



<b>PERMIT NUMBER:</b> 160035	<b>App. ID(s):</b> 412583
<b>BUSINESS NAME:</b> MR Steel Acquisition Corp.	<b>Revision(s):</b> 0.0.0.0
<b>SOURCE TYPE:</b> Steel Fabrication	<b>Revision Type(s):</b> New
<b>PERMIT ENGINEER:</b> Lizabeth Gomez	<b>Date Prepared:</b> 09/14/2016

<b>BACT:</b> No	<b>MACT:</b> Yes	<b>NSPS:</b> No	<b>SYNTH MINOR:</b> No	<b>AIRS:</b> No
<b>DUST PLAN REQUIRED:</b> Yes	<b>DUST PLAN RECEIVED:</b> Yes			
<b>O&amp;M PLAN REQUIRED:</b> No	<b>O&amp;M PLAN RECEIVED:</b> No			
<b>PORTABLE SOURCE:</b> No	<b>SITE VISIT:</b> Yes 05/03/2016			

**PROCESS DESCRIPTION:**

MR Steel Acquisition Corp. manufactures various steel products by cutting, shaping, and assembling pieces of steel metal. The source conducts the following steel fabrication activities, which emit particulate matter (PM), volatile organic compounds (VOC), hazardous air pollutants (HAP), and nitrogen oxides (NO<sub>x</sub>):

- *Grinding and Machining* – consists of grinding, drilling, sawing, cutting, shearing, forming, and bending metal pieces to desired sizes and shapes.
- *Abrasive Blasting* – is performed to clean the surface of large steel structures by propelling abrasive material with compressed air against the steel.
- *Welding* – steel parts are joined by melting the steel parts at the joint and filing the space with molten metal.
- *Plasma Cutting* – a plasma cutting table is used to cut steel while it is submerged (wet cutting).
- *Spray Coating* – steel products are spray coated.
- *Solvent Cleaning* – steel products are wiped cleaned with a VOC-containing solvent.

Typical steel products are mezzanines (Figure 1), modular building chassis (Figure 2), ramps, steps, and hauling equipment such as boat trailers (Figure 3).



Figure 1: Mezzanine (image taken from mrsteel.com)



Figure 2: Modular Building Chassis (image taken from mrsteel.com)



Figure 3: Boat Trailer (image taken from mrsteel.com)

**SITE PICTURES:**



Figure 4: Spray Enclosures. At this time, the enclosure pictured on the left does not have a force exhaust.



Figure 5: Location for spray coating objects larger than W-10' x L-25' x H-8' than cannot fit inside an enclosure.



Figure 6: Dewalt dry grinder and dust collection system (shop vacuum equipped with a cartridge filter).



Figure 7: Almi dry grinder and dust collection system (shop vacuum equipped with a cartridge filter).



Figure 8: Dry machining equipment. Scotman Ironworker Punch (left) and Edwards 55 ton Ironworker Punch (right).



Figure 9: Dry machining equipment. Accupress Press Break (left) and Accushear Metal Shear (right).



Figure 10: ChemStation solvent used for wipe cleaning steel parts.

**PERMIT HISTORY:**

Date Received	Revision Number	Description
04/08/2016	0.0.0.0	Submitted application for a new Non-Title V permit for a steel fabrication facility in Phoenix.
01/10/2014	--	Source previously permitted under Surface Coating General Permit #G13296.

**PURPOSE FOR APPLICATION:** Source is applying for a Non-Title V permit since the facility is not eligible for general permit.

**A. APPLICABLE COUNTY REGULATIONS:**

- Rule 100: General Provisions and Definitions
- Rule 200: Permit Requirements
- Rule 220: Non-Title V Permit Provisions
- Rule 280: Fees – Table B (Source w/ 3 or More Fees Table C Processes: Abrasive Blasting, Spray Coating, and Solvent Cleaning)
- Rule 300: Visible Emissions
- Rule 310: Fugitive Dust Sources
- Rule 312: Abrasive Blasting
- Rule 330: Volatile Organic Compounds
- Rule 331: Solvent Cleaning
- Rule 336: Surface Coating Operations
- Rule 345: Vehicle and Mobile Equipment Coating

**B. APPLICABLE FEDERAL REGULATIONS:**

40 CFR Part 63 Subpart XXXXXX (National Emissions Standards for Hazardous Air Pollutants Area Source Standards for Nine Metal Fabrication and Finishing Source Categories)

The facility **is subject** to this subpart since it is an area source that primarily operates under the SIC Code 3441 (Fabricated Structural Metal), which is one of the nine source categories listed in §63.11514 that are subject to this subpart. The requirements of this subpart apply to the dry machining, dry grinding and polishing, welding, and dry abrasive blasting operations performed on site. As required by §63.11519, the source has submitted an Initial Notification and Notification of Compliance Status. They must also submit an Annual Certification of Compliance Report by January 31<sup>st</sup>.

**C. AIR POLLUTION CONTROL EQUIPMENT/EMISSION CONTROL SYSTEM(s):**

The facility utilizes dust collectors and spray booths to capture and control particulate matter emissions as summarized below:

System	Qty	Exhaust Vents	Comments:
Dust Collection System	2	Indoor	Per §63.11516(c)(1) in Subpart 6^X, the facility is required to capture and vent emissions from the dry grinding machines. The source will capture emissions using a hose/duct work and vent them to a shop vacuum equipped with a filter. An O&M Plan is not required, but the Permittee must operate all associated equipment, including the filtration control device according to the manufacturer’s instructions, as well as maintain a record of the manufacturer’s specifications for the filtration control device.

Spray Enclosures	2	Outside	Enclosures with three sides and a roof: 1 – 31' x 15.5' x 9.5' 1 – 75' x 27' x 15' During the evaluation of this permit, the above enclosures did not have a forced air exhaust, thus do not require a filtering system. However, the smaller enclosure (31' x 15.5' x 9.5') is actually a booth that can be equipped with a forced air exhaust. If a forced air exhaust is installed, the Permittee will also have to install a filter with 92% control efficiency as required by this Permit and Rule 315 §301.2. O&M Plans are not required for spray booths/enclosures.
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**D. EMISSIONS:**

Spray Coating

A mass balance approach was used to calculate the spray coating emissions, which assumes that all coating materials will evaporate into the atmosphere during the application and drying process. The VOC and HAP emissions were estimated by multiplying the usage of the coating material by its respective VOC and HAP content specified in the safety data sheet (SDS) for each material. The VOC emissions were calculated according to the Actual Material VOC, which includes water and exempt compounds, rather than the Regulatory Coatings VOC. The Regulatory Coatings VOC, which is always higher, is the VOC content minus exempt compounds that is used to determine compliance with the VOC limits of an applicable County Rule.

