
Lexington, KY 40511
1860 B Williamson Court
Louisville, KY 40223
www.smithmanage.com

KENTUCKY

QUADRANGLE INFORMATION
EASTERN QUAD: (SITE)
INDEPENDENCE, KY - 2016
WESTERN QUAD:
UNION, KY - 2016

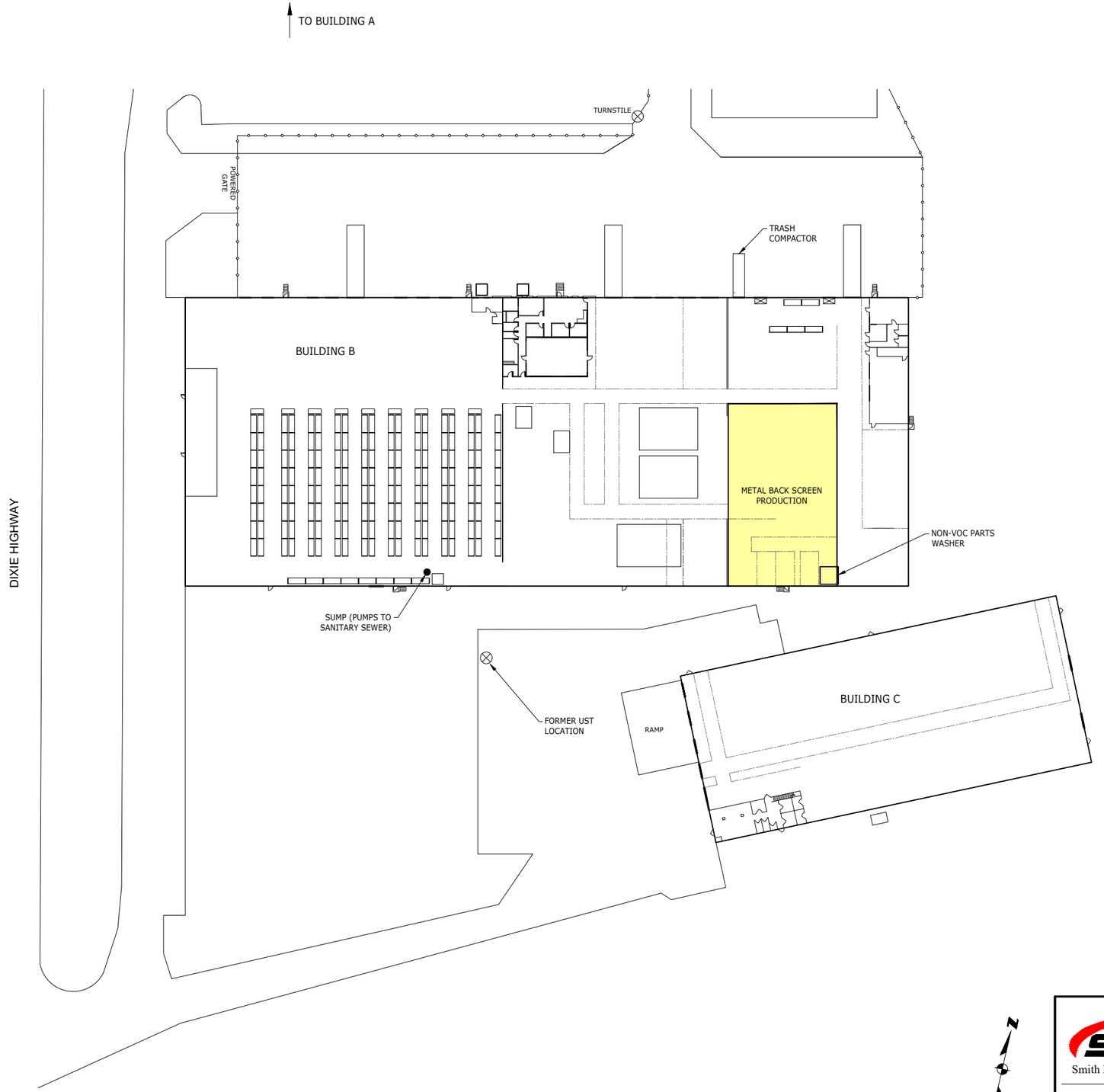
SITE LOCATION MAP

SWECO
8029 and 8045 E. DIXIE HIGHWAY
FLORENCE, BOONE CO., KENTUCKY 41022

| | |
|---|---|
| SCALE: | 1"=2000' |
| DATE: | 7/19/18 |
| PREPARED BY: | KAF |
| CHECKED BY: | WTS |

JOB NO. 2018-6394E

FIGURE 1




BUILDINGS B & C

SWECO
8045 & 8059 E. DIXIE HIGHWAY
FLORENCE, BOONE CO., KENTUCKY 41022

Smith Management Group
1405 Mercer Road
Lexington, KY 40511
www.smithmanage.com

| | |
|---|---|
| SCALE: | NTS |
| DATE: | 10/10/19 |
| PREPARED BY: | KAF |
| CHECKED BY: | WTS |

JOB 2019-6769A

FIGURE 2b

# ATTACHMENTS

## Attachment A Potential to Emit Calculations

## Attachment B Equipment Specification Sheets

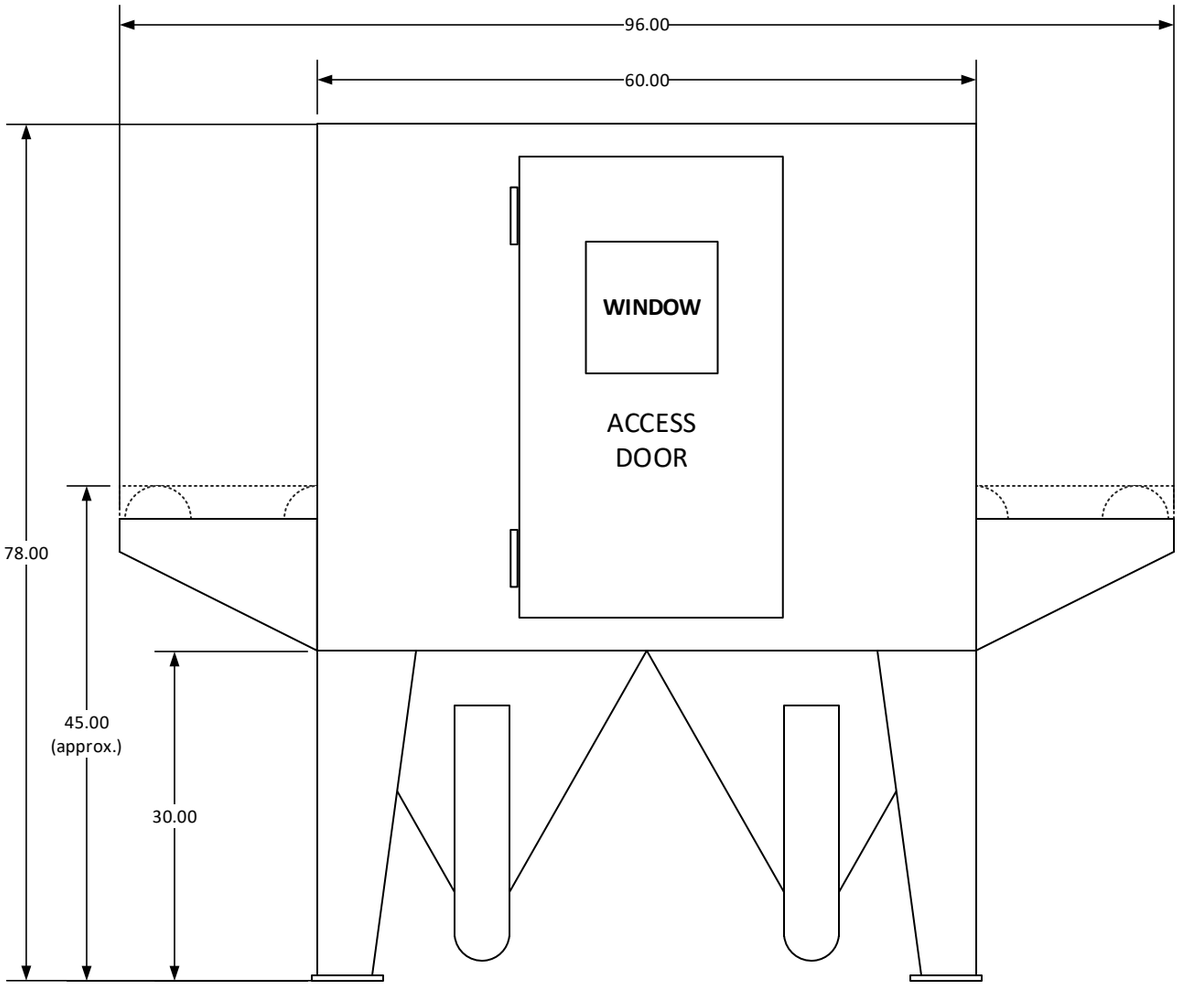
## Attachment C Safety Data Sheets

CALCULATION OF EMISSIONS FROM INSIGNIFICANT ACTIVITIES - METAL BACK SCREEN PRODUCTION
<Based upon maximum hourly and annual production>
SWECO, Division of M-I LLC
January 2020

