OKLAHOMA DEPARTMENT OF ENVIRONMENTAL QUALITY AIR QUALITY DIVISION

MEMORANDUM June 21, 2022

TO: Lee Warden, P.E., Permits and Engineering Group Manager

THROUGH: Rick Groshong, Compliance & Enforcement Manager

THROUGH: Richard Kienlen, P.E., Engineering Manager, New Source Permits Section

THROUGH: Ryan Buntyn, P.E., New Source Permits Section

FROM: Jennie Doan, E.I., Engineering Section, Regional Office at Tulsa

SUBJECT: Evaluation of Permit Application No. 99-035-O (M-4)

Ameristar Perimeter Security USA Inc.

Ornamental Steel Fencing Manufacturing Facility (SIC 3446/NAICS 332323)

Facility ID: 3686

Latitude: 36.17800, Longitude: -95.86900

Physical Address: 1555 North Mingo, Tulsa, OK 74116

SECTION I. INTRODUCTION

Ameristar Perimeter Security USA Inc. (Ameristar or applicant) has applied for an individual minor source operating permit for their Ornamental Steel Fencing Manufacturing Facility (facility). This facility is currently operating under individual minor source operating Permit No. 99-035-O (M-3), issued on October 28, 2013.

In this permit application, the facility requested the authorization of one (1) generator engine subject to 40 CFR Part 60, NSPS, Subpart IIII. The facility submitted a self-disclosure to AQD on April 30, 2021, that indicated that the facility had failed to obtain a minor source construction permit under OAC 252:100-7-15(a)(2)(B)(i) for the one (1) generator engine. Also indicated in the self-disclosure was the failure to comply with OAC 252:100-37-15(b) for one (1) 500-gallon gasoline storage tank. Since the generator was installed on September 1, 2018, and operating for more than 180-days, the application for a construction permit was converted to an operating permit and appropriate permitting fees were collected. Upon issuance of this permit, Enforcement Case 10131 will be resolved.

Other existing equipment at the facility has since become subject to various NESHAP regulations; however, this equipment is indicated to have been constructed prior to the effective dates of the applicable regulations. Therefore, it is presumed that no construction permits have been required for those units on that basis. This includes the following: gasoline tank, two emergency generators, and the chromate conversion coating process.

The applicant has requested to remain permitted as a synthetic minor facility with emission limitations of 52.6 TPY of NO_X, 50.42 TPY of CO, 12.14 TPY of PM, 99.62 TPY of VOC, 24.99 TPY of combined HAP, and 9.99 TPY of individual HAPs. On issuance, this permit will be a Federally Enforceable State Operating Permit (FESOP).

SECTION II. PROCESS DESCRIPTION

The facility has three (3) tubing production lines (mills) and three (3) roll forming lines, any of which can produce tubing with circular or square cross-section. Tubing is used as an upright or as a cross member in fencing and is also used in manufacturing "rackable" fencing.

Steel coil is fed into forming machines, which forms the steel into round or square tubes. The coils come in 55" diameter rolls with slight variations in coil dimensions depending on gauge and finished tubing outside diameter (OD). Circular tubing has ODs ranging from 1-3/8" to 2-7/8", and square tubing has side dimensions ranging from .590" square (sq) to 2.5" sq. The string is then run through a hot water pressure washing operation and into a high frequency (no gas) welding machine where the tubing is melted together. Zinc wire is used during the high frequency process to recover the raw substrate to prevent rusting. Finally, the tubing string is cut to desired lengths.

The tubing can be coated at this point in the manufacturing process or may become part of a rackable fence "panel." Tubing is coated using one of two processes, powder coating or E-coating. Powder coating is an electrostatic process in which the materials to be coated are heated and grounded. The dry blend of materials to be applied is heated and typically sprayed from a gun that applies a charge to the spray. At this facility, the powder coat is a blend of epoxy and polyester. The bare materials are washed with a non-VOC chemical and dried, given an initial coat and cured, and given a final coat and cured. Drying and curing are done with infrared and convection heat.

E-coating is also an electrostatic process, but involves dipping the grounded parts into an electrically charged liquid bath. The equipment is reminiscent of a normal dipping operation, but the deposition process is quite different. Coating of these products occurs in two steps, a primer and topcoat, each followed by a natural gas-fired curing oven.

The chromate conversion coating utilized at the facility is considered a non-electrolytic process occurring within an enclosed box and include creating a hard metal finish on the metal object when it is submerged in the tank bath.

Flat metal is stamped, drilled, bent, etc., to manufacture small equipment items such as gate hinges and clips and larger equipment like bollards and large custom gates. These small items are generally coated using the powder coat process. Some extra-large fabricated products will be spray painted in a wet paint booth, which has fabric filters for particulate control.

Mention was made earlier of "rackable" fences. The facility manufactures fencing segments, called "panels," that consist of rectangular sections of pre-assembled fencing. Each panel has vertical supports at either end, with horizontal top and bottom poles that support vertical decorative pieces forming the fence stakes. The ends of the panel can be inserted into the ground at different elevations and the remainder of the panel flexes to allow all of the stakes to remain vertical.

This makes the fence more attractive when installed on property with varying elevations. This patented panel operation is identified as rackable fencing. These panels are E-coated.

The different manufacturing processes operate various hours and shifts and are somewhat seasonal. The facility operates two 10-hour shifts per day, 7 days per week, with two weeks turnaround each year, or 7,020 hours per year (hpy).

SECTION III. EQUIPMENT

The following is a list of current equipment. All coating operations have individual stacks separate from the ovens.

Facility-Wide Emission Units

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EU	Equipment Type	Size / Rating (MMBTUH)	Commenced Construction
MA-H-1	Clean Line Stage 1 Burner (Main)	3.50	1992
MA-H-2	Dry Off Oven (Main)	3.20	1992
MA-H-3	Epoxy Cure Oven (Main)	4.60	1992
MA-H-4	Topcoat Infrared Oven (Main)	3.20	1992
MA-H-5	Topcoat Convection Oven (Main)	3.00	1992
MA-H-6	Stand Alone Burn-Off Oven 1 (Main)	0.39	1992
MA-H-7	Stand Alone Burn-Off Oven 2 (Main)	0.56	1992
MA-H-8	Stand Alone Burn-Off Oven 3 (Main)	0.80	1992
MA-H-9	Space Heaters - x55 (Main)	8.36	1992
MT-H-1	Primer Oven 1 (Mont)	1.50	2005
MT-H-2	Primer Oven 2 (Mont)	8.50	2005
MT-H-3	Topcoat Oven 1 (Mont)	1.50	2005
MT-H-4	Topcoat Oven 2 (Mont)	8.50	2005
MT-H-5	Make-up Air Units - x6 (Mont)	6.00	2005
MT-H-6	Space Heaters - x24 (Mont)	8.40	2005
MT-B-1	Boiler (Mont)	7.50	2005
WH-H-1	Clean Line Stage 1 Burner (Ware)	2.50	2017
WH-H-2	Clean Line Stage 2 Burner (Ware)	2.50	2017
WH-H-3	Dry-Off Oven Burner 1 (Ware)	2.00	2017
WH-H-4	Dry-Off Oven Burner 2 (Ware)	2.00	2017
WH-H-5	Primer Oven (Ware)	5.00	2017
WH-H-6	Topcoat Black Oven Burner 1 (Ware)	3.50	2017
WH-H-7	Topcoat Black Oven Burner 2 (Ware)	3.50	2017
WH-H-8	Topcoat Color Oven Burner 1 (Ware)	3.50	2017
WH-H-9	Topcoat Color Oven Burner 2 (Ware)	3.50	2017
WH-H-10	Space Heaters - x29 (Ware)	9.39	2017
PPC-1	Primer Powder Coating		1992, 2017*
TPC-1	Topcoat Powder Coating		1994, 2017

EU	Equipment Type	Size / Rating (MMBTUH)	Commenced Construction
PEP-1	Primer E-coating Paste		2005
PER-1	Primer E-coating Resin		2005
TEP-1	Topcoat E-coating Paste		2005
TER-1	Topcoat E-coating Resin		2005
WPB-1	Wet Paint Booth		2013
SOL-1	Solvent Usage		1992
MA-GEN-1	Emergency Generator (Main) (s/n JGNXB08.02NN)	128-Hp	9/1/2018
MT-GEN-1	Emergency Generator 1 (Mont) (s/n 99A00856-S)	89-Hp	2/1/1999
MT-GEN-2	Emergency Generator 2 (Mont) (s/n GTA8)	240-Нр	10/1/2004
GAS TK-1	Gasoline HFR Tank	275-gal	06/11/2021
PLASMA	Plasma Cutting		2010
LASER	Laser Cutting		2018
PW-1	Parts Washer	65-gal	

^{*}Powder Coating in Main Plant was constructed in 1992; Powder Coating in Warehouse construction in 2017.

SECTION IV. EMISSIONS

HEATERS/OVENS/BOILERS

Emissions from all units, with the exception of CO emissions from MT-H-2 and MT-H-4, are based on AP-42 (7/98), Section 1.4, a gas heating value of 1,020 BTU/SCF, and the maximum hourly ratings shown in the equipment table. Emissions of HAPs are estimated using a total HAP factor (from Section 1.4 of AP-42 (7/98) of 0.0018 lb/MMBTU) which is approximately 0.86 TPY.

Stack testing of the topcoat stack and of the primer stack yielded CO emission factors greater than those given in the above-referenced AP-42 tables. The primer stack showed 25.12 ppmvd (1.47 lbs/hr) and the topcoat stack showed 55.43 ppmvd (2.46 lbs/hr).