PM emissions from spray coating were estimated based on the usage of coating material, minus solvents and thinners. The overspray was approximated by multiplying the usage in gallons by the density, weight percent of solids for each material specified in the SDS, and the transfer efficiency according to the method of application. The spray gun transfer efficiencies were taken from Control Techniques Guidelines (CTG) for Miscellaneous Metal and Plastic Parts Coating, September 2008, EPA-453/R-08-003 and AP-42 Chapter 4.2.2.12 Metal Furniture Surface Coating (Table 4.2.2.12-1 Coating Method Transfer Efficiencies). According to the CTG high volume low pressure (HVLP) guns can achieve a transfer efficiency of 65%, whereas the transfer efficiency for pressure atomized (airless) guns was conservatively assumed to be 25% based on the values from AP-42. There were other references that assumed much higher transfer efficiencies for airless guns, such as the Texas Commission on Environmental Quality (TCEQ). In Table 1 of *Painting Basics and Emission Calculations for TCEQ Air Quality Permit Applications (October 11, 2006)*, the transfer efficiencies for airless guns, which are dependent on the geometry of the part being coated, range from 10% for table legs to 75% for flat surfaces. However, since the Permittee spray coats a variety of large metal frames that are not all flat surfaces, 25% would be the conservative and appropriate transfer efficiency to assume. Additionally, it was assumed that the entire overspray is released to the atmosphere since the spray coating enclosures are located outside and are not equipped with exhaust filters with specified capture efficiency.

Spray coating emissions were based on the material usage reported on the original permit application received 04/08/2016. To allow for business growth and operational flexibility, the material usage was increased by 20%. This allotted safety buffer is less than the 30% increase requested by the source on a revised material usage submitted via email on 06/21/2016. Only a 20% increase was given in order to keep the facility from exceeding the *Minor NSR Modification* thresholds of Rule 100 §200.71 which would trigger additional requirements.

Band Saw Cutting Fluid

A VOC-containing cutting fluid is used to lubricate a band saw. Emissions were calculated according to annual consumption of cutting fluid, the density of the fluid, and percentage of VOC content specified in the SDS:

$$70 \text{ gallons/year} \times 8.509 \text{ lbs/gallon} \times 10\% = 60 \text{ lbs VOC/year}$$

ChemStation Solvent Cleaning

VOC emissions from solvent wipe cleaning were calculated according to annual consumption of the ChemStation solvent, the specific gravity of the fluid converted to lb/gallon using the density of water, and percentage of VOC content specified in the SDS:

$$2,000 \text{ gallons/year} \times (1.015 \text{ sp gr} \times 8.345 \text{ lbs/gallon}) \times 10\% = 1,694 \text{ lbs VOC/year}$$

### Abrasive blasting

PM emissions from abrasive blasting were estimated according to the emission factors for sand blasting of mild steel panels taken from AP-42 Table 13.2.6-1 (Particulate Emission Factors for Abrasive Blasting). The annual usage of abrasive material specified in the permit application was 5 tons per year. Emissions were estimated by doubling the reported usage to 10 tons per year, in order to allow for operational flexibility and business growth. HAP emissions from abrasive blasting were estimated based on weight percentages of total PM emitted. The weight percentages for each HAP were taken from the SDS for structural steel provided by the source.

### Plasma Cutting

To estimate the emissions generated during plasma cutting, it was assumed that the PM<sub>10</sub> released was equivalent to the emitted airborne fumes. The worst case scenario, were the plasma cutter operates 365 days per year and 24 hours per day for a total of 8,760 hours per year was assumed. The emissions were calculated according to the emission factor for wet plasma cutting of mild steel. The emission factor for plasma cutting was taken from the technical document in AP-42 Chapter 12: *Emissions of Fume, Nitrogen Oxides and Noise in Plasma Cutting of Stainless and Mild Steel*. The document was found at: <http://www.epa.gov/ttn/chief/efdocs/welding.pdf>

### Welding Operations

Welding emissions, which generate submicron sized PM, were estimated according to the annual consumption of welding wire reported by the source via email on 06/21/2016. The emission factors according to the type of welding wire were obtained from AP-42 Chapter 12.19: Electric Arc Welding (Table 12.19-1: PM-10 Emission Factors for Welding Operations & Table 12.19-2: Hazardous Air Pollutant (HAP) Emission Factors for Welding Operations).

### FACILITY-WIDE ALLOWABLE EMISSIONS

Pollutants	Spray Coating	VOC-Containing Solvents	Abrasive Blasting	Plasma Cutting	Welding	Total Facility-wide
	lbs/yr	lbs/yr	lbs/yr	lbs/yr	lbs/yr	lbs/yr
NO <sub>x</sub>	--	--	--	2,674	--	2,674
PM	14,171	--	270	463	87	14,991
PM <sub>10</sub>	14,171	--	130	463	87	14,851
PM <sub>2.5</sub>	14,171	--	13	463	87	14,734
VOC	4,436	1,759	--	--	--	6,195
Total HAPs	64	26	13	22	6	131
Specific HAP						
Methanol	--	26	--	--	--	26
Toluene	10	--	--	--	--	10
Xylene	52	--	--	--	--	52
Hexamethylene-1,6-Diisocyanate	2	--	--	--	--	2
Manganese (Mn)	--	--	4	8	6	18
Nickle (Ni)	--	--	5	9	--	14
Chromium (Cr)	--	--	3	6	--	9

### **E. MINOR NEW SOURCE REVIEW (NSR):**

Rule 241 requires that new sources with a potential to emit (PTE) equal to or greater than the permitting threshold (Rule 100 §200.88) be evaluated for the possibility that the new source could interfere with attainment or maintenance of a national ambient air quality standard (NAAQS). Since the PTE for this new source does not exceed the *Minor NSR Modification* thresholds of Rule 100 §200.71, per the current draft department policy, the source is not required to perform the ambient air quality impact assessment of Rule 241 §303.