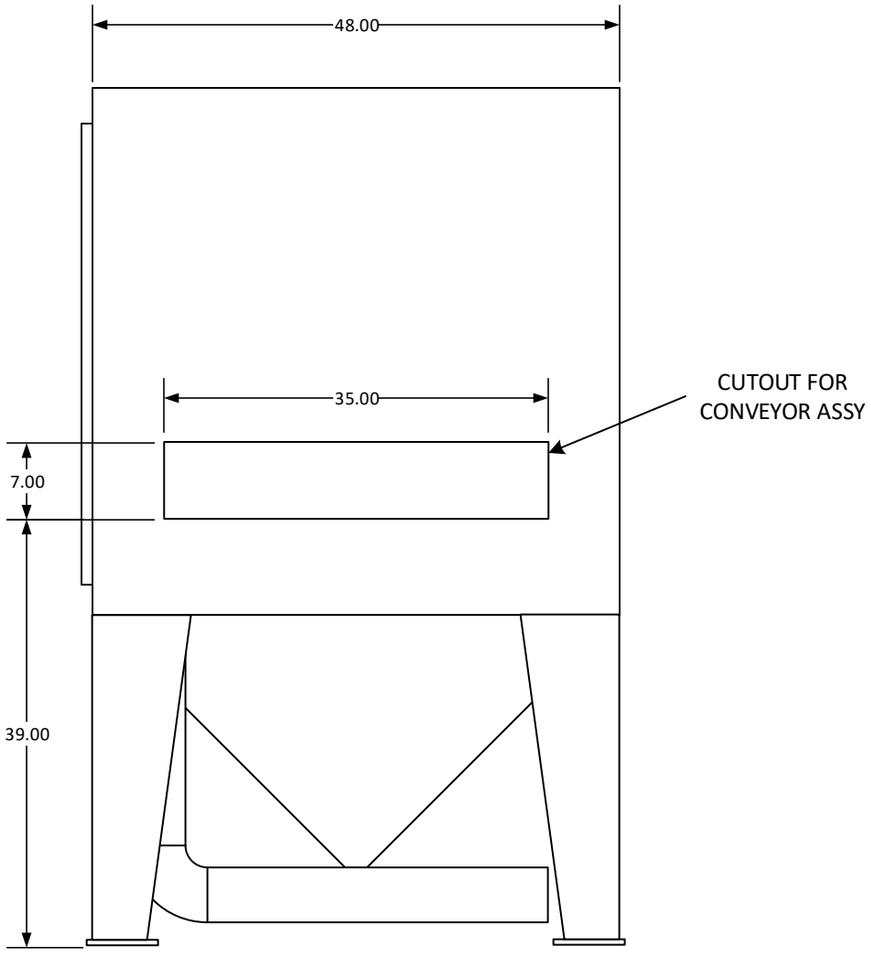
**Table 1: PTE for Insignificant Activities - Metal Back Screen Production**

| Insignificant Activity ID | Notes | Throughput | Pollutant | EF | EF Units | CE | Uncontrolled Emissions <lb/hr> | Uncontrolled Emissions <tons/yr> | Controlled Emissions <lb/hr> | Controlled Emissions <tons/yr> |
|---|---|---|---|---|---|---|---|---|---|---|
| **IA-64** | G120 steel grit **or** | 200 | PT | 0.69 | lb/1000 lb abrasive | 99% | 0.26 | 1.16 | 0.003 | 0.012 |
| **In-Line Conveyor Blast**[1] | 120 aluminum oxide | 383 | Manganese | 1.2 | % | 99% | 1.66E-03 | 7.25E-03 | 1.66E-05 | 7.25E-05 |
| | | lb/hr | Phosphorus | 0.05 | % | 99% | 6.90E-05 | 3.02E-04 | 6.90E-07 | 3.02E-06 |
| | | | Nickel | 0.2 | % | 99% | 2.76E-04 | 1.21E-03 | 2.76E-06 | 1.21E-05 |
| **IA-65** | Natural gas fired - 0.8 MMBtu/hr | 1.2 | PT | 0.0048 | lb/MMBtu | 0% | 5.76E-03 | 2.52E-02 | 5.76E-03 | 2.52E-02 |
| **Preheat Oven**[2] | Assumes natural gas heating factor of | MMBtu/hr | PM10/PM2.5 | 0.0048 | lb/MMBtu | 0% | 5.76E-03 | 2.52E-02 | 5.76E-03 | 2.52E-02 |
| | 1,020 Btu/scf | | SO2 | 0.6 | lb/mmscf | 0% | 7.06E-04 | 3.09E-03 | 7.06E-04 | 3.09E-03 |
| | | | NOX | 50 | lb/mmscf | 0% | 5.88E-02 | 2.58E-01 | 5.88E-02 | 2.58E-01 |
| | | | CO | 84 | lb/mmscf | 0% | 9.88E-02 | 4.33E-01 | 9.88E-02 | 4.33E-01 |
| | | | VOC | 5.5 | lb/mmscf | 0% | 6.47E-03 | 2.83E-02 | 6.47E-03 | 2.83E-02 |
| | | | Ammonia | 3.2 | lb/mmscf | 0% | 3.76E-03 | 1.65E-02 | 3.76E-03 | 1.65E-02 |
| | | | Lead | 0.0005 | lb/mmscf | 0% | 5.88E-07 | 2.58E-06 | 5.88E-07 | 2.58E-06 |
| | | | CO2 | 120000 | lb/mmscf | 0% | 141.18 | 618.35 | 141.18 | 618.35 |
| | | | N2O | 2.2 | lb/mmscf | 0% | 2.59E-03 | 1.13E-02 | 2.59E-03 | 1.13E-02 |
| | | | CH4 | 2.3 | lb/mmscf | 0% | 2.71E-03 | 1.19E-02 | 2.71E-03 | 1.19E-02 |
| **IA-66** | Assume VOC content = 1% | 50,000 | VOC | 1 | % | 0% | 0.057 | 0.250 | 0.057 | 0.250 |
| **Fluidized Bed Powder Coating**[3] | | lb/yr | | | | | | | | |
| **Electric Presses (4)**[4] | Electric powered | up to 64,440 parts/yr | n/a | Emissions are not expected from this activity. | | | | | | |

Notes:
(1) Blast material is G120 steel grit **or** 120 aluminum oxide. PTE calculations consider usage of 120 aluminum oxide in order to calculate PT emissions and G120 steel grit in order to calculate HAP emissions. Unit will not be operated without the dust collector being in place and operational according to manufacturer's recommended specifications.
(2) Parts are heated in the Pre-Heat Conveyor Oven. Parts must be preheated in order for the powder to successfully fuse to the part. All emission factors are from AP-42 Chapter 1.4, except for Ammonia which is from EPA Webfire.
(3) Powder coating is fluidized using air and fuses to heated parts. This process will not use any solvent, thinners, or other additives. Section IX of the MSDS indicates % volatile weight <1. Therefore, VOC content of the powder is assumed to be 1%. Maximum usage of power coating is expected to be 50,000 lb/yr.
(4) Electric presses are used to cure coated screens. Presses are similar in operation to the existing Fusion Press (IA-53); however the existing Fusion press is larger than the proposed presses.