Heater/Ovens/Boilers Emission Factors

EU	NOx	СО	VOC	SO ₂	PM ₁₀ /PM _{2.5}
EU	lb/MMSCF	lb/MMSCF	lb/MMSCF	lb/MMSCF	lb/MMSCF
MA-H-1 –					
MT-H-1; MT-					
H-3; MT-H5;		84			
MT-H-6;	100	04	5.5	0.6	7.6
WH-H-1 –	100		5.5	0.6	7.6
WH-H-10					
MT-H-2		1.47 lb/hr			
MT-H-4		2.46 lb/hr			

Emissions from Heater/Ovens/Boilers

TOLL	N($O_{\mathbf{X}}$		0	VOC		Se Se	O_2	PM ₁₀ /P	$M_{2.5}$
EU	lb/hr	TPY	lb/hr	TPY	lb/hr	TPY	lb/hr	TPY	lb/hr	TPY
MA-H-1	0.34	1.50	0.29	1.26	0.02	0.08	2.06E-03	0.01	0.03	0.11
MA-H-2	0.31	1.37	0.26	1.15	0.02	0.08	1.88E-03	0.01	0.02	0.10
МА-Н-3	0.45	1.98	0.38	1.66	0.02	0.11	2.71E-03	0.01	0.03	0.15
MA-H-4	0.31	1.37	0.26	1.15	0.02	0.08	1.88E-03	0.01	0.02	0.10
MA-H-5	0.29	1.29	0.25	1.08	0.02	0.07	1.76E-03	0.01	0.02	0.10
МА-Н-6	0.04	0.17	0.03	0.14	2.10E-03	0.01	2.29E-04	1.00E-03	2.91E-03	0.01
MA-H-7	0.05	0.24	0.05	0.20	3.02E-03	0.01	3.29E-04	1.44E-03	4.17E-03	0.02
MA-H-8	0.08	0.34	0.07	0.29	4.31E-03	0.02	4.71E-04	2.06E-03	0.01	0.03
MA-H-9	0.82	3.59	0.69	3.02	0.05	0.20	4.92E-03	0.02	0.06	0.27
MT-H-1	0.15	0.64	0.12	0.54	0.01	0.04	8.82E-04	0.00	0.01	0.05
MT-H-2	0.83	3.65	1.47	6.44	0.05	0.20	0.01	0.02	0.06	0.28
MT-H-3	0.15	0.64	0.12	0.54	0.01	0.04	8.82E-04	0.00	0.01	0.05
MT-H-4	0.83	3.65	2.46	10.77	0.05	0.20	0.01	0.02	0.06	0.28
MT-H-5	0.59	2.58	0.49	2.16	0.03	0.14	3.53E-03	0.02	0.04	0.20
МТ-Н-6	0.82	3.61	0.69	3.03	0.05	0.20	4.94E-03	0.02	0.06	0.27
MT-B-1	0.74	3.22	0.62	2.71	0.04	0.18	4.41E-03	0.02	0.06	0.24
WH-H-1	0.25	1.07	0.21	0.90	0.01	0.06	1.47E-03	0.01	0.02	0.08
WH-H-2	0.25	1.07	0.21	0.90	0.01	0.06	1.47E-03	0.01	0.02	0.08
WH-H-3	0.20	0.86	0.16	0.72	0.01	0.05	1.18E-03	0.01	0.01	0.07
WH-H-4	0.20	0.86	0.16	0.72	0.01	0.05	1.18E-03	0.01	0.01	0.07
WH-H-5	0.49	2.15	0.41	1.80	0.03	0.12	2.94E-03	0.01	0.04	0.16
WH-H-6	0.34	1.50	0.29	1.26	0.02	0.08	2.06E-03	0.01	0.03	0.11
WH-H-7	0.34	1.50	0.29	1.26	0.02	0.08	2.06E-03	0.01	0.03	0.11
WH-H-8	0.34	1.50	0.29	1.26	0.02	0.08	2.06E-03	0.01	0.03	0.11
WH-H-9	0.34	1.50	0.29	1.26	0.02	0.08	2.06E-03	0.01	0.03	0.11
WH-H-10	0.92	4.03	0.77	3.39	0.05	0.22	0.01	0.02	0.07	0.31

PAINTING/COATING

Supercoating Approach: A supercoat has been created for each type of coating operation at the facility to represent the worst-cases of all paints. Since this facility involves different coating processes, several supercoatings have been created.

The applicant has created the following Supercoat to represent the worst-case scenario of all the paints used in each operation as listed in the following table.

Proposed Supercoat Usage – increase of 35% to accommodate growth

Supercoat Name	Maximum Usage	Density	VOC Content	PM Content
	gal/year	lb/gal	wt%	wt%
Primer Powder Coating ¹	40,242	12.93	1.00%	99.0%

Supercoat Name	Maximum Usage	Density	VOC Content	PM Content
	gal/year	lb/gal	wt%	wt%
Topcoat Powder Coating ¹	121,323	12.93	1.00%	99.0%
Primer E-coating Paste ²	12,555	10.68	3.75%	46.22%
Primer E-coating Resin ²	53,325	10.43	0.50%	45.00%
Topcoat E-coating Paste ²	25,110	10.26	29.23%	43.88%
Topcoat E-coating Resin ²	97,875	8.76	4.57%	38.00%
Wet Paint Booth ¹	506	13.94	53.00%	47.00%
Solvent Usage	3,375	6.84	100.00%	0.00%

Transfer efficiency of 95.0% is assumed for powder coating and 60.0% is assumed for manual electrostatic spray based on Section 4.2.2 of AP-42. Transfer efficiency (i.e., reclaim efficiency) for powder coatings based on manufacturer's specifications.

The following table lists HAP component weight percent from each Supercoat.

Supercoat's HAPs List

Supercoat's HAT's List				
Supercoat Name	Total HAP			
Supercoat Name	Maximum wt% ¹			
Primer Powder Coating	0.00%			
Topcoat Powder Coating	0.00%			
Primer E-coating Paste	0.00%			
Primer E-coating Resin	0.00%			
Topcoat E-coating Paste	3.00%			
Topcoat E-coating Resin	0.00%			
Wet Paint Booth	28.50%			
Solvent Usage	36.84%			

The material safety data sheet (MSDS) contains a range of weight percentages for each compound contained in a paint, the high end of the range was assumed to represent worst case conditions.

The following table lists VOC and PM emissions. PM emissions from the spray coating operation (wet paint booth) assume 95.0% control efficiency, which is based on a blanket filter (Air Flow Technology, AFT), in-front-of-a-ring filter (Poly-panel), in-front-of-a-pocket filter (specialty collection bags). PM emissions from powder coatings assume 85.0% control efficiency. The control efficiency for powder coatings is based on EPA guidance for a partial enclosure (EPA-450-3-77-010). All other coating operations are identified in the application to be uncontrolled.

Supercoat Emissions (35% growth scenario)

Supercoat Name	VOC Emissions	PM _{10/2.5} Emissions
	TPY	TPY
Primer Powder Coating	2.60	0.39
Topcoat Powder Coating	7.84	1.16
Primer E-coating Paste	2.51	0.03
Primer E-coating Resin	1.39	0.13

Transfer efficiency of 99.9% is assumed for dip coating (negligible PM emissions generated from dipping operations).

Cumanaget Name	VOC Emissions	PM _{10/2.5} Emissions
Supercoat Name	TPY	TPY
Topcoat E-coating Paste	37.65	0.06
Topcoat E-coating Resin	19.57	0.16
Wet Paint Booth	1.87	0.03
Solvent Usage	11.54	
Total	84.98	1.96

The following table lists HAP contents and emissions of the Supercoats.

Supercoat's HAPs List

Sunavaata	HAP Pollutant	Wt.%	Emissions
Supercoats	HAP Pollutant	VV L. 70	TPY
Topcoat E-coating Paste	Glycol Ether	3.00%	3.86
	Xylene	17.50%	0.62
Wet Paint Booth	Glycol Ether	5.50%	0.19
	Ethylbenzene	5.50%	0.19
Colvent Heads	Xylene	31.58%	3.65
Solvent Usage	Ethylbenzene	5.26%	0.61
Total		-	9.12

CHROMIUM CONVERSION COATING (NON-ELECTROLYTIC)

Emissions from non-electrolytic tanks do not relate to current density or cathode efficiency. Therefore, to determine the mass emission rates from this process, it was assumed that atmospheric emissions from each non electrolytic tank were the result of turbulence caused by mixing the tank contents with compressed air. It is recognized that mixing may be accomplished by recirculating pumps, or there may be no mixing at all (other than the insertion and removal of parts).

Emissions were calculated using the surface area of the bath (22 ft²), emissions factors from Table 12.20-2 of AP-42 (07/96) for chrome acid anodizing (2.0 grains/hr- ft² for Chromium and 4.2 gr/hr-ft² for PM), and 8,760 hpy. Estimated emissions are 0.03 TPY Chromium and 0.06 TPY total PM.

PLASMA AND LASER CUTTING

Emission factors based on AP-12 Chapter 12 document, "Emissions of Fume, Nitrogen Oxides and Noise in Plasma Cutting of Stainless and Mild Steel." Plasma cutter control efficiency is based on MERV 15 rating guaranteed by filter manufacture. Laser cutting control efficiency is listed as 99.9% on the filter manufacture specifications; however, facility has conservatively assumed 99.0% for permitting purposes.

Plasma/Laser Cutting's Parameters & Emission Factors

Unit ID	Plasma	Laser
Cutting Type	Dry	Dry
Number of Equipment	1	1
Material Cut (lb/hr)	2,000	600
Material Cut (lb/yr)	17,520,000	5,256,000
Control Device	Dust Collector	Dust Collector

Unit ID	Plasma	Laser			
PM Control Efficiency	90.0%	99.0%			
NOx Control Efficiency	None	None			
Emission Factor(s)					
NOx (liters/min)		4.95 ¹ (6.6 grams/min)			
PM _{10/2.5} (grams/min)	23.0 ¹ (3.04 lb/hr)	23.0^{1}			

Average of the minimum and maximum values from the source data.

Plasma/Laser Cutting's Emissions

Unit ID	PM _{10/2.5} F	NOx		
Unit 1D	lb/hr	TPY	lb/hr	TPY
Plasma	0.30	1.31		
Laser	0.03	0.13	0.87	3.82
Total	0.33	1.44	0.87	3.82

MILLING/WOOD CUTTING

The facility identifies conducting "Grinding, cutting, sanding of non-asbestos materials for maintenance purposes," as contained in Appendix H. Each activity listed in Appendix H has been previously determined to contribute 5 TPY or less. Although this facility is not considered a de minimis facility in and of itself, for permitting purposes, the contribution of emissions from this source will be represented as 5 TPY PM in the facility-wide emissions summary table.

METAL CLEANER (COLD CLEANING UNIT FOR METAL DEGREASING)

The facility uses a parts cleaner for metal greasing which uses a VOC product (safety clean product) and is subject to the requirements of OAC 252:100-39-42 for cold cleaning units.

Emission are estimated using a product VOC content of 6.7 lb/gal from the product SDS, and 2,000 gpy of potential usage based on the maximum anticipated usage. Emissions of VOC are estimated to be approximately 6.70 TPY.

Table 3 of Subpart MMMM lists the amount of HAPs (% mass) generally expected to be present in generic solvent blends. According to the safety clean product SDS, 100% of the product is listed as a petroleum distillate (CAS # 64742-47-8). Using the information on Table 3 of Subpart MMMM appropriately 0.01% is expected to be toluene (1.34 lb/yr).

ENGINES

Emissions of NO_X, CO, PM_{10/2.5}, and formaldehyde (H₂CO) from MA-GEN-1 are calculated based on EPA Tier II standards. Emissions of NO_X, CO, VOC, PM_{10/2.5}, and formaldehyde (H₂CO) from MT-GEN-1 and MT-GEN-2 and VOC from MA-GEN-1 are calculated based on Section 3.3 of AP-42 (10/96).

Emissions of HAP and SO₂ from all engines are based on Table 3.4-1 and Table 3.4-3 of AP-42 (10/96) and ULSD (15 ppm). All engines are emergency use engines where annual emissions assume 500 hpy of operation and a brake-specific fuel consumption (BSFC) of 7,000 Btu/hp-hr. Total HAPs are estimated to be less than 0.01 TPY (combined). All stationary engines on-site are CI and diesel-fueled engines.