### **F. HAP EMISSION IMPACTS:**

Screen modeling was performed for hexamethylene-1,6-diisocyanate, manganese, nickel, and chromium per the MCAQD HAP Permitting Technical Guidance (TG-2011-001; issued on 10/31/2011). The modeling was

performed using BREEZE AERSCREEN. Hexamethylene-1,6-diisocyanate was modeled according to a rectangular source with dimensions equal to the smaller spray coating enclosure. A rectangular source was also used to model the metal HAP emissions since the welding and plasma cutting operations take place inside a building. The building dimensions were approximated to be 300 feet by 70 feet based on the Accessor's map. The distances from the center of the building and spray enclosure to the nearest property line were estimated to be 160 feet and 110 feet, respectively. The pollutant emission rate was based on the annual emission rate for each specific HAP and an operating schedule of 2,080 hours per year (8 hours/day and 260 days/yr).

The screen model's raw output data is located in the Appendix. In the table below the maximum 1-hour and scaled annual concentrations at the nearest property line were compared to the Acute and Chronic Ambient Air Concentrations levels.

#### COMPARISON OF HAP CONCENTRATIONS

Pollutant	<sup>1</sup> Ambient Air Concentrations (mg/m <sup>3</sup> )		Screen Model Results (mg/m <sup>3</sup> )		Higher than Ambient Air Concentration?	
	Acute	Chronic	Maximum 1-hr Conc.	<sup>2</sup> Scaled Annual Conc.	Acute	Chronic
Hexamethylene-1,6-Diisocyanate	0.017	1.00E-05	1.35E-03	1.35E-04	No	Yes
Manganese	2.5	5.21E-05	1.31E-02	1.31E-03	No	Yes
Nickel	5.0	7.90E-06	1.01E-02	1.01E-03	No	Yes
Chromium	0.1	1.58E-07	6.45E-03	6.45E-04	No	Yes

1. Concentrations taken from Table 1 of MCAQD HAP Permitting Technical Guidance (TG-2011-001; issued on 10/31/2011), the Reference Concentrations (RfCs) provided by the EPA's Integrated Risk Information System (IRIS), and the Temporary Emergency Exposure Limits (TEEL), divided by two, from Table 2-Acute Dose-Response Values for Screening Risk Assessments (9/18/2014) of the Dose-Response Assessment Tables used by the EPA's Office of Air Quality Planning and Standards (OAQPS).
2. AERSCREEN only calculates 1-hr concentrations, thus a scaling factor of 0.10 is used to estimate the annual concentration.

#### G. PERFORMANCE TESTING:

The facility does not have any emission control equipment that requires performance testing.

#### H. REGULATORY REQUIREMENTS AND MONITORING:

1. *Condition 1* is the facility-wide allowable emissions limits that will keep the source from exceeding any regulatory thresholds.
2. *Conditions 2 – 11* apply to the steel surface coating operations:
  - a. The operational limitation in *Condition 2* was included to restrict the source from spray coating materials containing metal HAPs that would subject the facility to additional requirements for 40 CFR Part 63 Subpart XXXXXX.
  - b. *Conditions 3 – 4* are the control requirements to limit PM emissions from all spray coating operations subject to Rule 315.
  - c. *Conditions 5 – 11* are the combined requirements for Rule 336 and Rule 345, which regulate VOC emissions and are applicable to the surface coating of miscellaneous metal parts and mobile equipment, respectively.
3. *Conditions 12 – 14* apply to the band saw cutting fluid and wipe cleaning solvent and are consistent with the requirements of Rule 330 and Rule 331.
  - a. The operational limitations for the cutting fluid in *Condition 12* were included to keep the facility from exceeding the VOC thresholds of Rule 330 Sections 301 and 302 that would require emissions reductions in accordance with Rule 330 Section 304.
  - b. Per Rule 331 §308.2, the wipe cleaning operations using the ChemStation solvent are exempt from Sections 302 – 307 and only subject to the solvent handling and recordkeeping requirements of Sections 301 and 500 of Rule 331.

4. *Conditions 15 – 16* are the operational limitations and recordkeeping requirements for the plasma cutting process.
  - a. A limit on the hours of operation for plasma cutting was not included since the facility will not exceed any threshold for PM if the wet plasma table were to operate for 365 days per year and 24 hours per day for a total of 8,760 hours per year.
  - b. The source confirmed via email on 06/09/2016, that the facility only has one wet plasma cutting table.
5. *Conditions 17 – 21* apply to the abrasive blasting operations and are consistent with the requirements of Rule 312 and 40 CFR Part 63 Subpart XXXXXX.
6. *Conditions 22 – 28* are the additional requirements for the steel fabrication operations subject to 40 CFR Part 63 Subpart XXXXXX.
  - a. *Condition 23* are the standards for dry machining
  - b. *Condition 24* are the standards for dry grinding.
  - c. *Condition 25* are the standards for welding.
  - d. *Condition 26* are the monitoring requirements for visual determinations of fugitive emissions for both the welding and unconfined abrasive blasting operations. A record and a report of the visual determinations is required per *Conditions 27 and 28*.
7. *Conditions 28 – 40* are the requirements of Rule 310 for the facility's unpaved areas throughout the site, which are a source of fugitive dust.
  - a. Any references to farm cultural practices, field use for non-motorized sports, on-site tile-roof buildings, and vehicle test development, or solid waste management were omitted.
  - b. A Dust Control Plan (DCP) is required since the facility has a disturbed surface area greater than 0.1 acre. Only the conditions within the template pertaining to a DCP were included. A DCP was submitted on 05/11/2016 and approved on 09/08/2016.
  - c. Basic Dust Control Training for the site superintendent or other designated on-site representative is required every three years, since the unpaved area is greater than 1 acre.
  - d. A trackout control device at all exits onto areas accessible to the public is not required, since the unpaved area is less than 2 acres.