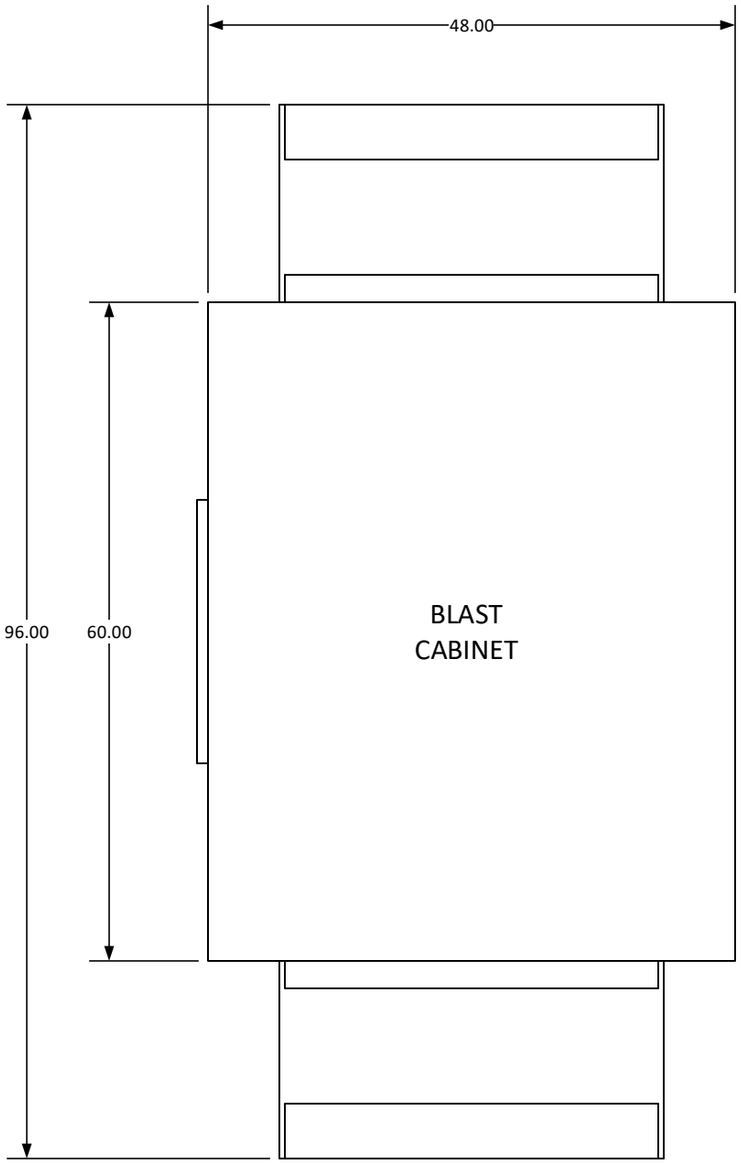


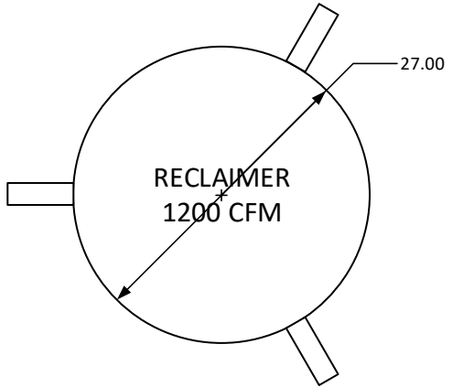

FRONT VIEW

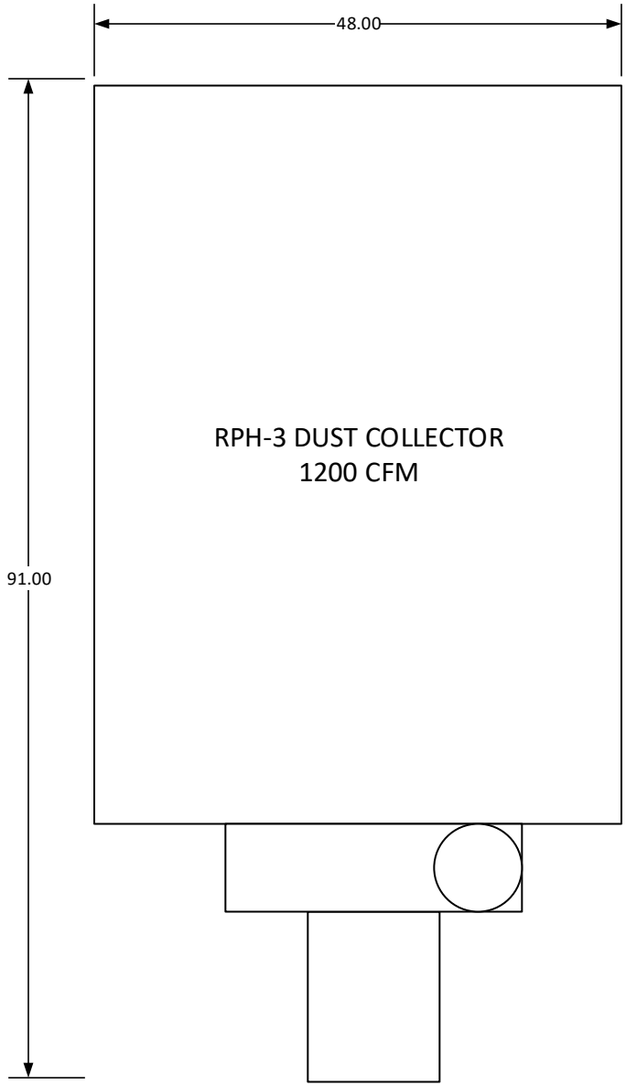



SIDE VIEW
(with conveyor pan removed)

| | | |
|---|---|---|
| TITLE: CONVEYOR BLAST CABINET | | |
| A&B Deburring Co.<br>525 Carr Street<br>Cincinnati, OH 45203<br>513-723-0777 | DATE: 10/21/2019 | |
| | REV: 1 | PAGE 1 of 2 |