Engine Emission Factors

EU	NOx	CO	VOC	SO ₂	PM _{10/2.5}	Total HAP
EU	g/hp-hr	g/hp-hr	g/hp-hr	g/hp-hr	g/hp-hr	lb/MMBTU
MA-GEN-1	4.92	3.73	1.12	0.005	0.224	0.004
MT-GEN-1	14.06	3.03	1.12	0.005	0.998	0.004
MT-GEN-2	14.06	3.03	1.12	0.005	0.998	0.004

Engine Emissions

EU	NOx		C	CO		VOC		SO ₂		PM _{10/2.5}	
EU	lb/hr	TPY	lb/hr	TPY	lb/hr	TPY	lb/hr	TPY	lb/hr	TPY	
MA-GEN-1	1.39	0.35	1.05	0.26	0.32	0.08	< 0.01	< 0.01	0.06	0.02	
MT-GEN-1	2.76	0.69	0.59	0.15	0.22	0.05	< 0.01	< 0.01	0.20	0.05	
MT-GEN-2	7.44	1.86	1.60	0.40	0.59	0.15	< 0.01	< 0.01	0.53	0.13	
Total	11.59	2.90	3.25	0.81	1.13	0.28	< 0.01	< 0.01	0.79	0.20	

TANKS

Working and breathing (W/B) emissions are based on AP-42 (11/19), Section 7.1. HAP emissions are calculated based on the default HAP speciation for RVP 13 gasoline in AP AP-42 (11/19), Section 7.1.

Tank Emissions

Parameter	GAS TK-1
Throughput, gal/yr	3,300
Liquid in Tank(s)	Gasoline RVP 13
Working/Breathing Method/Tool	AP-42 (11/19), Section 7.1
Working/Breathing Emissions, VOC TPY	0.13
Working/Breathing Emissions, HAP TPY	0.01

The facility identifies having a "Fuel/VOC storage tanks with less than 400 gallons capacity, or fuel/VOC storage tanks with less than 10,567 gallons capacity built after July 23, 1984, or tanks storing fuel/VOC that has a true vapor pressure at storage conditions less than 1.5 psia. This includes Fuel Oils Nos. 2 - 6, Nos. 2-GO - 4-GO, Diesel Fuel Oils Nos. 2-D - 4-D, and Kerosene," as contained in Appendix H. Each activity listed in Appendix H has been previously determined to contribute 5 TPY or less. Although this facility is not considered a de minimis facility in and of itself, for permitting purposes, the contribution of emissions from this source will be represented as 5 TPY VOC in the facility-wide emissions summary table.

FACILITY-WIDE EMISSIONS

Since potential emissions of all criteria pollutants are less than 100 TPY, potential emissions of any single HAP are less than 10 TPY (4.25 TPY), and potential emissions of total HAP are less than 25 TPY combined total HAP, the facility is not a major source.