## APPENDIX



160035 Calculations

**Surface Coating Emissions**

**Company:** MR Steel Acquisition Corp

**Permit:** 160035

SDS #	Coating Material	<sup>1</sup> Usage (gal/yr)	<sup>1</sup> Amount Shipped as Waste (gal/yr)	<sup>2</sup> Density (lbs/gal)	<sup>2</sup> Solids by weight (%)	<sup>3</sup> Transfer Efficiency	PM Emissions (lbs/yr)	<sup>2, 4</sup> Regulatory Coatings VOC (lb/gal)	<sup>2,4</sup> Actual Material VOC (lb/gal)	VOC Emissions (lbs/yr)	<sup>2</sup> Toluene Specific HAP (weight %)	Xylene	Hexamethylene-1,6-Diisocyanate
1	TBL6-A/& TBL-A Armourliner Truck Bed Liner w/ Activator	24	0.1	8.50	54	65	38	3.20	3.20	76.5	4.50%	25.50%	0.60%
2	Aquence KL 7919	2,640	20	9.18	25	25	4509	0.005	0.005	12.2	-	-	-
3	Sun/Steel #38 Dark Grey	1,470	12	9.95	42	25	4581	2.35	1.00	1,458.0	-	-	-
4	Sun/Steel #1403 Ultra Deep Base Gloss	6	0	8.72	28	25	11	3.08	1.19	7.1	-	-	-
5	Sun/Steel #1438 Yellow Tint Base	42	1	8.99	31	25	85	2.54	1.08	44.3	-	-	-
6	Sun/Steel #1400 Hi-Hide White Glos	12	0.1	9.69	38	25	33	2.78	1.14	13.6	-	-	-
7	Sun/Steel #1404 Neutral Base Gloss	192	2	8.45	25	25	304	3.17	1.22	231.8	-	-	-
8	Sun/Steel #1401 Pastel Base Gloss	6	0	9.69	38	25	17	2.77	1.14	6.8	-	-	-
9	Sun/Steel #1490 Gloss Black	300	3	8.47	25	25	477	3.05	1.18	350.5	-	-	-
10	Sun/Steel #1402 Deep Base Gloss	1,920	10	9.07	32	25	4115	2.97	1.17	2,234.7	-	-	-
<b>Total:</b>		6,612.0					14,170.8			4,435.5	9.1	51.8	1.2

Pollutant	Estimated Emissions	
PM/PM <sub>10</sub> /PM <sub>2.5</sub>	14,171	lbs/yr
VOC	4,436	lbs/yr
HAP	64	lbs/yr
Specific HAP	52	lbs/yr
Toluene	10	lbs/yr
Xylene	52	lbs/yr
Hexamethylene-1,6-Diisocyanate	2	lbs/yr

**Notes:**

<sup>1</sup> Based on the material usage reported on the original permit application received 04/08/2016. To allow for business growth and operational flexibility, the material usage was increased by 20%. This allotted safety buffer is less than the 30% increase requested by the source on a revised material usage submitted via email on 06/21/2016. Only a 20% increase was given in order to keep the facility from exceeding the Minor NSR Modification thresholds of Rule 100 §200.71 which would trigger additional requirements.

<sup>2</sup> The VOC content, density, and HAP weight % for each material was obtained from the safety data sheet (SDS); if only the specific gravity was reported, the density of water was used to convert to lb/gal.

Density of H<sub>2</sub>O = 8.345 lbs/gal

<sup>3</sup> Spray gun transfer efficiencies were taken from Control Techniques Guidelines (CTG) for Miscellaneous Metal and Plastic Parts Coating, September 2008, EPA-453/R-08-003 and AP-42 Chapter 4.2.2.12 Metal Furniture Surface Coating (Table 4.2.2.12-1 Coating Method Transfer Efficiencies).

<sup>4</sup> VOC emissions are based on Actual Material VOC. Regulatory Coatings VOC is used to determine compliance with applicable county rules.

**VOC-Containing Solvent Emissions**

**Company:** MR Steel Acquisition Corp

**Permit:** 160035

SDS #	Coating Material	<sup>1</sup> Usage (gal/yr)	<sup>1</sup> Amount Shipped as Waste (gal/yr)	<sup>2</sup> Density (lbs/gal)	<sup>2</sup> Actual Material VOC (lb/gal)	VOC Emissions (lbs/yr)	Methanol Specific HAP (weight %)
11	Klean Strip Green Odorless Mineral Spirits	13	0	7.81	0.16	2.1	-
12	Klean Strip Denatured Alcohol	6.5	0	6.65	0.46	3.0	60%
13	Chemstation 51551 Degreaser	2000	0	8.47	0.85	1,694.0	
	Saw Plus Cutting Fluid	70	0	8.51	0.85	59.6	
<b>Total:</b>		2,090				1,758.7	

Pollutant	Estimated Emissions
VOC	1,759 lbs/yr
HAP	26 lbs/yr
Specific HAP	
Methanol	26 lbs/yr

Notes:

<sup>1</sup> According to the material usage reported by the source via email received on 06/21/2016.

<sup>2</sup> The VOC content, density, and HAP weight % for each material was obtained from the safety data sheet (SDS); If only the specific gravity was reported, the density of water was used to convert to lb/gal.

Density of H<sub>2</sub>O = 8.345 lbs/gal

**Abrasive Blasting**

**Company:** MR Steel Acquisition

**Permit:** 160035

Emission factors taken from AP-42 Table 13.2.6-1: Particulate Emission Factors for Abrasive Blasting for sand blasting of mild steel panels.

Abrasive blasting material throughput = 5 tons/yr

**PM Emissions:**

Particle Size	Emission Factor (lb/1000 lb abrasive)	Emissions (lbs /yr)
Total PM	27	270
PM <sub>10</sub>	13	130
PM <sub>2.5</sub>	1.3	13

**HAP Emissions:**

Pollutant	* % weight of Total PM Emitted	Emissions (lbs/yr)
Manganese (Mn)	1.65%	4
Nickle (Ni)	2.00%	5
Chromium (Cr)	1.20%	3
Total		13

\* Weight percentages based on the SDS for structural steel provided by the source.



**Material Safety Data Sheet**  
Material Name: Carbon and Alloy Steels

\*\*\* Section 1 - Chemical Product and Company Identification \*\*\*

<b>Manufacturer Information</b> Gerdau Long Steel North America 4221 West Boy Scout Blvd. Suite 600 Tampa, FL 33607	Phone: (800) 876-3626  Emergency # 800-424-9300 CHEMTREC
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\*\*\* Section 2 - Hazards Identification \*\*\*

**Emergency Overview**  
Under normal handling and use, exposure to massive forms of steel presents no health hazards. Grinding, thermal cutting, and melting of steel may produce fumes containing elemental constituents, and breathing these fumes may present potentially significant health hazards.

**Potential Health Effects: Eyes**  
Dust or powder may cause irritation and/or inflammation to the eye tissue. Rubbing may cause abrasion of cornea.

**Potential Health Effects: Skin**  
Product may contain levels of components that may cause allergic skin reactions. Dust or powder may irritate the skin. This product may produce skin abrasions, lesions, or cuts.