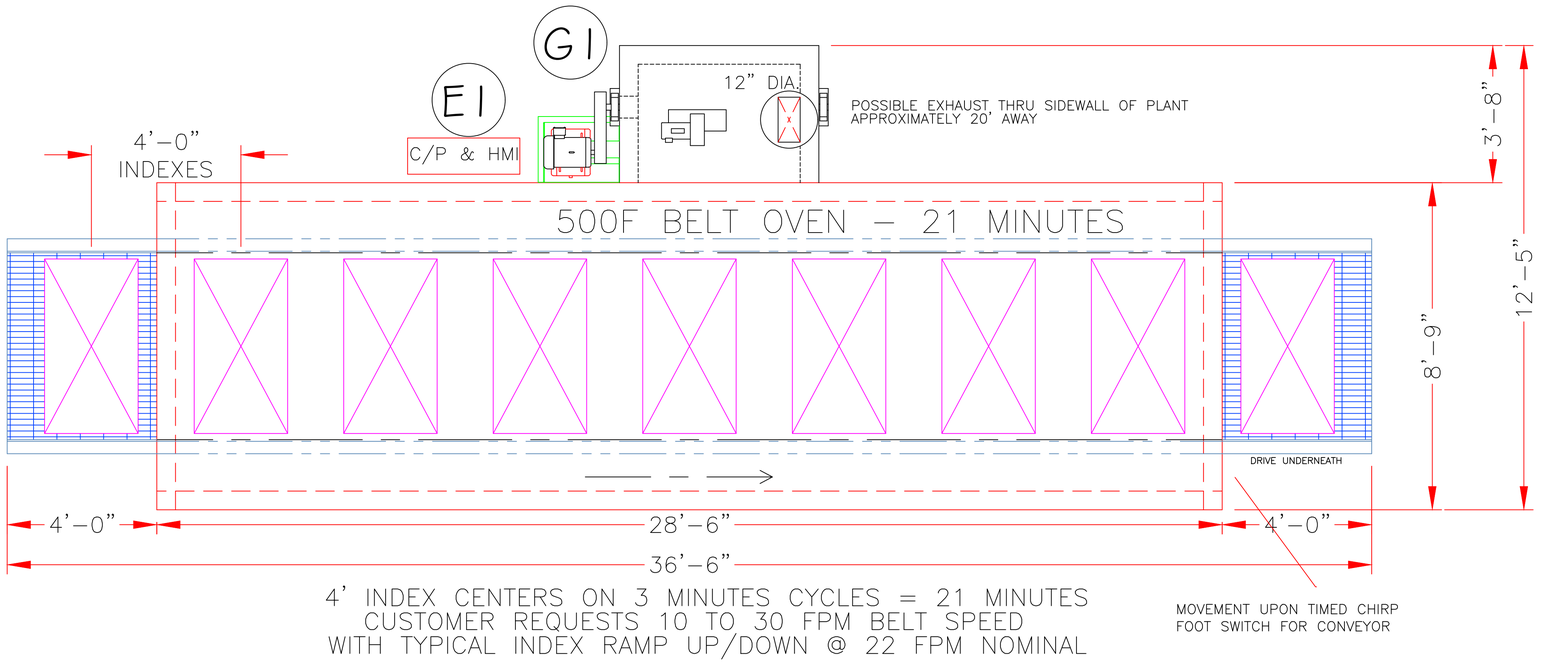


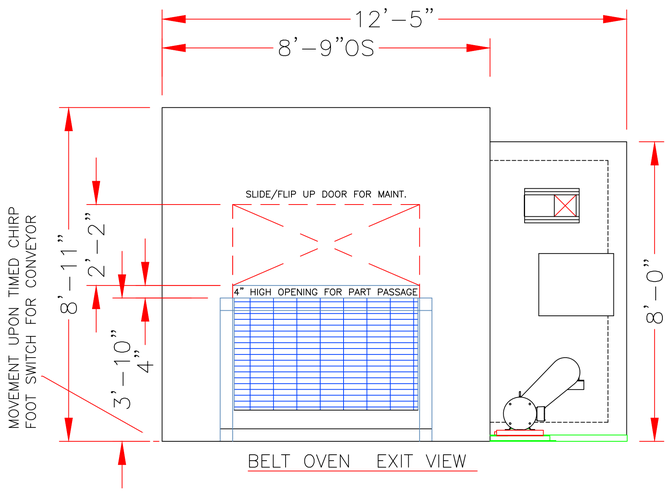

GENERAL ARRANGEMENT
DRAWING

| | | |
|---|---|---|
| TITLE: CONVEYOR BLAST CABINET | | |
| A&B Deburring Co.<br>525 Carr Street<br>Cincinnati, OH 45203<br>513-723-0777 | DATE: 10/21/2019 | |
| | REV: 1 | PAGE 2 of 2 |




4' INDEX CENTERS ON 3 MINUTES CYCLES = 21 MINUTES
CUSTOMER REQUESTS 10 TO 30 FPM BELT SPEED
WITH TYPICAL INDEX RAMP UP/DOWN @ 22 FPM NOMINAL

MOVEMENT UPON TIMED CHIRP
FOOT SWITCH FOR CONVEYOR




BELT OVEN EXIT VIEW

COMBINATION OVEN

Cure Zone

Single Pass (belt bottom return)
Design Maximum Operating Temperature – 500°F
Design Product Load – 1,000 lb/hr product load
Residence Time – 21 min. @ 3 min. index cycles
Heat System – Eclipse 1.2 MBTU Direct Fired Heater w/
#1-1/4 DWDI Recirculating Air Blowers – 9,900 cfm – 10hp

General

6" Thick Oven Walls, Floor and Roof
Exhaust Fan – 1350 cfm – integral to Recirc Shaft
PLC Control with 4 Recipe capability (oven temp & Index interval)
Illiminuated push button station at exit end of mesh belt to allow
line to move forward after index time out chirp

MESH BELT SYSTEM

Ashworth or Same 1" x 1" Galv. Mesh – 36'-6" ft Length
HRS herringbone slider bed design (top and botton return)
Line Speed – Variable 4 to 12 fpm (adjustable)
Average Line Loading – 12.5 #/ft max.
Maximum Load Weight – 1000# per hour
Caterpillar Drive – Variable Speed A/C
Screw Take-up via Idler Roller

## UTILITY LEGEND

(E1) OVEN ELECTRIC - 40 AMPS 480V / 3PH / 60 HZ

(G1) OVEN GAS - 1200 CFH @ 2 TO 7 PSI NAT. GAS

REQUIRED CUSTOMER INFORMATION

The following information is required before detail engineering can begin. Please include the following information on the return copy of this approval drawing:

Roof Height: _____ (ft–in)
Clear Height: _____ (ft–in)
Roof Slope: _____ (inches per foot)
3 phase Voltage: 480V/3PH
Heat Source: Natural Gas
Fuel Supply Pressure: _____ (psig) (NOTE: 2 to 7 psig range req'd)
Building Access Size & Location: _____

M.I. SWICO APPROVAL

REVIEW THIS DOCUMENT CAREFULLY. APPROVAL IS REQUIRED FOR MUTUAL PROTECTION OF PURCHASER AND SELLER.

SATISFACTORY AND APPROVED FOR FABRICATION ☐
APPROVED FOR FABRICATION WITH CHANGES NOTED. ☐
UNSATISFACTORY, REQUIRES REVISED PRINT WITH CHANGES AS INDICATED. ☐

COMPANY _____

SIGNATURE _____ DATE _____ TITLE _____

PEDTECH APPROVAL

REVIEW THIS DOCUMENT CAREFULLY. APPROVAL IS REQUIRED FOR MUTUAL PROTECTION OF PURCHASER AND SELLER.

SATISFACTORY AND APPROVED FOR FABRICATION ☐
APPROVED FOR FABRICATION WITH CHANGES NOTED. ☐
UNSATISFACTORY, REQUIRES REVISED PRINT WITH CHANGES AS INDICATED. ☐

COMPANY _____

SIGNATURE _____ DATE _____ TITLE _____

| Revision | |
|---|---|
| No. | Note |
| 3 | 9/10/19 BELT OVEN INFO |
| 4 | 10/15/19 APPROVAL DWG |

GAT
GENERAL AUTOMATIC TRANSFER CO. ST. LOUIS, MO.

FOR: *PED – MI–SWICO*

JOB: *BATCH OVEN*



| SCALE | DRAWN BY: | CHK'D BY: |
|---|---|---|
| 1/2=1'–0" | D. GUIRL | |

| DATE | DRAWING NO. | SH. | OF |
|---|---|---|---|
| 9/3/19 | 19128 | 1 | |

Aluminum oxide grit

# MATERIAL SAFETY DATA SHEET



**PRODUCT NAME:** ALUMINUM OXIDE GRIT, all grit sizes 10 to **1000**

## SECTION I - PRODUCT INFORMATION

**MANUFACTURE'S NAME:** WASHINGTON MILLS CORP., USA
**DISTRIBUTER'S NAME:** ALEXANDER TOOLS LIMITED
35 GLEN ROAD.
HAMILTON, ONTARIO, L8S 3M6

**EMERGENCY TELEPHONE:** 905-527-6234

**PRODUCT NAME:** ALUMINUM OXIDE GRIT
**PRODUCT USE:** Blasting

**SHIPPING NAME:** NON-REGULATED
**P.I.N. #:** **CLASSIFICATION:**

## SECTION II- HAZARDOUS INGREDIENTS

| INGREDIENTS | CAS REG. NUMBER | CONC. % w/w | TLV LD50 LC50 |
|---|---|---|---|
| ALUMINUM OXIDE | 1344-28-1 | 60-100% | TLV= 10 mg./cu.m. as Nuisance dust |
| TITANIUM DIOXIDE | 13463-67-7 | 1-5% | TLV= 10 mg./cu.m. as Nuisance dust |
| IRON OXIDE | 1309-37-1 | 0.1-1.5% | TLV= 5 mg./cu.m. as Nuisance dust. |
| SILICON DIOXIDE AMORPHOUS | 7631-86-9 | 0.5-1.7% | TLV= 6 mg./cu.m. as Nuisance dust |

**RISK PHRASES**

**DESCRIPTION:** TOXIC
**CLASS:** D2B

## SECTION III - PHYSICAL DATA

**PHYSICAL STATE:** Solid
**APPEARANCE:** White to tan
**ODOUR:** None
**ODOUR THRESHOLD:** N/A
**pH ( ):** N/A
**SOLUBILITY:** Insol.

**SPECIFIC GRAVITY:** 3.5 -4.0
**VAPOUR PRESSURE:** N/A
**VAPOUR DENSITY:** N/A
**EVAPORATION RATE:** N/A
**BOILING POINT:** 2977ºC.
**FREEZING POINT:** 2050ºC.