Facility-Wide Emissions

MA-H-1	TOLL	N	O_X	C	0	VOC		S	O_2	PM ₁₀ /PM _{2.5}		
MA-H-2 0.31 1.37 0.26 1.15 0.02 0.08 0.00 0.01 0.02 0.10 MA-H-3 0.45 1.98 0.38 1.66 0.02 0.11 0.00 0.01 0.03 0.15 MA-H-4 0.31 1.37 0.26 1.15 0.02 0.08 0.00 0.01 0.02 0.10 MA-H-5 0.29 1.29 0.25 1.08 0.02 0.07 0.00 0.01 0.02 0.10 MA-H-6 0.04 0.17 0.03 0.14 0.00 0.01 0.00 0	EU	lb/hr	TPY	lb/hr	TPY	lb/hr	TPY	lb/hr	TPY	lb/hr	TPY	
MA-H-3 0.45 1.98 0.38 1.66 0.02 0.11 0.00 0.01 0.03 0.15 MA-H-4 0.31 1.37 0.26 1.15 0.02 0.08 0.00 0.01 0.02 0.10 MA-H-5 0.29 1.29 0.25 1.08 0.02 0.07 0.00 0.01 0.02 0.10 MA-H-6 0.04 0.17 0.03 0.14 0.00 0.01 0.00	MA-H-1	0.34	1.50	0.29	1.26	0.02	0.08	0.00	0.01	0.03	0.11	
MA-H-4 0.31 1.37 0.26 1.15 0.02 0.08 0.00 0.01 0.02 0.10 MA-H-5 0.29 1.29 0.25 1.08 0.02 0.07 0.00 0.01 0.02 0.10 MA-H-6 0.04 0.17 0.03 0.14 0.00 0.01 0.00 0.01 0.03 0.04 0.00 0.00 0.01 0.03 0.06 0.22 0.00 0.00 0.01 0.02 0.06 0.22 0.06 0.28 MT-H-1 0.13 0.64 0.12 0.54 0.01 0.04 0.00 0.00 0.01 <	MA-H-2	0.31	1.37	0.26	1.15	0.02	0.08	0.00	0.01	0.02	0.10	
MA-H-5 0.29 1.29 0.25 1.08 0.02 0.07 0.00 0.01 0.02 0.10 MA-H-6 0.04 0.17 0.03 0.14 0.00 0.01 0.00 0.01 0.00 0.00 0.01 0.00 0.00 0.01 0.02 0.06 0.22 0.06 0.22 0.01 0.02 0.06 0.28 MT-H-1 0.15 0.64 0.12 0.54 0.01 0.04 0.00 0.00 0.01 0.02 0.06 0.28 MT-H-3 0.15 0.64 0.12 0.54 0.01 0.04 0.00 0.00 <	MA-H-3	0.45	1.98	0.38	1.66	0.02	0.11	0.00	0.01	0.03	0.15	
MA-H-6 0.04 0.17 0.03 0.14 0.00 0.01 0.00 0.00 0.00 0.01 MA-H-7 0.05 0.24 0.05 0.20 0.00 0.01 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.01 0.03 MA-H-8 0.08 3.59 0.69 3.02 0.05 0.20 0.00 0.02 0.06 0.27 MT-H-1 0.15 0.64 0.12 0.54 0.01 0.04 0.00 0.00 0.01 0.05 MT-H-3 0.15 0.64 0.12 0.54 0.01 0.04 0.00 0.00 0.01 0.05 MT-H-3 0.15 0.64 0.12 0.54 0.01 0.04 0.00 0.00 0.01 0.05 MT-H-4 0.83 3.65 2.46 10.77 0.05 0.20 0.01 0.02 0.06 0.	MA-H-4	0.31	1.37	0.26	1.15	0.02	0.08	0.00	0.01	0.02	0.10	
MA-H-7 0.05 0.24 0.05 0.20 0.00 0.01 0.00 0.00 0.00 0.02 MA-H-8 0.08 0.34 0.07 0.29 0.00 0.02 0.00 0.00 0.01 0.03 MA-H-9 0.82 3.59 0.69 3.02 0.05 0.20 0.00 0.02 0.06 0.27 MT-H-1 0.15 0.64 0.12 0.54 0.01 0.04 0.00 0.00 0.01 0.05 MT-H-2 0.83 3.65 1.47 6.44 0.05 0.20 0.01 0.02 0.06 0.28 MT-H-3 0.15 0.64 0.12 0.54 0.01 0.04 0.00 0.00 0.06 0.28 MT-H-4 0.83 3.65 2.46 10.77 0.05 0.20 0.01 0.02 0.06 0.28 MT-H-1 0.82 3.61 0.69 3.03 0.50 0.20 0.00 0.0	MA-H-5	0.29	1.29	0.25	1.08	0.02	0.07	0.00	0.01	0.02	0.10	
MA-H-8 0.08 0.34 0.07 0.29 0.00 0.02 0.00 0.01 0.03 MA-H-9 0.82 3.59 0.69 3.02 0.05 0.20 0.00 0.02 0.06 0.27 MT-H-1 0.15 0.64 0.12 0.54 0.01 0.04 0.00 0.00 0.01 0.05 MT-H-2 0.83 3.65 1.47 6.44 0.05 0.20 0.01 0.02 0.06 0.28 MT-H-3 0.15 0.64 0.12 0.54 0.01 0.04 0.00 0.00 0.01 0.05 MT-H-4 0.83 3.65 2.46 10.77 0.05 0.20 0.01 0.02 0.06 0.28 MT-H-5 0.59 2.58 0.49 2.16 0.03 0.14 0.00 0.02 0.06 0.22 MT-H-6 0.82 3.61 0.69 3.03 0.05 0.20 0.00 0.01 0.0	MA-H-6	0.04	0.17	0.03	0.14	0.00	0.01	0.00	0.00	0.00	0.01	
MA-H-9 0.82 3.59 0.69 3.02 0.05 0.20 0.00 0.02 0.06 0.27 MT-H-1 0.15 0.64 0.12 0.54 0.01 0.04 0.00 0.00 0.01 0.05 MT-H-2 0.83 3.65 1.47 6.44 0.05 0.20 0.01 0.02 0.06 0.28 MT-H-3 0.15 0.64 0.12 0.54 0.01 0.04 0.00 0.00 0.01 0.05 MT-H-4 0.83 3.65 2.46 10.77 0.05 0.20 0.01 0.02 0.06 0.28 MT-H-5 0.59 2.58 0.49 2.16 0.03 0.14 0.00 0.02 0.06 0.22 MT-H-6 0.82 3.61 0.69 3.03 0.05 0.20 0.00 0.02 0.06 0.27 MT-B-1 0.74 3.22 0.62 2.71 0.04 0.18 0.00 0.0	MA-H-7	0.05	0.24	0.05	0.20	0.00	0.01	0.00	0.00	0.00	0.02	
MT-H-1 0.15 0.64 0.12 0.54 0.01 0.04 0.00 0.00 0.01 0.05 MT-H-2 0.83 3.65 1.47 6.44 0.05 0.20 0.01 0.02 0.06 0.28 MT-H-3 0.15 0.64 0.12 0.54 0.01 0.04 0.00 0.00 0.01 0.05 MT-H-4 0.83 3.65 2.46 10.77 0.05 0.20 0.01 0.02 0.06 0.28 MT-H-5 0.59 2.58 0.49 2.16 0.03 0.14 0.00 0.02 0.04 0.20 MT-H-6 0.82 3.61 0.69 3.03 0.05 0.20 0.00 0.02 0.06 0.27 MT-B-1 0.74 3.22 0.62 2.71 0.04 0.18 0.00 0.02 0.06 0.24 WH-H-1 0.25 1.07 0.21 0.90 0.01 0.06 0.00 0.0	MA-H-8	0.08	0.34	0.07	0.29	0.00	0.02	0.00	0.00	0.01	0.03	
MT-H-2 0.83 3.65 1.47 6.44 0.05 0.20 0.01 0.02 0.06 0.28 MT-H-3 0.15 0.64 0.12 0.54 0.01 0.04 0.00 0.00 0.01 0.05 MT-H-4 0.83 3.65 2.46 10.77 0.05 0.20 0.01 0.02 0.06 0.28 MT-H-5 0.59 2.58 0.49 2.16 0.03 0.14 0.00 0.02 0.04 0.20 MT-H-6 0.82 3.61 0.69 3.03 0.05 0.20 0.00 0.02 0.06 0.27 MT-B-1 0.74 3.22 0.62 2.71 0.04 0.18 0.00 0.02 0.06 0.24 WH-H-1 0.25 1.07 0.21 0.90 0.01 0.06 0.00 0.01 0.02 0.08 WH-H-3 0.20 0.86 0.16 0.72 0.01 0.05 0.00 0.0	MA-H-9	0.82	3.59	0.69	3.02	0.05	0.20	0.00	0.02	0.06	0.27	
MT-H-3 0.15 0.64 0.12 0.54 0.01 0.04 0.00 0.00 0.01 0.05 MT-H-4 0.83 3.65 2.46 10.77 0.05 0.20 0.01 0.02 0.06 0.28 MT-H-5 0.59 2.58 0.49 2.16 0.03 0.14 0.00 0.02 0.04 0.20 MT-H-6 0.82 3.61 0.69 3.03 0.05 0.20 0.00 0.02 0.06 0.27 MT-B-1 0.74 3.22 0.62 2.71 0.04 0.18 0.00 0.02 0.06 0.24 WH-H-1 0.25 1.07 0.21 0.90 0.01 0.06 0.00 0.01 0.02 0.08 WH-H-3 0.25 1.07 0.21 0.90 0.01 0.06 0.00 0.01 0.02 0.08 WH-H-4 0.20 0.86 0.16 0.72 0.01 0.05 0.00 0.0	MT-H-1	0.15	0.64	0.12	0.54	0.01	0.04	0.00	0.00	0.01	0.05	
MT-H-4 0.83 3.65 2.46 10.77 0.05 0.20 0.01 0.02 0.06 0.28 MT-H-5 0.59 2.58 0.49 2.16 0.03 0.14 0.00 0.02 0.04 0.20 MT-H-6 0.82 3.61 0.69 3.03 0.05 0.20 0.00 0.02 0.06 0.27 MT-B-1 0.74 3.22 0.62 2.71 0.04 0.18 0.00 0.02 0.06 0.24 WH-H-1 0.25 1.07 0.21 0.90 0.01 0.06 0.00 0.01 0.02 0.08 WH-H-3 0.20 0.86 0.16 0.72 0.01 0.05 0.00 0.01 0.07 WH-H-4 0.20 0.86 0.16 0.72 0.01 0.05 0.00 0.01 0.07 WH-H-5 0.49 2.15 0.41 1.80 0.03 0.12 0.00 0.01 0.04 0.1	MT-H-2	0.83	3.65	1.47	6.44	0.05	0.20	0.01	0.02	0.06	0.28	
MT-H-5 0.59 2.58 0.49 2.16 0.03 0.14 0.00 0.02 0.04 0.20 MT-H-6 0.82 3.61 0.69 3.03 0.05 0.20 0.00 0.02 0.06 0.27 MT-B-1 0.74 3.22 0.62 2.71 0.04 0.18 0.00 0.02 0.06 0.24 WH-H-1 0.25 1.07 0.21 0.90 0.01 0.06 0.00 0.01 0.02 0.08 WH-H-2 0.25 1.07 0.21 0.90 0.01 0.06 0.00 0.01 0.02 0.08 WH-H-3 0.20 0.86 0.16 0.72 0.01 0.05 0.00 0.01 0.01 0.07 WH-H-4 0.20 0.86 0.16 0.72 0.01 0.05 0.00 0.01 0.01 0.07 WH-H-5 0.49 2.15 0.41 1.80 0.03 0.12 0.00 0.01	MT-H-3	0.15	0.64	0.12	0.54	0.01	0.04	0.00	0.00	0.01	0.05	
MT-H-6 0.82 3.61 0.69 3.03 0.05 0.20 0.00 0.02 0.06 0.27 MT-B-1 0.74 3.22 0.62 2.71 0.04 0.18 0.00 0.02 0.06 0.24 WH-H-1 0.25 1.07 0.21 0.90 0.01 0.06 0.00 0.01 0.02 0.08 WH-H-2 0.25 1.07 0.21 0.90 0.01 0.06 0.00 0.01 0.02 0.08 WH-H-3 0.20 0.86 0.16 0.72 0.01 0.05 0.00 0.01 0.01 0.07 WH-H-4 0.20 0.86 0.16 0.72 0.01 0.05 0.00 0.01 0.01 0.07 WH-H-5 0.49 2.15 0.41 1.80 0.03 0.12 0.00 0.01 0.04 0.16 WH-H-5 0.49 2.15 0.41 1.80 0.03 0.12 0.00 0.01	MT-H-4	0.83	3.65	2.46	10.77	0.05	0.20	0.01	0.02	0.06	0.28	
MT-B-1 0.74 3.22 0.62 2.71 0.04 0.18 0.00 0.02 0.06 0.24 WH-H-1 0.25 1.07 0.21 0.90 0.01 0.06 0.00 0.01 0.02 0.08 WH-H-2 0.25 1.07 0.21 0.90 0.01 0.06 0.00 0.01 0.02 0.08 WH-H-3 0.20 0.86 0.16 0.72 0.01 0.05 0.00 0.01 0.01 0.07 WH-H-4 0.20 0.86 0.16 0.72 0.01 0.05 0.00 0.01 0.01 0.07 WH-H-5 0.49 2.15 0.41 1.80 0.03 0.12 0.00 0.01 0.04 0.16 WH-H-6 0.34 1.50 0.29 1.26 0.02 0.08 0.00 0.01 0.03 0.11 WH-H-7 0.34 1.50 0.29 1.26 0.02 0.08 0.00 0.01	MT-H-5	0.59	2.58	0.49	2.16	0.03	0.14	0.00	0.02	0.04	0.20	
WH-H-1 0.25 1.07 0.21 0.90 0.01 0.06 0.00 0.01 0.02 0.08 WH-H-2 0.25 1.07 0.21 0.90 0.01 0.06 0.00 0.01 0.02 0.08 WH-H-3 0.20 0.86 0.16 0.72 0.01 0.05 0.00 0.01 0.01 0.07 WH-H-4 0.20 0.86 0.16 0.72 0.01 0.05 0.00 0.01 0.01 0.07 WH-H-5 0.49 2.15 0.41 1.80 0.03 0.12 0.00 0.01 0.04 0.16 WH-H-6 0.34 1.50 0.29 1.26 0.02 0.08 0.00 0.01 0.03 0.11 WH-H-7 0.34 1.50 0.29 1.26 0.02 0.08 0.00 0.01 0.03 0.11 WH-H-9 0.34 1.50 0.29 1.26 0.02 0.08 0.00 0.01	MT-H-6	0.82	3.61	0.69	3.03	0.05	0.20	0.00	0.02	0.06	0.27	
WH-H-2 0.25 1.07 0.21 0.90 0.01 0.06 0.00 0.01 0.02 0.08 WH-H-3 0.20 0.86 0.16 0.72 0.01 0.05 0.00 0.01 0.01 0.07 WH-H-4 0.20 0.86 0.16 0.72 0.01 0.05 0.00 0.01 0.01 0.07 WH-H-5 0.49 2.15 0.41 1.80 0.03 0.12 0.00 0.01 0.04 0.16 WH-H-6 0.34 1.50 0.29 1.26 0.02 0.08 0.00 0.01 0.03 0.11 WH-H-7 0.34 1.50 0.29 1.26 0.02 0.08 0.00 0.01 0.03 0.11 WH-H-9 0.34 1.50 0.29 1.26 0.02 0.08 0.00 0.01 0.03 0.11 WH-H-10 0.92 4.03 0.77 3.39 0.05 0.22 0.01 0.0	MT-B-1	0.74	3.22	0.62	2.71	0.04	0.18	0.00	0.02	0.06	0.24	
WH-H-3 0.20 0.86 0.16 0.72 0.01 0.05 0.00 0.01 0.01 0.07 WH-H-4 0.20 0.86 0.16 0.72 0.01 0.05 0.00 0.01 0.01 0.07 WH-H-5 0.49 2.15 0.41 1.80 0.03 0.12 0.00 0.01 0.04 0.16 WH-H-6 0.34 1.50 0.29 1.26 0.02 0.08 0.00 0.01 0.03 0.11 WH-H-7 0.34 1.50 0.29 1.26 0.02 0.08 0.00 0.01 0.03 0.11 WH-H-8 0.34 1.50 0.29 1.26 0.02 0.08 0.00 0.01 0.03 0.11 WH-H-9 0.34 1.50 0.29 1.26 0.02 0.08 0.00 0.01 0.03 0.11 WH-H-9 0.34 1.50 0.29 1.26 0.02 0.08 0.00 0.01	WH-H-1	0.25	1.07	0.21	0.90	0.01	0.06	0.00	0.01	0.02	0.08	
WH-H-4 0.20 0.86 0.16 0.72 0.01 0.05 0.00 0.01 0.01 0.07 WH-H-5 0.49 2.15 0.41 1.80 0.03 0.12 0.00 0.01 0.04 0.16 WH-H-6 0.34 1.50 0.29 1.26 0.02 0.08 0.00 0.01 0.03 0.11 WH-H-7 0.34 1.50 0.29 1.26 0.02 0.08 0.00 0.01 0.03 0.11 WH-H-8 0.34 1.50 0.29 1.26 0.02 0.08 0.00 0.01 0.03 0.11 WH-H-9 0.34 1.50 0.29 1.26 0.02 0.08 0.00 0.01 0.03 0.11 WH-H-10 0.92 4.03 0.77 3.39 0.05 0.22 0.01 0.02 0.07 0.31 MA-GEN-1 1.39 0.35 1.05 0.26 0.32 0.08 <0.01	WH-H-2	0.25	1.07	0.21	0.90	0.01	0.06	0.00	0.01	0.02	0.08	
WH-H-5 0.49 2.15 0.41 1.80 0.03 0.12 0.00 0.01 0.04 0.16 WH-H-6 0.34 1.50 0.29 1.26 0.02 0.08 0.00 0.01 0.03 0.11 WH-H-7 0.34 1.50 0.29 1.26 0.02 0.08 0.00 0.01 0.03 0.11 WH-H-8 0.34 1.50 0.29 1.26 0.02 0.08 0.00 0.01 0.03 0.11 WH-H-9 0.34 1.50 0.29 1.26 0.02 0.08 0.00 0.01 0.03 0.11 WH-H-10 0.92 4.03 0.77 3.39 0.05 0.22 0.01 0.02 0.07 0.31 MA-GEN-1 1.39 0.35 1.05 0.26 0.32 0.08 <0.01	WH-H-3	0.20	0.86	0.16	0.72	0.01	0.05	0.00	0.01	0.01	0.07	
WH-H-6 0.34 1.50 0.29 1.26 0.02 0.08 0.00 0.01 0.03 0.11 WH-H-7 0.34 1.50 0.29 1.26 0.02 0.08 0.00 0.01 0.03 0.11 WH-H-8 0.34 1.50 0.29 1.26 0.02 0.08 0.00 0.01 0.03 0.11 WH-H-9 0.34 1.50 0.29 1.26 0.02 0.08 0.00 0.01 0.03 0.11 WH-H-10 0.92 4.03 0.77 3.39 0.05 0.22 0.01 0.02 0.07 0.31 MA-GEN-1 1.39 0.35 1.05 0.26 0.32 0.08 <0.01	WH-H-4	0.20	0.86	0.16	0.72	0.01	0.05	0.00	0.01	0.01	0.07	
WH-H-7 0.34 1.50 0.29 1.26 0.02 0.08 0.00 0.01 0.03 0.11 WH-H-8 0.34 1.50 0.29 1.26 0.02 0.08 0.00 0.01 0.03 0.11 WH-H-9 0.34 1.50 0.29 1.26 0.02 0.08 0.00 0.01 0.03 0.11 WH-H-10 0.92 4.03 0.77 3.39 0.05 0.22 0.01 0.02 0.07 0.31 MA-GEN-1 1.39 0.35 1.05 0.26 0.32 0.08 <0.01	WH-H-5	0.49	2.15	0.41	1.80	0.03	0.12	0.00	0.01	0.04	0.16	
WH-H-8 0.34 1.50 0.29 1.26 0.02 0.08 0.00 0.01 0.03 0.11 WH-H-9 0.34 1.50 0.29 1.26 0.02 0.08 0.00 0.01 0.03 0.11 WH-H-10 0.92 4.03 0.77 3.39 0.05 0.22 0.01 0.02 0.07 0.31 MA-GEN-1 1.39 0.35 1.05 0.26 0.32 0.08 <0.01	WH-H-6	0.34	1.50	0.29	1.26	0.02	0.08	0.00	0.01	0.03	0.11	
WH-H-9 0.34 1.50 0.29 1.26 0.02 0.08 0.00 0.01 0.03 0.11 WH-H-10 0.92 4.03 0.77 3.39 0.05 0.22 0.01 0.02 0.07 0.31 MA-GEN-1 1.39 0.35 1.05 0.26 0.32 0.08 <0.01	WH-H-7	0.34	1.50	0.29	1.26	0.02	0.08	0.00	0.01	0.03	0.11	
WH-H-10 0.92 4.03 0.77 3.39 0.05 0.22 0.01 0.02 0.07 0.31 MA-GEN-1 1.39 0.35 1.05 0.26 0.32 0.08 <0.01	WH-H-8	0.34	1.50	0.29	1.26	0.02	0.08	0.00	0.01	0.03	0.11	
MA-GEN-1 1.39 0.35 1.05 0.26 0.32 0.08 <0.01 <0.01 0.06 0.02 MT-GEN-1 2.76 0.69 0.59 0.15 0.22 0.05 <0.01	WH-H-9	0.34	1.50	0.29	1.26	0.02	0.08	0.00	0.01	0.03	0.11	
MT-GEN-1 2.76 0.69 0.59 0.15 0.22 0.05 <0.01 <0.01 0.20 0.05 MT-GEN-2 7.44 1.86 1.60 0.40 0.59 0.15 <0.01	WH-H-10	0.92	4.03	0.77	3.39	0.05	0.22	0.01	0.02	0.07	0.31	
MT-GEN-2 7.44 1.86 1.60 0.40 0.59 0.15 <0.01 <0.01 0.53 0.13 GAS TK-1 0.39 0.39 0.39 1.16 1.16 1.16 0.03	MA-GEN-1	1.39	0.35	1.05	0.26	0.32	0.08	< 0.01	< 0.01	0.06	0.02	
GAS TK-1 0.13 0.39 0.39 0.39 1.16 1.16 1.16 1.16 0.03 0.03 0.13 0.13 0.06 0.16 0.16 0.16 <	MT-GEN-1	2.76	0.69	0.59	0.15	0.22	0.05	< 0.01	< 0.01	0.20	0.05	
Diesel TK-1 0.39 TPC-1 NS 7.84 1.16 PEP-1 NS 2.51 0.03 PER-1 NS 1.39 0.13 TEP-1 NS 37.65 0.06 TER-1 NS 19.57 0.16	MT-GEN-2	7.44	1.86	1.60	0.40	0.59	0.15	< 0.01	< 0.01	0.53	0.13	
PPC-1 NS 2.60 0.39 TPC-1 NS 7.84 1.16 PEP-1 NS 2.51 0.03 PER-1 NS 1.39 0.13 TEP-1 NS 37.65 0.06 TER-1 NS 19.57 0.16	GAS TK-1						0.13					
TPC-1 NS 7.84 1.16 PEP-1 NS 2.51 0.03 PER-1 NS 1.39 0.13 TEP-1 NS 37.65 0.06 TER-1 NS 19.57 0.16	Diesel TK-1						< 5.0					
PEP-1 NS 2.51 0.03 PER-1 NS 1.39 0.13 TEP-1 NS 37.65 0.06 TER-1 NS 19.57 0.16	PPC-1					NS	2.60				0.39	
PER-1 NS 1.39 0.13 TEP-1 NS 37.65 0.06 TER-1 NS 19.57 0.16	TPC-1					NS	7.84				1.16	
PER-1 NS 1.39 0.13 TEP-1 NS 37.65 0.06 TER-1 NS 19.57 0.16	PEP-1					NS	2.51				0.03	
TEP-1 NS 37.65 0.06 TER-1 NS 19.57 0.16	PER-1					NS	1.39				0.13	
TER-1 NS 19.57 0.16	TEP-1					NS						
WFD-1 NO 1.8/ U.U.S	WPB-1					NS	1.87				0.03	