**Potential Health Effects: Ingestion**  
Ingestion of this product is unlikely; however if ingested may cause gastrointestinal disturbances, abdominal pain, fever, vomiting, and diarrhea. Ingestion of large amounts of product may produce more serious toxicities.

**Potential Health Effects: Inhalation**  
Product may contain levels of components that may cause allergic respiratory sensitization and cancer. Dusts, vapors, and fumes generated during processing may irritate the respiratory system. Severe acute overexposure or chronic overexposure to dusts or processing fumes may produce more serious toxicities.

HMIS Ratings: Health: 1 Fire: 0 HMIS Reactivity 0  
Hazard Scale: 0 = Minimal 1 = Slight 2 = Moderate 3 = Serious 4 = Severe \* = Chronic hazard

\*\*\* Section 3 - Composition / Information on Ingredients \*\*\*

CAS #	Component	Percent
1309-37-1	Iron oxide	>94
7440-02-0	Nickel	<2
7439-96-6	Manganese	<1.65
7440-47-3	Chromium	<1.2
7440-21-3	Silicon	<1
7439-98-7	Molybdenum	<1
1333-86-4	Carbon black	<1

**Plasma Cutting Emissions**

<b>Company:</b>	MR Steel Acquisition
<b>Permit:</b>	160035
Plasma cutting hours:	8760 hours/year

**Emission factors (AP-42 Chapter 12: Metallurgical Industry Document)**

*Emissions of Fume, Nitrogen Oxides and Noise in Plasma Cutting of Stainless and Mild Steel*

<http://www.epa.gov/ttn/chief/efdocs/welding.pdf>

Process	Material	Pollutant	Emission Factor	<sup>1</sup> Emissions
Wet Plasma Cutting	Mild Steel (8 mm thickness)	<sup>2</sup> PM <sub>10</sub>	0.4 g/min	463 lbs/yr
		<sup>5</sup> NO <sub>x</sub>	1.6 L/min	2,674 lbs/yr

**Notes:**

- <sup>1</sup> Unit Conversions used: 1 hour = 60 mins; 1 lb = 453.6 grams.
- <sup>2</sup> PM<sub>10</sub> emissions were assumed to be equivalent to the airborne fumes released.
- <sup>3</sup> To convert the emissions to lbs per year it was assumed that the total nitrogen oxides emitted (NO and NO<sub>2</sub>) consists of 8% NO<sub>2</sub>

**HAP Emissions:**

Pollutant	* % weight of Total PM Emitted	Emissions (lbs/yr)
Manganese (Mn)	1.65%	8
Nickle (Ni)	2.00%	9
Chromium (Cr)	1.20%	6
<b>Total</b>		<b>22</b>

\* Weight percentages based on the SDS for structural steel provided by the source.

**Welding Emissions**

**Company:** MR Steel Acquisition

**Permit:** 160035

Emission factors (AP-42 Chapter 12.19: Electric Arc Welding)

Table 12.19-1: PM-10 Emission Factors for Welding Operations

Table 12.19-2: Hazardous Air Pollutant (HAP) Emission Factors for Welding Operations

Welding Rod	<sup>1</sup> Usage	Process	Electrode Type	PM <sub>10</sub> Emission Factor (lb/1000 lb)	PM <sub>10</sub> Emissions (lbs/yr)	Mn Emission Factor (lb/1000 lb)	Mn Emission (lbs/yr)
Carbon Steel & Low Allow Wire	16,607 lbs/yr	GMAW	E70S	5.20	86.36	0.32	5.28
<b>TOTAL</b>	16,607 lbs/yr				86.36		5.28

Emissions

PM <sub>10</sub>	86.36 lbs/yr
† PM <sub>2.5</sub>	86.36 lbs/yr
HAP - Mn	5.28 lbs/yr

Notes:

† PM<sub>2.5</sub> assumed to equal PM<sub>10</sub>

<sup>1</sup> Annual usage of welding wire reported via email on 05/17/2016

TITLE: 160035 HDI

\*\*\*\*\* AREA PARAMETERS \*\*\*\*\*

SOURCE EMISSION RATE: 0.121E-03 g/s 0.960E-03 lb/hr

AREA EMISSION RATE: 0.271E-05 g/(s-m2) 0.215E-04 lb/(hr-m2)

AREA HEIGHT: 0.00 meters 0.00 feet

AREA SOURCE LONG SIDE: 9.45 meters 31.00 feet

AREA SOURCE SHORT SIDE: 4.72 meters 15.50 feet

INITIAL VERTICAL DIMENSION: 0.00 meters 0.00 feet

RURAL OR URBAN: URBAN

POPULATION: 4000000

INITIAL PROBE DISTANCE = 325. meters 1066. feet

\*\*\*\*\* BUILDING DOWNWASH PARAMETERS \*\*\*\*\*

BUILDING DOWNWASH NOT USED FOR NON-POINT SOURCES

\*\*\*\*\* FLOW SECTOR ANALYSIS \*\*\*\*\*  
25 meter receptor spacing: 34. meters - 325. meters

MAXIMUM IMPACT RECEPTOR

Zo SECTOR	SURFACE ROUGHNESS	1-HR CONC (ug/m3)	RADIAL (deg)	DIST (m)	TEMPORAL PERIOD
1*	1.000	1.350	5	33.5	WIN

\* = worst case diagonal

\*\*\*\*\* MAKEMET METEOROLOGY PARAMETERS \*\*\*\*\*

MIN/MAX TEMPERATURE: 277.6 / 322.0 (K)

MINIMUM WIND SPEED: 0.5 m/s

ANEMOMETER HEIGHT: 10.000 meters

SURFACE CHARACTERISTICS INPUT: AERMET SEASONAL TABLES

DOMINANT SURFACE PROFILE: Urban

DOMINANT CLIMATE TYPE: Dry Conditions

DOMINANT SEASON: Winter

ALBEDO: 0.35

BOWEN RATIO: 2.00

ROUGHNESS LENGTH: 1.000 (meters)

METEOROLOGY CONDITIONS USED TO PREDICT OVERALL MAXIMUM IMPACT

YR MO DY JDY HR  
10 01 10 10 01

HO U\* W\* DT/DZ ZI CNV ZIMCH M-O LEN ZO BOWEN ALBEDO REF WS

```

-1.32  0.043 -9.000  0.020 -999.  21.    6.1 1.000  2.00  0.35  0.50
  HT  REF TA    HT
-----
10.0  322.0  2.0