**N/A = NOT APPLICABLE**

**UK = UNKNOWN**

June 2, 2006

**PRODUCT NAME:** ALUMINUM OXIDE GRIT

## SECTION IV - FIRE OR EXPLOSION HAZARD

**FLASH POINT:** None **METHOD:** TOC /TCC
**FLAMMABILITY LIMITS IN AIR: LOWER:** N/A **UPPER:** N/A
**AUTO-IGNITION TEMPERATURE:** N/A
**CONDITIONS OF FLAMMABILITY:** N/A
**EXTINGUISHING MEDIA:** N/A

**HAZARDOUS COMBUSTION PRODUCTS:** N/A

**SPECIAL FIRE FIGHTING PROCEDURES:** N/A

**EXPLOSION DATA**
- **SENSITIVITY TO MECHANICAL IMPACT:** no
- **SENSITIVITY TO STATIC DISCHARGE:** no

## SECTION V - REACTIVITY DATA

**STABILITY:** Stable **CONDITIONS TO AVOID:** none

**INCOMPATIBILITY (MATERIALS TO AVOID):** none

**CONDITIONS OF REACTIVITY:** none

**HAZARDOUS DECOMPOSITION PRODUCTS:** none

## SECTION VI - FIRST AID MEASURES

**EMERGENCY FIRST AID PROCEDURE:**

**EYE CONTACT:** Flush eyes with fresh water for 15 min. Get medical attention in irritation occurs.

**SKIN CONTACT:** Get medical attention for abrasive damage to the skin if needed.

**INHALATION:** Move to fresh air. Apply artificial respiration as needed. Get medical attention if irritation occurs.

**INGESTION:** N/A

**PRODUCT NAME:** ALUMINUM OXIDE GRIT

## SECTION VII - TOXICOLOGICAL PROPERTIES

**ROUTE OF ENTRY--** **EYE CONTACT:** Abrasive
**INHALATION:** Irritation by dust
**INGESTION:** N/A
**SKIN CONTACT:** N/A
**SKIN ABSORPTION:** None

**EFFECTS OF EXPOSURE TO PRODUCT--**

**ACUTE:** Abrasive damage to eyes due to dust or grit. May cause coughing and shortness of breath caused by dust.

**CHRONIC:** Pulmonary effects of Inert Nuisance dust.

**EXPOSURE LIMITS:** 10 mg./cu.m. as a nuisance dust.

**IRRITANCY:** slight **SENSITIZATION:** no

**CARCINOGENICITY:** UK **TERATOGENICITY:** no
**MUTAGENICITY:** no
**REPRODUCTIVE TOXICITY:** no

**NAME OF TOXICOLOGICALLY SYNERGISTIC PRODUCTS:** none

## SECTION VIII - PREVENTIVE MEASURES

**PERSONAL PROTECTIVE EQUIPMENT:**

**EYES-** Safety glass with side shields.
**HANDS-** none.
**OTHER PROTECTIVE EQUIPMENT-** Eye wash station
**RESPIRATOR TYPE-** Approved respirator for nuisance dust.

**SPECIFIC ENGINEERING CONTROLS:**

**VENTILATION REQUIREMENTS- GENERAL:** Yes
**- OTHERS:** no

**PRODUCT NAME:** ALUMINUM OXIDE GRIT

## SECTION VII - PREVENTIVE MEASURES

**PROCEDURES TO BE FOLLOWED IN CASE OF A LEAK OR SPILL:** Sweep up spills. Respirator may be required for nuisance dust.

**WASTE DISPOSAL:** All waste disposal should comply with all Federal and Provincial Regulations.

**DSL LIST:** All components of this product are found on the DSL List.

**STORAGE REQUIREMENTS:** Store in the original sealed drum away from excessive moisture.

**HANDLING PROCEDURES:** Eye wash station should be made available for the employees. Good house keeping practices should be used. Handle with adequate ventilation for removal of dust.

## SECTION IX - PREPARATION INFORMATION

| | |
|---|---|
| **PREPARED BY:** | SAFETY DEPARTMENT |
| **DATE PREPARED:** | June 28, 1996 |
| **DATE REVISED:** | June 2, 2006 |
| **TELEPHONE NUMBER:** | 905-527-6234 |

# Safety Data Sheet
**acc. to OSHA HCS**

*Printing date 08/28/2018* *Reviewed on 06/03/2018*

## 1 Identification

**Product identifier**
**Trade name: AMASTEEL**
**Application of the substance / the mixture** *Cast steel*

**Details of the supplier of the safety data sheet**
**Manufacturer/Supplier:**
*Ervin Industries, Inc.*
*3893 Research Park Drive*
*Ann Arbor, MI 48108-2217*
*Phone: (734)-769-4600/Fax: (734)-663-0136*
*sales@ervinindustries.com*
*http://www.ervinindustries.com/*
**Information department:**
*Qualtity Assurance Department*
*(mo-thu: 8a.m.-4p.m., fr 8a.m.-1p.m.)*

**Emergency telephone number:** *Tel.: +(734)-769-4600/Fax: (734)-663-0136*

## 2 Hazard(s) identification

**Classification of the substance or mixture**
*The product is not classified according to the Globally Harmonized System (GHS).*
**Additional information:** *Reference test method for release of nickel available - see aection 11*

**Label elements**
**GHS label elements** *Void*
**Hazard pictograms** *Void*
**Signal word** *Void*
**Hazard statements** *Void*
**Classification system:**
**NFPA ratings (scale 0 - 4)**


*Health = 0*
*Fire = 0*
*Reactivity = 0*

**HMIS-ratings (scale 0 - 4)**


*Health = 0*
*Fire = 0*
*Reactivity = 0*

**Other hazards**
**Results of PBT and vPvB assessment**
**PBT:** *Not applicable.*
**vPvB:** *Not applicable.*

## 3 Composition/information on ingredients

**Chemical characterization: Mixtures**
**Description:** *Mixture: consisting of the following components.*

| **Dangerous components:** | | |
|---|---|---|
| *7440-44-0* | *carbon* | *0.8-1.2%* |
| *7439-96-5* | *manganese* | *0.35-1.2%* |
| *7440-21-3* | *silicon* | *0.4-1.5%* |
| *7704-34-9* | *sulfur* | *<0.05%* |
| *7723-14-0* | *phosphorus* | *<0.05%* |
| *7440-02-0* | *nickel* | *<0.2%* |

(Contd. on page 2)

# Safety Data Sheet
**acc. to OSHA HCS**

*Printing date 08/28/2018* *Reviewed on 06/03/2018*

**Trade name: AMASTEEL**

(Contd. of page 1)

## 4 First-aid measures

**Description of first aid measures**
**General information:** *No special measures required.*
**After inhalation:** *Supply fresh air; consult doctor in case of complaints.*
**After skin contact:**
*Rinse with warm water.*
*If skin irritation continues, consult a doctor.*
**After eye contact:** *Rinse opened eye for several minutes under running water. If symptoms persist, consult a doctor.*
**After swallowing:**
*Rinse out mouth and then drink plenty of water.*
*If symptoms persist consult doctor.*
**Information for doctor:**
**Most important symptoms and effects, both acute and delayed** *No further relevant information available.*
**Indication of any immediate medical attention and special treatment needed**
*No further relevant information available.*

## 5 Fire-fighting measures

**Extinguishing media**
**Suitable extinguishing agents:** *CO2, sand, extinguishing powder. Do not use water.*
**For safety reasons unsuitable extinguishing agents:** *Water*
**Special hazards arising from the substance or mixture**
*products are non-flammable.*
*Fine metal dust that is created as a waste stream and/or contaminants that are removed during the blasting process may pose a small risk of fire or explosion.*
**Advice for firefighters**
**Protective equipment:** *No special measures required.*

## 6 Accidental release measures

**Personal precautions, protective equipment and emergency procedures**
*Scrap and remnants can create slip-and-fall hazards. It is recommended to keep floors and work areas clean at all times.*
**Environmental precautions:** *No special measures required.*
**Methods and material for containment and cleaning up:** *Pick up mechanically.*
**Reference to other sections**
*See Section 7 for information on safe handling.*
*See Section 8 for information on personal protection equipment.*
*See Section 13 for disposal information.*
**Protective Action Criteria for Chemicals**

| **PAC-1:** | | |
|---|---|---|
| *7440-44-0* | *carbon* | *6 mg/m3* |
| *7440-21-3* | *silicon* | *45 mg/m3* |
| *7723-14-0* | *phosphorus* | *0.27 mg/m3* |
| *7440-02-0* | *nickel* | *4.5 mg/m3* |

| **PAC-2:** | | |
|---|---|---|
| *7440-44-0* | *carbon* | *330 mg/m3* |
| *7440-21-3* | *silicon* | *100 mg/m3* |
| *7723-14-0* | *phosphorus* | *3 mg/m3* |
| *7440-02-0* | *nickel* | *50 mg/m3* |

| **PAC-3:** | | |
|---|---|---|
| *7440-44-0* | *carbon* | *2,000 mg/m3* |

(Contd. on page 3)