EU	N	$O_{\mathbf{X}}$	C	0	V	OC	SO	O_2	PM ₁₀	/PM _{2.5}
EU	lb/hr	TPY	lb/hr	TPY	lb/hr	TPY	lb/hr	TPY	lb/hr	TPY
SOL-1		-			NS	11.54	1			< 0.01
Plasma									0.30	1.31
Laser	0.87	3.82							0.03	0.13
Milling/Wood Cutting										<5.0
PC-1						6.70				
CHROME-1										0.06
Total	22.93	52.60	14.57	50.42	1.72	99.62	0.03	0.28	1.90	12.14

^{*} NS – Not Specified

Facility-Wide HAPs List

HAP Pollutant	Emissions
HAF Fonutant	TPY
Glycol Ether	4.06
Xylene	4.26
Ethylbenzene	0.80
Formaldehyde and other HAPs	< 0.01
Chromium	0.03
Total	9.16

SECTION V. FEDERAL REGULATIONS

NSPS, 40 CFR Part 60

[Subpart IIII Applicable]

<u>Subpart Dc.</u> Small Industrial-Commercial-Institutional Steam Generating Units. This subpart affects steam generating units with a heat input capacity between 10 and 100 MMBTUH and that commence construction, modification, or reconstruction after June 9, 1989. All heaters and boilers are below this threshold.

<u>Subparts K, Ka, Kb</u>, VOL Storage Vessels. All tanks at the facility are below the negligible size (19,813 gallons) and are exempt from these subparts.

Subpart SS, Surface Coating of Large Appliances. No large appliances are coated at this facility.

Subpart TT, Metal Coils. Coils are not coated at the facility; galvanized coils are raw materials.

<u>Subpart IIII</u>, Stationary Compression Ignition (CI) Internal Combustion Engines (ICE). This subpart affects CI ICE ordered after July 11, 2005, and manufactured after April 1, 2006. One of the diesel emergency generator engines (MA-GEN-1) is applicable to this subpart.

<u>Subpart JJJJ</u>, Stationary Spark Ignition Internal Combustion Engines (SI-ICE). This subpart promulgates emission standards for new SI engines ordered after June 12, 2006, that also meet certain manufacture date criteria and all SI engines modified or reconstructed after June 12, 2006. The specific emission standards (either in g/hp-hr or as a concentration limit) vary based on engine

class, engine power rating, lean-burn or rich-burn, fuel type, duty (emergency or non-emergency), and manufacture date. There are three gasoline powered portable washers at the facility, but these units qualify as nonroad engines and are therefore not subject to this subpart.

NESHAP, 40 CFR Part 61

[Not Applicable]

There are no emissions of any of the regulated pollutants: arsenic, asbestos, benzene, beryllium, coke oven emissions, mercury, radionuclides or vinyl chloride.

NESHAP, 40 CFR Part 63 [Subpart ZZZZ, CCCCCC, and WWWWWW Applicable] Subpart N, Chromium Emissions from Hard and Decorative Chromium Electroplating and Chromium Anodizing Tanks. This facility does not conduct chromium electroplating or anodizing.

<u>Subpart T,</u> Halogenated Solvent Cleaning. This subpart applies to each individual batch vapor, inline vapor, in-line cold, and batch cold solvent cleaning machine that uses any solvent containing methylene chloride, perchloroethylene, trichloroethylene, 1,1,1-trichloroethane, carbon tetrachloride, or chloroform, or any combination of these halogenated HAP solvents, in a total concentration greater than 5 percent by weight, as a cleaning and/or drying agent. This facility does not use any solvents containing these halogenated HAP solvents. This subpart is not applicable at this time.

Subpart ZZZZ, Reciprocating Internal Combustion Engines (RICE). This subpart previously affected only RICE with a site rating greater than 500 brake horsepower that were located at a major source of HAP emissions. On January 18, 2008, the EPA published a final rule that promulgates standards for new and reconstructed engines (after June 12, 2006) with a site-rating less than or equal to 500 HP located at major sources, and new and reconstructed engines (after June 12, 2006) located at area sources. Owners and operators of new or reconstructed engines (after June 12, 2006) at area sources, and new or reconstructed engines with a site-rating equal to or less than 500 HP located at a major source (except new or reconstructed 4-stroke, lean-burn engines with a site-rating greater than or equal to 250 HP and less than or equal to 500 HP located at a major source) must meet the requirements of Subpart ZZZZ by complying with either 40 CFR Part 60 Subpart IIII (for CI engines), or 40 CFR Part 60 Subpart JJJJ (for SI engines).

On March 3, 2010, EPA finalized additional requirements for stationary CI RICE located at area sources. A summary of these requirements for the emergency generator engines located at this facility are shown following:

Engine Category	Normal Operation @ 15% O ₂
Existing Emergency CI & Black Start CI	Change oil and filter every 500 hours of operation or annually, whichever one comes first; Inspect air cleaner every 1,000 hours of operation or annually, whichever one comes first; and Inspect all hoses and belts every 500 hours of operation or annually, whichever one comes first and replace as necessary.

Sources have the option to utilize an oil analysis program in order to extend the specified oil change requirements of this subpart. Initial compliance demonstrations must be conducted within 180 days after the compliance date. Owners and operators of a non-operational engine can conduct the performance test when the engine is started up again.