```

METEOROLOGY CONDITIONS USED TO PREDICT AMBIENT BOUNDARY IMPACT

```

-----
YR MO DY JDY HR
-----
10 01 10 10 01
-----
  HO    U*    W*  DT/DZ  ZI CNV  ZIMCH  M-O  LEN    ZO  BOWEN  ALBEDO  REF  WS
-----
-1.32  0.043 -9.000  0.020 -999.  21.    6.1 1.000  2.00  0.35  0.50
-----
  HT  REF TA    HT
-----
10.0  322.0  2.0

```

\*\*\*\*\* AERSCREEN AUTOMATED DISTANCES \*\*\*\*\*  
 OVERALL MAXIMUM CONCENTRATIONS BY DISTANCE

DIST (m)	MAXIMUM 1-HR CONC (ug/m3)	DIST (m)	MAXIMUM 1-HR CONC (ug/m3)
33.53	1.350	200.00	0.1018
50.00	0.7426	225.00	0.8635E-01
75.00	0.4100	250.00	0.7453E-01
100.00	0.2716	275.00	0.6525E-01
125.00	0.1976	300.00	0.5781E-01
150.00	0.1526	325.00	0.5172E-01
175.00	0.1228		

\*\*\*\*\* AERSCREEN MAXIMUM IMPACT SUMMARY \*\*\*\*\*

3-hour, 8-hour, and 24-hour scaled concentrations are equal to the 1-hour concentration as referenced in SCREENING PROCEDURES FOR ESTIMATING THE AIR QUALITY IMPACT OF STATIONARY SOURCES, REVISED (Section 4.5.4) Report number EPA-454/R-92-019 [http://www.epa.gov/scram001/guidance\\_permit.htm](http://www.epa.gov/scram001/guidance_permit.htm) under Screening Guidance

CALCULATION PROCEDURE	MAXIMUM 1-HOUR CONC (ug/m3)	SCALED 3-HOUR CONC (ug/m3)	SCALED 8-HOUR CONC (ug/m3)	SCALED 24-HOUR CONC (ug/m3)	SCALED ANNUAL CONC (ug/m3)
FLAT TERRAIN	1.350	1.350	1.350	1.350	N/A
DISTANCE FROM SOURCE		33.53 meters			
IMPACT AT THE AMBIENT BOUNDARY	1.350	1.350	1.350	1.350	N/A
DISTANCE FROM SOURCE		33.53 meters			

TITLE: 160035 MN

\*\*\*\*\* AREA PARAMETERS \*\*\*\*\*

SOURCE EMISSION RATE: 0.110E-02 g/s 0.870E-02 lb/hr

AREA EMISSION RATE: 0.562E-06 g/(s-m2) 0.446E-05 lb/(hr-m2)

AREA HEIGHT: 0.00 meters 0.00 feet

AREA SOURCE LONG SIDE: 91.44 meters 300.00 feet

AREA SOURCE SHORT SIDE: 21.34 meters 70.00 feet

INITIAL VERTICAL DIMENSION: 0.00 meters 0.00 feet

RURAL OR URBAN: URBAN

POPULATION: 4000000

INITIAL PROBE DISTANCE = 325. meters 1066. feet

\*\*\*\*\* BUILDING DOWNWASH PARAMETERS \*\*\*\*\*

BUILDING DOWNWASH NOT USED FOR NON-POINT SOURCES

\*\*\*\*\* FLOW SECTOR ANALYSIS \*\*\*\*\*  
25 meter receptor spacing: 49. meters - 325. meters

MAXIMUM IMPACT RECEPTOR

Zo SECTOR	SURFACE ROUGHNESS	1-HR CONC (ug/m3)	RADIAL (deg)	DIST (m)	TEMPORAL PERIOD
1*	1.000	13.05	0	48.8	WIN

\* = worst case diagonal

\*\*\*\*\* MAKEMET METEOROLOGY PARAMETERS \*\*\*\*\*

MIN/MAX TEMPERATURE: 277.6 / 322.0 (K)

MINIMUM WIND SPEED: 0.5 m/s

ANEMOMETER HEIGHT: 10.000 meters

SURFACE CHARACTERISTICS INPUT: AERMET SEASONAL TABLES

DOMINANT SURFACE PROFILE: Urban

DOMINANT CLIMATE TYPE: Dry Conditions

DOMINANT SEASON: Winter

ALBEDO: 0.35

BOWEN RATIO: 2.00

ROUGHNESS LENGTH: 1.000 (meters)

METEOROLOGY CONDITIONS USED TO PREDICT OVERALL MAXIMUM IMPACT

YR MO DY JDY HR  
10 01 10 10 01

HO U\* W\* DT/DZ ZI CNV ZIMCH M-O LEN ZO BOWEN ALBEDO REF WS

-1.32 0.043 -9.000 0.020 -999. 21. 6.1 1.000 2.00 0.35 0.50  
 HT REF TA HT  
 -----  
 10.0 322.0 2.0

METEOROLOGY CONDITIONS USED TO PREDICT AMBIENT BOUNDARY IMPACT

-----  
 YR MO DY JDY HR  
 -----  
 10 01 10 10 01  
 -----  
 HO U\* W\* DT/DZ ZI CNV ZIMCH M-O LEN ZO BOWEN ALBEDO REF WS  
 -----  
 -1.32 0.043 -9.000 0.020 -999. 21. 6.1 1.000 2.00 0.35 0.50  
 -----  
 HT REF TA HT  
 -----  
 10.0 322.0 2.0

\*\*\*\*\* AERSCREEN AUTOMATED DISTANCES \*\*\*\*\*  
 OVERALL MAXIMUM CONCENTRATIONS BY DISTANCE

DIST (m)	MAXIMUM 1-HR CONC (ug/m3)	DIST (m)	MAXIMUM 1-HR CONC (ug/m3)
48.77	13.05	200.00	0.9333
50.00	11.74	225.00	0.7886
75.00	4.277	250.00	0.6791
100.00	2.642	275.00	0.5934
125.00	1.866	300.00	0.5251
150.00	1.419	325.00	0.4695
175.00	1.133		