# Safety Data Sheet
**acc. to OSHA HCS**



(Contd. of page 2)

| | | |
|---|---|---|
| 7440-21-3 | silicon | 630 mg/m3 |
| 7723-14-0 | phosphorus | 18 mg/m3 |
| 7440-02-0 | nickel | 99 mg/m3 |

## 7 Handling and storage

**Handling:**
**Precautions for safe handling**
*Special care must be exercised to prevent product leakage. Exercise extra caution when removing the tension straps that are part of wholesale pallet deliveries.*
**Information about protection against explosions and fires:** *No special measures required.*

**Conditions for safe storage, including any incompatibilities**
**Storage:**
**Requirements to be met by storerooms and receptacles:** *No special requirements.*
**Information about storage in one common storage facility:** *Not required.*
**Further information about storage conditions:** *None.*
**Specific end use(s)** *No further relevant information available.*

## 8 Exposure controls/personal protection

**Additional information about design of technical systems:** *No further data; see item 7.*

**Control parameters**
**Components with limit values that require monitoring at the workplace:**
*The following constituents are the only constituents of the product which have a PEL, TLV or other recommended exposure limit.*
*At this time, the other constituents have no known exposure limits.*

| ***7439-96-5 manganese*** | |
|---|---|
| PEL | Ceiling limit value: 5 mg/m³<br>as Mn |
| REL | Short-term value: 3 mg/m³<br>Long-term value: 1 mg/m³<br>fume, as Mn |
| TLV | Long-term value: 0.02* 0.1** mg/m³<br>as Mn; *respirable **inhalable fraction |
| ***7440-21-3 silicon*** | |
| PEL | Long-term value: 15* 5** mg/m³<br>*total dust **respirable fraction |
| REL | Long-term value: 10* 5** mg/m³<br>*total dust **respirable fraction |
| TLV | TLV withdrawn |

**Additional information:** *The lists that were valid during the creation were used as basis.*

**Exposure controls**
**Personal protective equipment:**
**General protective and hygienic measures:**
*The usual precautionary measures for handling chemicals should be followed.*
**Breathing equipment:**
*Use suitable respiratory protective device in case of insufficient ventilation.*
*Filter P2*
**Protection of hands:**
*Leather gloves*
*Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation*

(Contd. on page 4)

# Safety Data Sheet
**acc. to OSHA HCS**



(Contd. of page 3)

**Material of gloves**
*The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.*
**Penetration time of glove material**
*The exact break trough time has to be found out by the manufacturer of the protective gloves and has to be observed.*
*The determined penetration times according to EN 374 part III are not performed under practical conditions. Therefore a maximum wearing time, which corresponds to 50% of the penetration time, is recommended.*
**Eye protection:** *Safety glasses*
**Body protection:** *Protective work clothing*

## 9 Physical and chemical properties

| | |
|---|---|
| **Information on basic physical and chemical properties** | |
| **General Information** | |
| **Appearance:** | |
| **Form:** | *Solid* |
| **Odor:** | *Odorless* |
| **Odor threshold:** | *Not determined.* |
| **pH-value:** | *Not applicable.* |
| **Change in condition** | |
| **Melting point/Melting range:** | *1500 °C (2732 °F) (~2700 °F)* |
| **Boiling point/Boiling range:** | *3000 °C (5432 °F) (~5400 °F)* |
| **Flash point:** | *Not applicable.* |
| **Flammability (solid, gaseous):** | *Not determined.* |
| **Ignition temperature:** | |
| **Decomposition temperature:** | *Not determined.* |
| **Auto igniting:** | *Product is not selfigniting.* |
| **Danger of explosion:** | *Product does not present an explosion hazard.* |
| **Explosion limits:** | |
| **Lower:** | *Not determined.* |
| **Upper:** | *Not determined.* |
| **Vapor pressure:** | *Not applicable.* |
| **Density at 20 °C (68 °F):** | *7.8 g/cm³ (65.091 lbs/gal)* |
| **Relative density** | *Not determined.* |
| **Vapor density** | *Not applicable.* |
| **Evaporation rate** | *Not applicable.* |
| **Solubility in / Miscibility with** | |
| **Water:** | *Insoluble.* *Very little danger of rust forming.* |
| **Partition coefficient (n-octanol/water):** | *Not determined.* |
| **Viscosity:** | |
| **Dynamic:** | *Not applicable.* |
| **Kinematic:** | *Not applicable.* |
| **Solvent content:** | |
| **Organic solvents:** | *0.0 %* |
| **VOC content:** | *0.0 g/l / 0.00 lb/gl* |
| **Other information** | *No further relevant information available.* |

## 10 Stability and reactivity

**Reactivity** *No further relevant information available.*

(Contd. on page 5)

# Safety Data Sheet
**acc. to OSHA HCS**



(Contd. of page 4)

**Chemical stability**
**Thermal decomposition / conditions to be avoided:** *No decomposition if used according to specifications.*
**Possibility of hazardous reactions** *No dangerous reactions known.*
**Conditions to avoid** *No further relevant information available.*
**Incompatible materials:** *No further relevant information available.*
**Hazardous decomposition products:** *No dangerous decomposition products known.*

## 11 Toxicological information

**Information on toxicological effects**
**Acute toxicity:**
**Primary irritant effect:**
**on the skin:** *No irritant effect.*
**on the eye:** *No irritating effect.*
**Sensitization:**
*Examination nickel release in accordance with DIN EN 1811: 2012-10: done*
*Sample Number 2016-00916*
*<0.1 µg per cm2 and week*
*therefore no sensitization detected.*
**Additional toxicological information:**
*The product is not subject to classification according to internally approved calculation methods for preparations:*
*When used and handled according to specifications, the product does not have any harmful effects according to our experience and the information provided to us.*

**Carcinogenic categories**

| **IARC (International Agency for Research on Cancer)** | | |
|---|---|---|
| *7440-02-0* | *nickel* | *1* |

| **NTP (National Toxicology Program)** | | |
|---|---|---|
| *7440-02-0* | *nickel* | *R* |

| **OSHA-Ca (Occupational Safety & Health Administration)** |
|---|
| *None of the ingredients is listed.* |

## 12 Ecological information

**Toxicity**
**Aquatic toxicity:** *No further relevant information available.*
**Persistence and degradability** *No further relevant information available.*
**Behavior in environmental systems:**
**Bioaccumulative potential** *No further relevant information available.*
**Mobility in soil** *No further relevant information available.*
**Additional ecological information:**
**General notes:** *Generally not hazardous for water*
**Results of PBT and vPvB assessment**
**PBT:** *Not applicable.*
**vPvB:** *Not applicable.*
**Other adverse effects** *No further relevant information available.*

## 13 Disposal considerations

**Waste treatment methods**
**Recommendation:**
*completely emptied packaging in 25kg paper bag: paper recycling*
*completely emptied packaging in big bags: commercial waste disposal*
*completely emptied packaging in steel barrels: metal recycling*

(Contd. on page 6)

# Safety Data Sheet
## acc. to OSHA HCS



(Contd. of page 5)

**Uncleaned packagings:**
**Recommendation:** *Disposal must be made according to official regulations.*

## 14 Transport information

| | |
|---|---|
| **UN-Number**<br>**DOT, ADR, ADN, IMDG, IATA** | *Void* |
| **UN proper shipping name**<br>**DOT, ADR, ADN, IMDG, IATA** | *Void* |
| **Transport hazard class(es)**<br>**DOT, ADR, ADN, IMDG, IATA**<br>**Class** | *Void* |
| **Packing group**<br>**DOT, ADR, IMDG, IATA** | *Void* |
| **Environmental hazards:**<br>**Marine pollutant:** | *No* |
| **Special precautions for user** | *Not applicable.* |
| **Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code** | *Not applicable.* |
| **UN "Model Regulation":** | *Void* |

## 15 Regulatory information

**Safety, health and environmental regulations/legislation specific for the substance or mixture**
**Sara**

| **Section 355 (extremely hazardous substances):** | |
|---|---|
| *7723-14-0* | *phosphorus* |

| **Section 313 (Specific toxic chemical listings):** | |
|---|---|
| *7439-96-5* | *manganese* |
| *7723-14-0* | *phosphorus* |
| *7440-02-0* | *nickel* |

| **TSCA (Toxic Substances Control Act):** | |
|---|---|
| *7440-44-0* | *carbon* |
| *7440-21-3* | *silicon* |
| *7704-34-9* | *sulfur* |
| *7723-14-0* | *phosphorus* |