Other applicable requirements include:

- 1) The owner/operator must operate and maintain the stationary RICE and after-treatment control device (if any) according to the manufacturer's emission-related written instructions or develop their own maintenance plan which must provide to the extent practicable for the maintenance and operation of the engine in a manner consistent with good air pollution control practice for minimizing emissions.
- 2) Existing emergency stationary RICE located at an area source of HAP emissions must install a non-resettable hour meter if one is not already installed.
- 3) Fuel is limited to ultra-low sulfur (15 ppm or less).

One of the diesel emergency generator engines (MA-GEN-1) complies with NESHAP ZZZZ by complying with NSPS IIII. The other two diesel emergency generators (MT-GEN-1 & MT-GEN-2) qualify as existing emergency-use units located at an area source and will comply with NESHAP ZZZZ.

<u>Subpart HHHHHH</u>, Paint Stripping and Miscellaneous Surface Coating Operations. This subpart affects area sources involved in any of the following activities:

- 1. Paint stripping operations that involve the use of chemical strippers that contain methylene chloride (MeCl), in paint removal processes;
- 2. Autobody refinishing operations that encompass motor vehicle and mobile equipment spray-applied surface coating operations; and
- 3. Spray application of coatings containing target HAP (compounds of chromium (Cr), lead (Pb),manganese (Mn), nickel (Ni), or cadmium (Cd)), to any part or product made of metal or plastic, or combinations of metal and plastic that are not motor vehicles or mobile equipment.

The wet paint booth is the only coating operation utilizing spray application, and none of the coatings used in this operation contain target HAPs. Therefore, this subpart is not applicable.

<u>Subpart CCCCC</u>, Gasoline Dispensing Facilities. This subpart establishes emission limitations and management practices for HAP emitted from the loading of gasoline storage tanks at gasoline dispensing facilities (GDF) located at an area source. GDF means any stationary facility which dispenses gasoline into the fuel tank of a motor vehicle. The affected source includes each gasoline cargo tank during the delivery of product to a GDF and also includes each storage tank. If a GDF has a monthly throughput of less than 10,000 gallons of gasoline, it must not allow gasoline to be handled in a manner that would result in vapor releases to the atmosphere for extended periods of time. Measures to be taken include, but are not limited to, the following:

- 1) Minimize gasoline spills;
- 2) Clean up spills as expeditiously as practicable;
- 3) Cover all open gasoline containers and all gasoline storage tank fill-pipes with a gasketed seal when not in use;
- 4) Minimize gasoline sent to open waste collection systems that collect and transport gasoline to reclamation and recycling devices, such as oil/water separators.

The facility has one gasoline tank with monthly throughput of less than 10,000 gallons of gasoline that will comply with the appropriate requirements of this subpart.

<u>Subpart JJJJJJ</u>, Industrial, Commercial, and Institutional Boilers at area sources of HAPs. The boilers at this facility burn natural gas, and Subpart JJJJJJ does not affect gas-fired boilers.

<u>Subpart WWWWW</u>, Area Source Standards for Plating and Polishing Operations. This subpart affects plating and polishing area sources that are engaged in one or more of the following processes:

- 1) Electroplating other than chromium electroplating (i.e., non-chromium electroplating);
- 2) Electroless or non-electrolytic plating;
- 3) Other non-electrolytic metal coating processes, such as chromate conversion coating, nickel acetate sealing, sodium dichromate sealing, and manganese phosphate coating; and thermal spraying;
- 4) Dry mechanical polishing of finished metals and formed products after plating;
- 5) Electroforming; and/or
- 6) Electropolishing.

The facility conducts non-electrolytic metal coating processes (chromate conversion coating), and this activity will comply with all applicable process unit management practices.

Subpart XXXXXX, Area Source Standards for 9 Metal Fabrication and Finishing Source Categories. This subpart affects area sources that are primarily engaged in one of the nine source categories listed in this subpart that use materials that contain or have the potential to emit metal fabrication or finishing metal HAP (MFHAP) while performing dry abrasive blasting, machining, dry grinding and polishing, spray painting, or welding. MFHAP means any compound of the following metals: cadmium, chromium, lead, manganese, or nickel, or any of these metals in the elemental form with the exception of lead. A material that contains one or more of the MFHAP cadmium, chromium, lead, or nickel in amounts greater than or equal to 0.1 percent by weight (as the metal), or contains manganese in an amount greater than or equal to 1.0 percent by weight (as the metal) is considered to be a material that contains MFHAP, as shown in formulation data provided by the manufacturer or supplier, such as the Safety Data Sheets for the material. The nine source categories described in Table 1 of this subpart are listed below with their potential SIC/NAICS Codes:

\mathbf{E}	PA Source Category	SIC Description	SIC	NAICS	NAICS Description
	Electrical & Electronic	Motors & Generators Mfg.	3621	335312	Motor & Generator Mfg.
1	Electrical & Electronic Equipment Finishing Ops	Electrical Machinery,	3699	335999	All Other Misc. Electrical
		Equipment, & Supplies, NEC	3099	333999	Equipment & Component Mfg.

E	PA Source Category	SIC Description	SIC	NAICS	NAICS Description
2	Fabricated Metal Products,	Fabricated Metal Products, NEC	3499	332117	Powder Metallurgy Part Mfg.
2	NEC	Fabricated Metal Products, NEC	3499	332999	All Other Miscellaneous Fabricated Metal Product Mfg.
				332313	Plate Work Mfg.
3	Fabricated Plate Work	Fabricated Plate Work &	3443	332410	Power Boiler & Heat Exchanger Mfg.
	(Boiler Shops)	Boiler Shops		332420	Metal Tank (Heavy Gauge) Mfg.
4	Fabricated Structural Metal Mfg.	Fabricated Structural Metal Fabrication	3441	332312	Fabricated Structural Metal Mfg.
5	Heating Equipment, except Electric	Heating Equipment, except electric	3433	333414	Heating Equipment (except Warm Air Furnaces) Mfg.
		Construction Machinery Manufacturing	3531	333120	Construction Machinery Mfg.
6	Industrial Machinery & Equipment: Finishing Ops	Oil & Gas Field Machinery Equipment Mfg.	3533	333132	Oil & Gas Field Machinery and Equipment Mfg.
		Pumps & Pumping Equipment Mfg.	3561	333911	Pump & Pumping Equipment Mfg.
7	Iron & Steel Forging	Iron and Steel Forging	3462	332111	Iron & Steel Forging
8	Primary Metals Products Mfg.	Primary Metals Products Mfg.	3399	332618	Other Fabricated Wire Product Mfg.
9	Valves & Pipe Fittings, NEC	Valves & Pipe Fittings, NEC	3494	332919	Other Metal Valve & Pipe Fitting Mfg.

Applicability is determined by the type of work performed by the facility compared to the source category description in the preambles to the proposed and final rules. The SIC/NAICS codes that are provided in the preamble are not intended to be exhaustive but rather to provide a guide for determining facilities that are likely to be affected. If the facility SIC/NACIS code combination is not identified in the SIC/NAICS table provided as a guide, that facility may likely not be covered by this subpart. The facility SIC/NACIS code combination (3446/332323) is not included in the potentially affected SIC/NACIS codes. Therefore, this subpart does not appear to be applicable to the facility.

SECTION VI. OKLAHOMA AIR POLLUTION CONTROL RULES

OAC 252:100-1 (General Provisions)

[Applicable]

Subchapter 1 includes definitions but there are no regulatory requirements.

OAC 252:100-2 (Incorporation by Reference)

[Applicable]

This subchapter incorporates by reference applicable provisions of Title 40 of the Code of Federal Regulations listed in OAC 252:100, Appendix Q. These requirements are addressed in the "Federal Regulations" section.

OAC 252:100-3 (Air Quality Standards and Increments)

[Applicable]

Subchapter 3 enumerates the primary and secondary ambient air quality standards and the significant deterioration increments. At this time, all of Oklahoma is in "attainment" of these standards.

OAC 252:100-5 (Registration, Emissions Inventory and Annual Operating Fees) [Applicable] Subchapter 5 requires sources of air contaminants to register with Air Quality, file emission inventories annually, and pay annual operating fees based upon total annual emissions of regulated pollutants. Emission inventories were submitted and fees paid for previous years as required.

OAC 252:100-7 (Permits for Minor Facilities)

[Applicable]

Subchapter 7 sets forth the permit application fees and the basic substantive requirements of permits for minor facilities. Since criteria pollutant emissions are less than 100 TPY for each pollutant, and emissions of Hazardous Air Pollutants (HAP) do not exceed 10 TPY for any one HAP or 25 TPY for any aggregate of HAP, the facility is defined as a minor source. As such, BACT is not required.

OAC 252:100-9 (Excess Emissions Reporting Requirements)

[Applicable]

Except as provided in OAC 252:100-9-7(a)(1), the owner or operator of a source of excess emissions shall notify the Director as soon as possible but no later than 4:30 p.m. the following working day of the first occurrence of excess emissions in each excess emission event. No later than thirty (30) calendar days after the start of any excess emission event, the owner or operator of an air contaminant source from which excess emissions have occurred shall submit a report for each excess emission event describing the extent of the event and the actions taken by the owner or operator of the facility in response to this event. Request for mitigation as described in OAC 252:100-9-8, shall be included in the excess emission event report. Additional reporting may be required in the case of ongoing emission events and in the case of excess emissions reporting required by 40 CFR Parts 60, 61, or 63.

OAC 252:100-13 (Open Burning)

[Applicable]

Open burning of refuse and other combustible material is prohibited except as authorized in the specific examples and under the conditions listed in this subchapter.

OAC 252:100-19 (Particulate Matter (PM))

[Applicable]

Section 19-4 regulates emissions of PM from new and existing fuel-burning equipment, with emission limits based on maximum design heat input rating. Appendix C specifies a PM emission limitation of 0.60 lbs/MMBTU for all equipment at this facility with a heat input rating of 10 Million BTU per hour (MMBTUH) or less. Fuel-burning equipment is defined in OAC 252:100-19 as any internal combustion engine or gas turbine, or other combustion device used to convert the combustion of fuel into usable energy. For natural gas sources, Table 1.4-2 of AP-42 (7/98) lists total PM emissions to be 7.6 lbs/million scf or about 0.0076 lbs/MMBTU, which is in compliance. The equipment at this facility, MA-H-1 through MA-H-9, MT-H-1 through MT-H-6, MT-B-1, and WH-H-1 through WH-H-10, is subject to this section. All equipment has a heat input rating of less than 10 MMBTUH and is in compliance with this subpart. For compression ignition diesel fired engines, AP-42 (10/96), Section 3.3, lists the total PM emissions as 0.31 lb/MMBTU (note that the NSPS Subpart IIII emissions standard is lower, at approximately 0.07 lb/MMBTU) which is in compliance. For spark ignition natural gas fired engines, AP-42 (7/00), Section 3.2 for 4-stroke rich-burn engines lists total PM emissions as 0.019 lb/MMBTU, which is in compliance.