\*\*\*\*\* AERSCREEN MAXIMUM IMPACT SUMMARY \*\*\*\*\*

3-hour, 8-hour, and 24-hour scaled concentrations are equal to the 1-hour concentration as referenced in SCREENING PROCEDURES FOR ESTIMATING THE AIR QUALITY IMPACT OF STATIONARY SOURCES, REVISED (Section 4.5.4) Report number EPA-454/R-92-019 [http://www.epa.gov/scram001/guidance\\_permit.htm](http://www.epa.gov/scram001/guidance_permit.htm) under Screening Guidance

CALCULATION PROCEDURE	MAXIMUM 1-HOUR CONC (ug/m3)	SCALED 3-HOUR CONC (ug/m3)	SCALED 8-HOUR CONC (ug/m3)	SCALED 24-HOUR CONC (ug/m3)	SCALED ANNUAL CONC (ug/m3)
FLAT TERRAIN	13.05	13.05	13.05	13.05	N/A
DI STANCE FROM SOURCE		48.77 meters			
IMPACT AT THE AMBIENT BOUNDARY	13.05	13.05	13.05	13.05	N/A
DI STANCE FROM SOURCE		48.77 meters			

TITLE: 160035 NI

\*\*\*\*\* AREA PARAMETERS \*\*\*\*\*

SOURCE EMISSION RATE: 0.844E-03 g/s 0.670E-02 lb/hr

AREA EMISSION RATE: 0.433E-06 g/(s-m2) 0.343E-05 lb/(hr-m2)

AREA HEIGHT: 0.00 meters 0.00 feet

AREA SOURCE LONG SIDE: 91.44 meters 300.00 feet

AREA SOURCE SHORT SIDE: 21.34 meters 70.00 feet

INITIAL VERTICAL DIMENSION: 0.00 meters 0.00 feet

RURAL OR URBAN: URBAN

POPULATION: 4000000

INITIAL PROBE DISTANCE = 325. meters 1066. feet

\*\*\*\*\* BUILDING DOWNWASH PARAMETERS \*\*\*\*\*

BUILDING DOWNWASH NOT USED FOR NON-POINT SOURCES

\*\*\*\*\* FLOW SECTOR ANALYSIS \*\*\*\*\*

25 meter receptor spacing: 49. meters - 325. meters

MAXIMUM IMPACT RECEPTOR

Zo SECTOR	SURFACE ROUGHNESS	1-HR CONC (ug/m3)	RADIAL (deg)	DIST (m)	TEMPORAL PERIOD
1*	1.000	10.05	0	48.8	WIN

\* = worst case diagonal

\*\*\*\*\* MAKEMET METEOROLOGY PARAMETERS \*\*\*\*\*

MIN/MAX TEMPERATURE: 277.6 / 322.0 (K)

MINIMUM WIND SPEED: 0.5 m/s

ANEMOMETER HEIGHT: 10.000 meters

SURFACE CHARACTERISTICS INPUT: AERMET SEASONAL TABLES

DOMINANT SURFACE PROFILE: Urban

DOMINANT CLIMATE TYPE: Dry Conditions

DOMINANT SEASON: Winter

ALBEDO: 0.35

BOWEN RATIO: 2.00

ROUGHNESS LENGTH: 1.000 (meters)

METEOROLOGY CONDITIONS USED TO PREDICT OVERALL MAXIMUM IMPACT

YR MO DY JDY HR

10 01 10 10 01

```

HO      U*      W*  DT/DZ  ZI CNV  ZIMCH  M-O LEN  ZO  BOWEN  ALBEDO  REF WS
-----
-1.32  0.043  -9.000  0.020  -999.   21.     6.1  1.000  2.00  0.35  0.50

HT  REF TA  HT
-----
10.0  322.0  2.0

```

METEOROLOGY CONDITIONS USED TO PREDICT AMBIENT BOUNDARY IMPACT

```

YR MO DY JDY HR
-----
10 01 10 10 01

```

```

HO      U*      W*  DT/DZ  ZI CNV  ZIMCH  M-O LEN  ZO  BOWEN  ALBEDO  REF WS
-----
-1.32  0.043  -9.000  0.020  -999.   21.     6.1  1.000  2.00  0.35  0.50

HT  REF TA  HT
-----
10.0  322.0  2.0

```

\*\*\*\*\* AERSCREEN AUTOMATED DISTANCES \*\*\*\*\*  
OVERALL MAXIMUM CONCENTRATIONS BY DISTANCE

DIST (m)	MAXIMUM 1-HR CONC (ug/m3)	DIST (m)	MAXIMUM 1-HR CONC (ug/m3)
48.77	10.05	200.00	0.7187
50.00	9.038	225.00	0.6072
75.00	3.293	250.00	0.5230
100.00	2.034	275.00	0.4570
125.00	1.437	300.00	0.4044
150.00	1.093	325.00	0.3615
175.00	0.8722		

\*\*\*\*\* AERSCREEN MAXIMUM IMPACT SUMMARY \*\*\*\*\*

3-hour, 8-hour, and 24-hour scaled concentrations are equal to the 1-hour concentration as referenced in SCREENING PROCEDURES FOR ESTIMATING THE AIR QUALITY IMPACT OF STATIONARY SOURCES, REVISED (Section 4.5.4) Report number EPA-454/R-92-019 [http://www.epa.gov/scram001/guidance\\_permit.htm](http://www.epa.gov/scram001/guidance_permit.htm) under Screening Guidance

CALCULATION PROCEDURE	MAXIMUM 1-HOUR CONC (ug/m3)	SCALED 3-HOUR CONC (ug/m3)	SCALED 8-HOUR CONC (ug/m3)	SCALED 24-HOUR CONC (ug/m3)	SCALED ANNUAL CONC (ug/m3)
FLAT TERRAIN	10.05	10.05	10.05	10.05	N/A
DISTANCE FROM SOURCE		48.77 meters			
IMPACT AT THE AMBIENT BOUNDARY	10.05	10.05	10.05	10.05	N/A
DISTANCE FROM SOURCE		48.77 meters			

TITLE: 160035 CR

\*\*\*\*\* AREA PARAMETERS \*\*\*\*\*

SOURCE EMISSION RATE: 0.542E-03 g/s 0.430E-02 lb/hr

AREA EMISSION RATE: 0.278E-06 g/(s-m2) 0.220E-05 lb/(hr-m2)