**Proposition 65**
*Warning: This product can expose you to chemicals including Nickel, which is known to the State of California to cause cancer. For more information go to www.P65Warnings.ca.gov*

| **Chemicals known to cause cancer:** | |
|---|---|
| *7440-02-0* | *nickel* |

| **Chemicals known to cause reproductive toxicity for females:** |
|---|
| *None of the ingredients is listed.* |

| **Chemicals known to cause reproductive toxicity for males:** |
|---|
| *None of the ingredients is listed.* |

(Contd. on page 7)

# Safety Data Sheet
## acc. to OSHA HCS



(Contd. of page 6)

| **Chemicals known to cause developmental toxicity:** |
|---|
| *None of the ingredients is listed.* |

**Cancerogenity categories**

| **EPA (Environmental Protection Agency)** | | |
|---|---|---|
| *7439-96-5* | *manganese* | *D* |
| *7723-14-0* | *phosphorus* | *D* |

| **TLV (Threshold Limit Value established by ACGIH)** | | |
|---|---|---|
| *7440-02-0* | *nickel* | *A5* |

| **NIOSH-Ca (National Institute for Occupational Safety and Health)** | |
|---|---|
| *7440-02-0* | *nickel* |

**GHS label elements** *Void*
**Hazard pictograms** *Void*
**Signal word** *Void*
**Hazard statements** *Void*

**National regulations:**

**Information about limitation of use:** *Employment restrictions concerning young persons must be observed.*
**Water hazard class:** *Generally not hazardous for water.*
**Chemical safety assessment:** *A Chemical Safety Assessment has not been carried out.*

## 16 Other information

*This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.*

**Contact:** *Dr. W. Assmann*
**Date of preparation / last revision** *08/28/2018 / 6*
**Abbreviations and acronyms:**
*ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)*
*IMDG: International Maritime Code for Dangerous Goods*
*DOT: US Department of Transportation*
*IATA: International Air Transport Association*
*ACGIH: American Conference of Governmental Industrial Hygienists*
*EINECS: European Inventory of Existing Commercial Chemical Substances*
*ELINCS: European List of Notified Chemical Substances*
*CAS: Chemical Abstracts Service (division of the American Chemical Society)*
*NFPA: National Fire Protection Association (USA)*
*HMIS: Hazardous Materials Identification System (USA)*
*VOC: Volatile Organic Compounds (USA, EU)*
*PBT: Persistent, Bioaccumulative and Toxic*
*vPvB: very Persistent and very Bioaccumulative*
*NIOSH: National Institute for Occupational Safety*
*OSHA: Occupational Safety & Health*
*TLV: Threshold Limit Value*
*PEL: Permissible Exposure Limit*
*REL: Recommended Exposure Limit*
*** Data compared to the previous version altered.** *AMASTEEL*

Powder coating material

# Material Safety Data Sheet

Date reviewed: Februrary 7, 2013

## SECTION I - PRODUCT AND COMPANY INFORMATION

| | |
|---|---|
| Product Name: | S.W. WIRE GRAY |
| Product Code: | 7930-72676 |
| HMIS HAZARD RATING: | Health:2 Fire:1 Reactivity:1 PPI:X |


TCI POWDER COATINGS
734 DIXON DR.
ELLAVILLE,GA 31806

TCI CANADA
1435 Norjohn Court Units 8-9
Burlington, ON, L7L 0E6

| | |
|---|---|
| E-Mail | ehs@tcipowder.com |
| Toll Free | 800-533-9067 |
| Emergency Contact 1 | 229-938-0454 |
| Emergency Contact 2 | 229-815-0011 |


## SECTION II - INGREDIENT INFORMATION

| Ingredient | CAS Number | PERCENTAGE |
|---|---|---|
| EPOXY RESIN | 25036-25-3 | 30 -60 % |
| BARIUM SULFATE | 7727-43-7 | 10 -20 % |
| TITANIUM DIOXIDE | 13463-67-7 | 10 -20 % |
| ISOPROPYLIDENEDIPHENOL | 80-05-7 | 3 -6 % |
| CARBON BLACK | 1333-86-4 | 0 -5 % |

## SECTION III - HAZARDS IDENTIFICATION

Emergency Overview
WARNING! MAY FORM COMBUSTIBLE DUST CONCENTRATIONS IN AIR (DURING PROCESSING)

PRIMARY ROUTES OF EXPOSURE: Eyes, Inhalation, Skin

Skin Contact: Incidental contact is not expected to cause irritation. However, exposure to this product may cause an allergic skin reaction and sensitization in some individuals. Repeated overexposure can cause skin dryness and may eventually lead to contact dermatitis.

Eye Contact: May cause slight to mild redness and burning. May cause mechanical irritation.

Inhalation: This product contains ingredients with established airborne exposure limits – see Section VIII. Otherwise it is considered a nuisance dust. No effects are expected when exposures are maintained below the exposure limits of Section VIII. However, exposure to this product may cause an allergic reaction and sensitization in some individuals. Lung and respiratory conditions may be aggravated by exposure.

Ingestion: May cause pain and upset stomach.

# SECTION IV - FIRST AID MEASURES

Eye Contact: Immediately flush eyes with cool water for 15 minutes, occasionally lifting lids to ensure complete rinsing. Seek medical attention if symptoms persist.

Skin Contact: Wash skin thoroughly with soap and water. Remove and wash clothing and shoes before reuse. Seek medical attention if irritation persists.

Inhalation: Remove to fresh air. If breathing difficulties develop, seek medical attention. If necessary, give artificial respiration.

Ingestion: Seek immediate medical attention. Wash out mouth with water followed by a cupful of water to drink. Repeat if vomiting occurs. Never give anything by mouth to an unconscious person.

# SECTION V - FIRE-FIGHTING MEASURES

| | |
|---|---|
| Flash Range: | Not Applicable |
| Lower Explosion Limit Range: | 30 GM/M3 - 90 GM/M3 |
| Extinguishing Media: | Foam, CO2, dry chemical or water spray. |

Fire and Explosion Hazards: An HMIS flammability rating of 1 applies to the product as supplied. However, airborne dust from the product can present a flammability hazard and may form explosive dust mixtures with air. A potentially dangerous situation exists when powder is transferred from a closed container to a process in which dust concentrations are within the explosion (flammability) limits. The concentration of powder dust in air should be maintained outside of the limits.

Firefighting Instructions: Use fully protective equipment with self-contained breathing apparatus.

Explosion: Avoid generating dust; fine dust dispersed in air in sufficient concentrations, and in the presence of an ignition source is a potential dust explosion hazard.

# SECTION VI - ACCIDENTAL RELEASE MEASURES

Sweep up carefully or use explosion-proof vacuum cleaner. Then dispose of in accordance with local, state, and federal regulations.

Dust deposits should not be allowed to accumulate on surfaces, as these may form an explosive mixture if they are released into the atmosphere in sufficient concentration.

Avoid dispersal of dust in the air (i.e., clearing dust surfaces with compressed air).

Nonsparking tools should be used.

# SECTION VII - HANDLING AND STORAGE

Keep all equipment clean and work areas free from dust. Avoid excessive skin contact. Do not ingest or inhale. Personnel should be trained in the safe handling and proper use of this product. Wash thoroughly after handling, especially before eating, drinking, smoking, and using restroom facilities.

Store in a cool, dry, well ventilated area away from heat, ignition sources, and direct sunlight. Keep containers tightly closed.  Protect from physical damage.

Minimize dust generation and accumulation. Routine housekeeping should be instituted to ensure that dusts do not accumulate on surfaces. Dry powders can build static electricity charges when subjected to the friction of transfer and mixing operations. Provide adequate precautions, such as electrical grounding and bonding, or inert atmospheres.

# SECTION VIII - EXPOSURE CONTROLS/PERSONAL PROTECTION

Product ingredients other than ingredients with established airborne exposure limits may be considered under the PEL for particulates not otherwise regulated (nuisance dust).