<u>Section 19-12</u> limits particulate emissions from new and existing emission points in an industrial process based on process weight rate, as specified in Appendix G. None of the process weight rates from chromate conversion, milling, or wood cutting are significant.

As shown in the following table, all of the emission points are in compliance with Subchapter 19.

Source	Process Rate (TPH)	Appendix G Allowable Emission Limit (lbs/hr)	Potential Emission Rate (lbs/hr)
Primer Powder Coating	0.13	1.02	0.37
Topcoat Powder Coating	0.38	2.13	1.12
Primer E-coating Paste	0.03	0.41	0.03
Primer E-coating Resin	0.13	1.06	0.12
Topcoat E-coating Paste	0.06	0.64	0.05
Topcoat E-coating Resin	0.21	1.42	0.16
Wet Paint Booth	0.05	0.55	0.03
Laser Cutting	1.00	4.10	0.30
Plasma Cutting	0.30	1.83	0.03

OAC 252:100-25 (Visible Emissions and Particulates)

[Applicable]

No discharge of greater than 20% opacity is allowed except for short-term occurrences that consist of not more than one six-minute period in any consecutive 60 minutes, not to exceed three such periods in any consecutive 24 hours. In no case shall the average of any six-minute period exceed 60% opacity. When using natural gas as a fuel, there is very little possibility of exceeding the opacity standards. When using diesel as a fuel, for the compression ignition engines, there is little possibility of exceeding the opacity standards. PM emissions from the other operations conducted throughout the facility are generally controlled by use of dust control systems where needed. The permit will require these controls where needed to comply with this subchapter.

OAC 252:100-29 (Fugitive Dust)

[Applicable]

No person shall cause or permit the discharge of any visible fugitive dust emissions beyond the property line on which the emissions originated in such a manner as to damage or to interfere with the use of adjacent properties, or cause air quality standards to be exceeded, or to interfere with the maintenance of air quality standards. Under normal operating conditions, this facility has negligible potential to violate this requirement; therefore it is not necessary to require specific precautions to be taken.

OAC 252:100-31 (Sulfur Compounds)

[Applicable]

<u>Part 2</u> limits the ambient air concentration of hydrogen sulfide (H2S) emissions from any facility to 0.2 ppmv (24-hour average). Fuel-burning equipment fired with commercial natural gas and ULSD will not have the potential to exceed the H2S ambient air concentration limit.

<u>Part 5</u> limits sulfur dioxide emissions from new fuel-burning equipment (constructed after July 1, 1972). For gaseous fuels the limit is 0.2 lb/MMBTU heat input averaged over 3 hours. For fuel gas having a gross calorific value of 1,000 BTU/SCF, this limit corresponds to fuel sulfur content of 1,203 ppmv. AP-42 (7/98) Section 1.4 and AP-42 (7/00) Section 3.2 lists the total SO2 emissions

for natural gas to be 0.6 lb/MMft3 or about 0.0006 lb/MMBTU. For liquid fuels the limit is 0.8 lb/MMBTU heat input averaged over 3 hours. AP-42 (10/96) Section 3.3 lists SO2 emissions from diesel fired (compression ignition) engines as 0.29 lb/MMBTU. The permit will require the use of commercial-grade natural gas for all fuel-burning equipment, except for the compression ignition engines that are required to be fueled with ultra-low sulfur diesel.

OAC 252:100-33 (Nitrogen Oxides)

[Not Applicable]

This subchapter limits new gas burning equipment with rated heat input greater than or equal to 50 MMBTUH to emissions of 0.20 lbs of NO_x per MMBTU. There are no equipment items that exceed the 50 MMBTUH threshold.

OAC 252:100-35 (Carbon Monoxide)

[Not Applicable]

This subchapter affects gray iron cupolas, blast furnaces, basic oxygen furnaces, petroleum catalytic cracking units, and petroleum catalytic reforming units. There are no affected sources.

OAC 252:100-37 (Volatile Organic Compounds)

[Applicable]

Part 3 concerns the control of volatile organic compounds in storage and loading operations.

Section 37-15(b) requires existing storage tanks in Tulsa or Oklahoma Counties with a capacity of 400 gallons or more to be equipped with a permanent submerged fill pipe or with an organic vapor recovery system. Section 37-4(a) exempts VOCs with vapor pressures less than 1.5 psia under actual storage conditions. The gasoline tank is the only storage tank with a vapor pressure greater than 1.5 psia, but it has a capacity less than 400 gallons.

<u>Part 3</u> also requires loading facilities with a throughput equal to or less than 40,000 gallons per day to be equipped with a system for submerged filling of tank trucks or trailers if the capacity of the vehicle is greater than 200 gallons. This facility does not load vehicles with a capacity greater than 200 gallons. Therefore, this requirement is not applicable.

Part 5 concerns the control of VOCs in coating operations.

<u>Section 37-25</u> requires the owner or operator of any coating line or coating operation with VOC emissions shall use coatings that as applied contain VOCs in excess of the amounts listed in the table. Emissions from the clean-up with VOCs of any article, machine, or equipment used in applying coatings shall be counted in determining compliance with this rule. OAC 252:100-37-25(a), coating type limits are expressed in pounds (lbs) of VOC per gallon of coating-as applied, excluding the volume of any water and exempt organic compounds. Coating operations at Ameristar are subject to the coating limits in OAC 252:100-37-25 (listed below).

Coating Type Limits (As Applied) from OAC 252:100-37-25

Coating Type	Definition	Limitation (lb-VOC/gal)
Alkyd primer	A chemical coating composed primarily of alkyd applied to a surface to provide a firm bond between the substrate and any additional coating	4.8
Vinyl	A chemical coating containing plasticized or unplasticized polymers and co-polymers of vinyl acetate, vinyl chloride, polyvinyl alcohols or their condensation products. The primary mode of cure is solvent evaporation.	6.0

Coating Type	Definition	Limitation (lb-VOC/gal)
Nitrocellulose lacquer (NC lacquer)	A chemical coating containing nitrocellulose and suitable resinous modifiers. The primary mode of cure is solvent evaporation.	6.4
Acrylics	A chemical coating containing polymers or co-polymers of acrylic or substitute acrylic acid in combination with resinous modifiers. The primary mode of cure is solvent evaporation.	6.0
Epoxies	A chemical coating containing epoxy groups and suitable chemical cross-linking agents. The primary mode of cure involves a chemical reaction between the epoxy and the cross-linking agent.	4.8
Maintenance finishes	A chemical coating that protects a given substrate from adverse chemical or physical conditions.	4.8
Custom products finish	A proprietary chemical coating designed for a specific customer and use.	6.5

<u>Section 37-27</u> controls emissions of VOCs from aerospace industry coating operations effective September 15, 2020. Except as noted in OAC 252:100-37-27(a)(2) through (4), this Section applies to existing or new aerospace vehicle and component coating operations at aerospace manufacturing, rework, or repair facilities. Ameristar does not conduct aerospace industry coating operations. This section does not apply.

<u>Part 7</u> requires fuel-burning equipment to be operated and maintained so as to minimize VOC emissions. Temperature and available air must be sufficient to provide essentially complete combustion. All combustion equipment is designed to provide essentially complete combustion of organic materials.

<u>Part 7</u> also requires all effluent water separators openings or floating roofs to be sealed or equipped with an organic vapor recovery system. The effluent water separators located at this facility are not subject since they only handle organic streams with vapor pressures less than 1.5 psia.

OAC 252:100-39 (VOC in Nonattainment & Former Nonattainment Areas) [Applicable] In addition to any application of the requirements contained in 252:100-37, the additional requirements contained in Subchapter 39 shall be required of existing and new facilities located in Tulsa and Oklahoma Counties. The Ameristar facility is located in Tulsa County.

<u>Section 39-41</u> contains requirements for storage, loading, and transport/delivery of VOCs. Subsection 39-41(a) covers storage of VOCs in vessels with a storage capacity greater than 40,000 gallons. This facility does not have any VOC storage vessels with capacity greater than 40,000 gallons. Subsection 39-41(b) covers storage of VOCs in vessels with a storage capacity of 400-40,000 gallons. The gasoline tank is the only storage tank with a vapor pressure greater than 1.5 psia, but it has a capacity less than 400 gallons.

<u>Section 39-42</u> contains requirements for metal cleaning activities in Tulsa and Oklahoma County. Ameristar utilizes a parts cleaner and is required to comply with the cold cleaning requirements. <u>Subsection 42 (a)</u> covers cold solvent cleaning units, noting standards for construction and operation of such equipment. The requirements for cold solvent cleaning units are summarized in the table below.

Summary of Cold Solvent Cleaning Unit Requirements

	Equipment Requirements: An owner or operator of any cold cleaning unit for metal degreasing h uses a VOC shall		
A.	install a cover or door on the facility that can be easily operated with one hand;		
B.	provide an internal drain board that will allow lid closure if practical; if not practical, provide an external drainage facility; and,		
C.	attach a permanent, conspicuous label summarizing the operating requirements specified in 252:100-39-42(a)(2) to the facility.		
(2.)	Operating Requirements: As a minimum operators shall		
A.	drain clean parts at least 15 seconds or until dripping ceases before removal;		
B.	close degreaser cover when not handling parts in cleaner;		
C.	store waste VOC in covered containers;		
D.	not dispose or allow disposition of waste VOC in such a manner that more than 20 percent by weight can evaporate into the atmosphere.		
E.	use a solid fluid stream, not an atomized spray, when VOC is sprayed.		
meas	(3.) Requirements for Controls: If the vapor pressure of the VOC is greater than 0.6 psi (4.1 kPa) measured at 100°F (38°C) or if VOC is heated to 248°F (120°C), the owner or operator shall apply one or more of the following control devices/techniques.		
A.	Freeboard that gives a freeboard ratio greater than or equal to 0.7.		
B.	Water cover where the VOC is insoluble in and denser than water or such equivalent.		
C.	Another system of equivalent control as approved by the Division Director.		

<u>Subsection 42 (b)</u> covers vapor-type metal degreasers, noting standards for construction and operation of such equipment. Paragraph 1 outlines equipment standards including doors and covers in Subparagraph A; safety switches in Subparagraph B; equipment specifications such as freeboard, chillers, etc., in Subparagraph C; and, conspicuous labeling of the equipment in Subparagraph D. Paragraph 2 describes the labeling information required to comply with Subparagraph 1(D). Paragraph 3 lists compliance and recordkeeping criteria. There are no identified vapor degreasers at the facility.

<u>Section 39-46</u> limits the VOC content of coatings used in industries located in Tulsa County which manufacture and/or coat metal parts and products, such as large farm machinery, small farm machinery, small appliances, commercial machinery, industrial machinery and fabricated metal products. Architectural coating, aerospace coating, and automobile refinishing are not included. OAC 252:100-37-25(a), coating type (1-5) limits are expressed in pounds (lbs) of VOC per gallon of coating-as applied, excluding the volume of any water and exempt organic compounds. If more than one limit listed in the table is applicable to a specific coating, then the least stringent limitation shall be applied. Coating operations at Ameristar are subject to the coating limits in OAC 252:100-37-25 (listed below).