AREA HEIGHT: 0.00 meters 0.00 feet

AREA SOURCE LONG SIDE: 91.44 meters 300.00 feet

AREA SOURCE SHORT SIDE: 21.34 meters 70.00 feet

INITIAL VERTICAL DIMENSION: 0.00 meters 0.00 feet

RURAL OR URBAN: URBAN

POPULATION: 4000000

INITIAL PROBE DISTANCE = 325. meters 1066. feet

\*\*\*\*\* BUILDING DOWNWASH PARAMETERS \*\*\*\*\*

BUILDING DOWNWASH NOT USED FOR NON-POINT SOURCES

\*\*\*\*\* FLOW SECTOR ANALYSIS \*\*\*\*\*

25 meter receptor spacing: 49. meters - 325. meters

MAXIMUM IMPACT RECEPTOR

Zo SECTOR	SURFACE ROUGHNESS	1-HR CONC (ug/m3)	RADIAL (deg)	DIST (m)	TEMPORAL PERIOD
1*	1.000	6.451	0	48.8	WIN

\* = worst case diagonal

\*\*\*\*\* MAKEMET METEOROLOGY PARAMETERS \*\*\*\*\*

MIN/MAX TEMPERATURE: 277.6 / 322.0 (K)

MINIMUM WIND SPEED: 0.5 m/s

ANEMOMETER HEIGHT: 10.000 meters

SURFACE CHARACTERISTICS INPUT: AERMET SEASONAL TABLES

DOMINANT SURFACE PROFILE: Urban

DOMINANT CLIMATE TYPE: Dry Conditions

DOMINANT SEASON: Winter

ALBEDO: 0.35

BOWEN RATIO: 2.00

ROUGHNESS LENGTH: 1.000 (meters)

METEOROLOGY CONDITIONS USED TO PREDICT OVERALL MAXIMUM IMPACT

YR MO DY JDY HR

10 01 10 10 01

```

HO      U*      W*  DT/DZ  ZI CNV  ZIMCH  M-O LEN  ZO  BOWEN  ALBEDO  REF WS
-----
-1.32  0.043  -9.000  0.020  -999.   21.    6.1  1.000  2.00  0.35  0.50

HT  REF TA  HT
-----
10.0  322.0  2.0

```

METEOROLOGY CONDITIONS USED TO PREDICT AMBIENT BOUNDARY IMPACT

```

YR MO DY  JDY HR
-----
10 01 10  10 01

HO      U*      W*  DT/DZ  ZI CNV  ZIMCH  M-O LEN  ZO  BOWEN  ALBEDO  REF WS
-----
-1.32  0.043  -9.000  0.020  -999.   21.    6.1  1.000  2.00  0.35  0.50

HT  REF TA  HT
-----
10.0  322.0  2.0

```

\*\*\*\*\* AERSCREEN AUTOMATED DISTANCES \*\*\*\*\*  
OVERALL MAXIMUM CONCENTRATIONS BY DISTANCE

DIST (m)	MAXIMUM 1-HR CONC (ug/m3)	DIST (m)	MAXIMUM 1-HR CONC (ug/m3)
48.77	6.451	200.00	0.4613
50.00	5.800	225.00	0.3897
75.00	2.114	250.00	0.3356
100.00	1.306	275.00	0.2933
125.00	0.9224	300.00	0.2595
150.00	0.7013	325.00	0.2320
175.00	0.5597		

\*\*\*\*\* AERSCREEN MAXIMUM IMPACT SUMMARY \*\*\*\*\*

3-hour, 8-hour, and 24-hour scaled concentrations are equal to the 1-hour concentration as referenced in SCREENING PROCEDURES FOR ESTIMATING THE AIR QUALITY IMPACT OF STATIONARY SOURCES, REVISED (Section 4.5.4) Report number EPA-454/R-92-019 [http://www.epa.gov/scram001/guidance\\_permit.htm](http://www.epa.gov/scram001/guidance_permit.htm) under Screening Guidance

CALCULATION PROCEDURE	MAXIMUM 1-HOUR CONC (ug/m3)	SCALED 3-HOUR CONC (ug/m3)	SCALED 8-HOUR CONC (ug/m3)	SCALED 24-HOUR CONC (ug/m3)	SCALED ANNUAL CONC (ug/m3)
FLAT TERRAIN	6.451	6.451	6.451	6.451	N/A
DISTANCE FROM SOURCE		48.77 meters			
IMPACT AT THE AMBIENT BOUNDARY	6.451	6.451	6.451	6.451	N/A
DISTANCE FROM SOURCE		48.77 meters			



# NON-TITLE V COMPLETENESS DETERMINATION CHECKLIST

**Items 1-15 Front page:** Items 1 to 15 (14 for Renewals) must be completed.

*Notes to engineer:*

- For renewal applications the source must either answer 'No' to questions 2-5 or submit an application for a permit modification.
- Item 8: Many applicants do not know the SIC code or NAICS code for their industry. For a new application the code can be obtained by doing an on-line search. <http://www.osha.gov/pls/imis/sicsearch.html>
- Items 5, 7 and 14: These may be the same for many applicants.

Complete:  Incomplete:

**Item 16:** A simple site diagram has been included, preferably on a standard size paper. Detailed blueprints or construction drawings are not required.

Complete:  Incomplete:  N/A:

**Item 17:** A simple process flow diagram on a standard size paper is preferred. A process flow diagram may not be needed for some small businesses.

Complete:  Incomplete:  N/A:

**Item 18:** An O&M plan is required only for a control device. An O&M plan is not required for a spray booth. Instead of including the O&M plan with the application, an applicant may submit it after receiving the permit.

Complete:  Incomplete:  N/A:

**Item 19:** A dust control plan, if required, must accompany the permit application. The plan will be reviewed and approved by the dust compliance group.

Complete:  Incomplete:  N/A:

**Item 20:** The applicant needs to complete only those sections of the permit application that are applicable.

Complete:  Incomplete:  N/A:

*Notes to engineer:*

- Concerning Section Z: Many applicants will not be able to perform these engineering calculations. We will accept the permit application with a blank Section Z.

Instructions for completing Sections A, B, C, D, E-1, E-2, F, G, H, I, J, K-1, K-2, K-3, K-4, L, M, X-1, X-2, Y and Z of the permit application are included at the beginning of each section and are self-explanatory.

In general, a material safety data sheet (MSDS) is required for each chemical used, stored or processed at the facility. Exceptions are for very common materials, such as gasoline, diesel, acetone, etc.

Business name: MR Steel Acquisition Corp.

Permit number: 160035

Completeness review completed.

Application determined to be: Complete:  Incomplete:

Permit Engineer: Lizabeth Gomez

Date: 09/14/2016