Occupational Exposure Limits

| Ingredients | ACGIH TLV | ACGIH TLV-C | ACGIH STEL | OSHA STEL | OSHA PEL |
|---|---|---|---|---|---|
| CARBON BLACK | 3.5 mg/m3 | n/est | n/est | n/est | 3.5 mg/m3 |
| EPOXY RESIN | 10 mg/m3 | n/est | n/est | n/est | 15 mg/m3 |
| BARIUM SULFATE | 10 mg/m3 | n/est | n/est | n/est | 10 mg/m3 |
| TITANIUM DIOXIDE | 10 mg/m3 | n/est | n/est | n/est | 10 mg/m3 |
| ISOPROPYLIDENEDIPHENOL | n/est | n/est | n/est | n/est | n/est |
| NUISANCE DUST | 10 mg/m3 | N/est | N/est | N/est | 15 mg/m3 (total) |
| | 3 mg/m3 | | | | 5 mg/m3 (respirable) |

ENGINEERING CONTROLS: Provide ventilation to keep airborne particulate concentration below established airborne exposure limits (TLV's or PEL's). It is recommended that all dust controls handling this product be explosion proof, contain relief vents, or other commensurate measures. Ensure that dust-handling systems (such as exhaust ducts, dust collectors, vessels, and processing equipment) are designed in a manner to prevent the escape of dust into the work area (i.e., there is no leakage from the equipment). Ventilation equipment, baghouse, and cyclone dust collection should be grounded. Curing ovens and heating chambers should be properly vented to prevent any fumes from entering the workplace.

RESPIRATORS: Use a properly fitted NIOSH/MSHA approved respirator if needed to avoid breathing dust.

SKIN PROTECTION:  Protective gloves & clothing recommended.

EYE PROTECTION: Goggles or safety glasses with side-shields recommended.

## SECTION IX - PHYSICAL AND CHEMICAL PROPERTIES

| | |
|---|---|
| Form: | SOLID POWDER |
| Color: | GREY |
| Odor: | NEGLIGIBLE |
| Solubility (in water): | INSOLUBLE |
| pH Value: | NOT APPLICABLE |
| Boiling Range: | NOT APPLICABLE |
| Vapor Pressure (mmHg): | NOT APPLICABLE |
| Melting Point: | < 300° F |
| Evaporation Rate: | NOT APPLICABLE |
| Vapor Density: | NOT APPLICABLE |
| Partition Coefficient: | NOT APPLICABLE |
| % Volatile Weight: | < 1 (one hour at 110° C) |
| % Volatile | See Above |
| Specific Gravity: | 1.58 |
| Molecular Weight: | MIXTURE |

## SECTION X - STABILITY AND REACTIVITY

Stability: This product is stable under normal conditions of storage and use.

Hazardous Polymerization: Hazardous polymerization will not occur.

Hazardous decomposition products: Combustion byproducts may contain CO, CO2, incompletely burned carbon compounds, NO2 or other

nitrogen compounds.

# SECTION XI - TOXICOLOGICAL INFORMATION

## PRODUCT:

Exposure to this product may cause an allergic reaction and sensitization in some individuals. Extended inhalation of dust can lead to particulate deposition in the lungs. Repeated overexposure can cause skin dryness and may eventually result in contact dermatitis. Extended inhilation of dust can lead to particulate deposition in the lungs.

## COMPONENTS:

| | |
|---|---|
| CARBON BLACK | Carbon Black may cause mechanical irritation to the eyes and temporary discomfort to the respiratory tract at concentrations above the respiratory tract at concentrations above the occupational exposure limit (see Section VIII). Temporary respiratory tract discomfort arising from Carbon Black exposure may occurdue to mechanical irritation. No adverse reactions are usually expected from ingestion or dermal (skin) exposure. Carbon Black has not been reported as causing sensitization in humans. Epidemiological studies of workers in the Carbon Black producing industries of North America and Western Europe show no evidence of clinically significant adverse health effects due to occupational exposure to Carbon Black. Based on a comprehensive independent review of a major epidemiological study, the validity of a relationship between Carbon Black exposure and symptoms of cough and sputum can not be supported by the available data. In a sub-chronic toxicity study of the effects of Carbon Black inhalation on the lungs of rats exposed to Carbon Black for ninety (90) days found the effects included inflammation, hyperplasia, and fibrosis with a NOEL of 1.1 mg/m3. A chronic toxicity study of the effects of Carbon Black inhalation on the lungs of rats exposed to Carbon Black for two (2) years found the effects included inflammation, fibrosis, and tumors (related to fine particle overload rather than to a specific chemical effect). Acute Toxicity: LD50 (oral/rat) = > 8,000 mg/kg. Carcinogenicity: NTP = No; IARC = Yes (IARC considers Carbon Black to be possibly carcinogenic to humans - Group 2B); OSHA = No. |
| EPOXY RESIN | This resin material has negligible water solubility and low toxicity. Overexposure to solid epoxy resin can cause eye, skin and respiratory irritation due to abrasiveness. Similar resin materials have behaved as moderate eye irritants in animals. Prolonged or repeated contact with epoxy resin may cause sensitization. Exposure studies with related materials have shown some evidence for allergic contact dermatitis, and rarely an allergic respiratory reaction like asthma, in sensitized individuals. Medical conditions that may be aggravated by overexposure to this material include respiratory, allergy, eczema and other skin conditions. The following toxicology information has been reported: LD50 (oral/rat) => 5,000 mg/kg; LD50 (dermal/rabbit) => 4,000 mg/kg. The IARC has concluded that epoxy resin materials of this type are not classifiable as a carcinogen (Group 3), that is human and animal evidence of carcinogenicity is inadequate. Carcinogenicity: OSHA = No, IARC = No, NTP = No. Some resin manufacturers state that some similar resins have shown mutagenic activity in "in vitro" (test tube) tests, while others have not. |

| | |
|---|---|
| BARIUM SULFATE | Pure Barium Sulfate is usually not considered to pose a significant toxicity risk in industrial environments where exposures are controlled with published exposure limits. Direct contact of the eyes with Barium Sulfate dust might cause mechanical irritation resulting in watering and redness. Direct contact with the skin with Barium Sulfate dust can have various effects. Repeated or prolonged overexposure may cause dermatitis (reddening, scaling and itching are characteristic of skin inflammation) or conjunctivitis (inflammation of the mucous membranes surrounding the eye). Inhalation of fine Barium Sulfate dust may cause irritation of the nose and throat by mechanical action. Prolonged or repeated inhalation may cause baritosis, a benign pneumoconiosis, with some signs of bronchial irritation. Medical conditions aggravated by exposure include pre-existing respiratory, skin and eye diseases. Acute Toxicity: LD50 (oral/rat)=>15,000 mg/kg. Carcinogenicity: NTP=No, IARC=No, OSHA=No |
| TITANIUM DIOXIDE | Signs and symptoms of acute exposure to titanium dioxide may include physical irritation of the skin and eyes, with redness and swelling; cough; and sneezing. Signs and symptoms of chronic exposure to titanium dioxide may include X-ray evidence of mild fibrosis; dysprea; cough; and declines in pulmonary function. Titanium dioxide is not known to cause sensitization.<br><br>LD50 (oral/rat)=>10,000 mg/kg<br>LD50 (dermal/rabbit)=>10,000 mg/kg<br><br>In 2006 IARC concluded that titanium dioxide is possibly carcinogenic to humans (Group 2B). This conclusion was based on experimental evidence in animals (rat inhalation studies). There is inadequate evidence in humans for the carcinogenicity of titanium dioxide. |
| ISOPROPYLIDENEDIPHENOL | Contact with eyes can cause severe irritation. This product is also a skin and respiratory irritant. This product may cause sensitization in some individuals leading to itching and rash following low future exposure. There is limited evidence that Isopropylidenediphenol (Bisphenol A) may damage the developing fetus and reduce fertility. |

# SECTION XII - ECOLOGICAL INFORMATION

No information is available for this product.

# SECTION XIII - DISPOSAL CONSIDERATIONS

Dispose in accordance with all local, state, and federal regulations.

# SECTION XIV - TRANSPORT INFORMATION

In non-bulk containers this product is not a regulated Hazardous Material for transportation (49 CFR 172).

# SECTION XV - REGULATORY INFORMATION

The ingredients in this product are listed on the TSCA Inventory maintained by U.S. EPA or are otherwise approved for commercial use under TSCA.

This product contains the following Toxic Chemicals at levels above the applicable de minimis concentrations (40 CFR 372).

None

These Toxic Chemicals (SARA TITLE III SECTION 313) are subject to the reporting requirements of Section 313 of the Emergency Planning and Community Right to Know Act of 1986 and of 40 CFR 372.

# SECTION XVI - OTHER INFORMATION

Refer to NFPA 654, Standard for the Prevention of Fire and Dust Explosions from the Manufacturing, Processing, and Handling of Combustible Particulate Solids, for safe handling.

The information contained herein is based on the data available to us and is believed to be correct. However, we make no warranty, expressed or implied regarding the accuracy of this data or the results to be obtained from the use thereof, we assume no responsibility for injury from the use of the product described herein.