Coating Type Limits (As Applied) from OAC 252:100-39

Coating Type	Definition	Limitation (lb-VOC/gal)
Air or Forced Air Dry	A coating that are dried by the use of air or forced warm air at temperatures up to 194 F.	3.5

Coating Type	Definition	Limitation (lb-VOC/gal)
Clear Coat	A coating that lacks color and opacity or is transparent and uses the undercoat as a reflectant base.	4.3
Extreme Performance	A coatings designed for harsh exposure or extreme environmental conditions (e.g., exposure to the weather all of the time, temperature above 200°F, detergents, abrasive and scouring agents, solvents, corrosive atmosphere or similar conditions).	3.5
Powder	A coating that is applied in a finely divided state by various methods, and becomes a continuous, solid film when the metal part or product is moved to an oven for curing.	0.40
Other	All other coatings	3.0

OAC 252:100-42 (Toxic Air Contaminants (TAC))

[Applicable]

This subchapter regulates toxic air contaminants (TAC) that are emitted into the ambient air in areas of concern (AOC). Any work practice, material substitution, or control equipment required by the Department prior to June 11, 2004, to control a TAC, shall be retained, unless a modification is approved by the Director. Since no AOC has been designated there are no specific requirements for this facility at this time.

OAC 252:100-43 (Testing, Monitoring, and Recordkeeping)

[Applicable]

This subchapter provides general requirements for testing, monitoring and recordkeeping and applies to any testing, monitoring or recordkeeping activity conducted at any stationary source. To determine compliance with emissions limitations or standards, the Air Quality Director may require the owner or operator of any source in the state of Oklahoma to install, maintain and operate monitoring equipment or to conduct tests, including stack tests, of the air contaminant source. All required testing must be conducted by methods approved by the Air Quality Director and under the direction of qualified personnel. A notice-of-intent to test and a testing protocol shall be submitted to Air Quality at least 30 days prior to any EPA Reference Method stack tests. Emissions and other data required to demonstrate compliance with any federal or state emission limit or standard, or any requirement set forth in a valid permit shall be recorded, maintained, and submitted as required by this subchapter, an applicable rule, or permit requirement. Data from any required testing or monitoring not conducted in accordance with the provisions of this subchapter shall be considered invalid. Nothing shall preclude the use, including the exclusive use, of any credible evidence or information relevant to whether a source would have been in compliance with applicable requirements if the appropriate performance or compliance test or procedure had been performed.

SECTION VII. COMPLIANCE

Inspection

Due to the pandemic, no inspection is conducted at this time.

Enforcement Case

There is no active enforcement case for this facility.

Tier Classification

This application has been determined to be **Tier I** based on the request for modification of an existing minor operating permit that was issued prior to September 15, 2021, and that will now become a FESOP.

The draft permit had undergone public notice on the DEQ's web site as required in OAC 252:4-7-13(g). The public, tribal governments, and the EPA had 30 days to comment on the draft permit. Permits available for public review and comment are found in the Air Quality section of the DEQ Web page: www.deq.ok.gov. During public review, facility commented that there is a mistake in the memorandum regarding the NOx emissions emitted in the laser cutting instead of plasma cutting. The mistake is corrected by switching the NOx emissions to laser cutting, and the NOx emissions calculations remain the same. In addition to the change in the memorandum, a specific condition to limit NOx emissions is added, and the permit draft will go to another round of 30-day public review.

Landowner Affidavit

The applicant has submitted an affidavit that they are not seeking a permit for land use or for any operation upon land owned by others without their knowledge. The affidavit certifies that the applicant owns the real property.

Fees Paid

A minor source construction permit fee of \$2,000 and a minor source operating permit fee of \$750 for the installation and operation of an emergency generator has been paid.

SECTION VIII. SUMMARY

The facility is operating as described in the permit application. Enforcement Case 10131 was opened in response to a self-disclosure (submitted by the facility) for the failure to submit an application for a synthetic minor construction permit to install an emergency generator. The facility has since then submitted all appropriate application forms and fees due. Issuance of the operating permit is recommended, contingent on public review.

PERMIT TO OPERATE AIR POLLUTION CONTROL FACILITY SPECIFIC CONDITIONS

Ameristar Perimeter Security USA Inc. Ornamental Steel Fencing Manufacturing Facility

Permit No. 99-035-O (M-4)

The permittee is authorized to operate in conformity with the specifications submitted to Air Quality on April 30, 2021, and subsequent information received thereafter. The Evaluation Memorandum dated June 21, 2022, explains the derivation of applicable permit requirements and estimates of emissions; however, it does not contain operating limitations or permit requirements. Continuing operation under this permit constitutes acceptance of, and consent to, the conditions contained herein.

1. Points of emissions and emission limitations for each point:

a. Coating Operations

Pollutants	Emissions TPY ¹
VOC	85.00
PM_{10}	2.00
Total HAP	9.99

¹ monthly, 12-month rolling total

- i.) Compliance with the annual emission cap on VOC, PM₁₀, and HAP emissions for the coating operations shall be demonstrated on a monthly, 12-month rolling total basis. Each month, the facility shall record the total volume of each coatings, thinners, and solvents used (alternatively inventory and/or purchasing records may be used for this record), assuming 100% volatilization of the VOC maximum percentage of the component from the safety data sheets (alternatively the manufacture or supplier provided specific component percentages can be used if records are retained), and shall calculate emissions of VOC and HAP for that month, which shall then be added to the rolling 12-month total. For PM₁₀, each month the facility shall record the volume of each coatings used (alternatively inventory and/or purchasing records may be used for this record) and shall calculate emissions of PM₁₀ for that month, which shall then be added to the 12-month rolling total.
- ii.) The VOC content of coatings as applied, less water and exempt solvents, shall not exceed the following limits and shall include all solvents used to cleanup any article, machine, or equipment used in applying coatings. VOC emissions from clean-up solvents may be determined as the difference between the amounts used minus the amounts recovered for disposal. VOC emissions from cleanup solvents shall be included when determining compliance with the limitations of VOC per gallon of coating less water and exempt solvents, unless those solvents are recycled into the

system or disposed of in such a manner that would prevent their evaporation into the atmosphere.

Coating	lbs/gal
Alkyd Primers	4.8
Epoxies	4.8
Maintenance Finishes	4.8
Vinyls	6.0
Acrylics	6.0
NC lacquers	6.4
Custom Product Finishes	6.5

iii.) The VOC content of coatings as applied, less water and exempt solvents, shall not exceed the following limits:

Coating Type	VOC Content Limitations	
Coating Type	lb/gal	
Air or Forced Air Dry	3.5	
Clear Coat	4.3	
Extreme Performance	3.5	
Powder	0.4	
Other	3.0	

- iv.) Paint spraying equipment shall be cleaned with solvents being drained into a closed container.
- v.) The permittee shall maintain paint spray guns in good working order so as to minimize paint overspray during operations.
- vi.) Paint spray booths shall be equipped with filters for control of overspray. Spray booths and filter systems shall be maintained per manufacturers' recommendations.
- vii.) Facility shall keep a copy of the up-to-date manufacturing specifications for each control device which should specify the acceptable pressure differential range required for proper operation, or the minimum frequency of filter replacement recommended by the manufacturer.
- viii.) Facility shall record daily pressure differential of the PM filter for coating operations when operating.
- ix.) The listed areas shall be controlled by the following PM control devices maintaining the minimum control efficiencies shown. Records demonstrating proper operation and maintenance shall be maintained. Pressure drop readings shall be recorded at least once during any day that the booth is used.

Control Device/Area	Efficiency	Operating Parameters, inches water gauge
Wet Paint Booth Filter	95.0%	0.22 for AFT filter

b. Parts Cleaner (Cold Cleaning Metal Degreaser)

DII	VOC	
EU	TPY	
PC-1	6.70	

Solvent Name	Maximum Usage	Density	VOC Content	HAP Content
Solvent Name	gal/year	lb/gal	lb/gal	%, wt.
Safety Clean	2,000	6.7	6.7	0.01

- i.) An owner or operator of any cold cleaning unit for metal degreasing which uses a VOC shall comply the following requirements of OAC 252:100-39-42(a).
- **(1.) Equipment Requirements:** An owner or operator of any cold cleaning unit for metal degreasing which uses a VOC shall
- A. install a cover or door on the facility that can be easily operated with one hand;
- B. provide an internal drain board that will allow lid closure if practical; if not practical, provide an external drainage facility; and,
- C. attach a permanent, conspicuous label summarizing the operating requirements specified in 252:100-39-42(a)(2) to the facility.
- (2.) Operating Requirements: As a minimum operators shall
- A. drain clean parts at least 15 seconds or until dripping ceases before removal;
- B. close degreaser cover when not handling parts in cleaner;
- C. | store waste VOC in covered containers;
- D. not dispose or allow disposition of waste VOC in such a manner that more than 20 percent by weight can evaporate into the atmosphere.
- E. use a solid fluid stream, not an atomized spray, when VOC is sprayed.
- (3.) Requirements for Controls: If the vapor pressure of the VOC is greater than 0.6 psi (4.1 kPa) measured at 100°F (38°C) or if VOC is heated to 248°F (120°C), the owner or operator shall apply one or more of the following control devices/techniques.
- A. Freeboard that gives a freeboard ratio greater than or equal to 0.7.
- B. Water cover where the VOC is insoluble in and denser than water or such equivalent.
- C. Another system of equivalent control as approved by the Division Director.

c. Natural Gas Fired Heaters/Boilers/Ovens

EU	Equipment Type	Size / Rating (MMBTUH)	Commenced Construction
MA-H-1	Clean Line Stage 1 Burner (Main)	3.50	1992

EU	Equipment Type	Size / Rating (MMBTUH)	Commenced Construction
MA-H-2	Dry Off Oven (Main)	3.20	1992
MA-H-3	Epoxy Cure Oven (Main)	4.60	1992
MA-H-4	Topcoat Infrared Oven (Main)	3.20	1992
MA-H-5	Topcoat Convection Oven (Main)	3.00	1992
MA-H-6	Stand Alone Burn-Off Oven 1 (Main)	0.39	1992
MA-H-7	Stand Alone Burn-Off Oven 2 (Main)	0.56	1992
MA-H-8	Stand Alone Burn-Off Oven 3 (Main)	0.80	1992
MA-H-9	Space Heaters - x55 (Main)	8.36	1992
MT-H-1	Primer Oven 1 (Mont)	1.50	2005
MT-H-2	Primer Oven 2 (Mont)	8.50	2005
MT-H-3	Topcoat Oven 1 (Mont)	1.50	2005
MT-H-4	Topcoat Oven 2 (Mont)	8.50	2005
MT-H-5	Make-up Air Units - x6 (Mont)	6.00	2005
MT-H-6	Space Heaters - x24 (Mont)	8.40	2005
MT-B-1	Boiler (Mont)	7.50	2005
WH-H-1	Clean Line Stage 1 Burner (Ware)	2.50	2017
WH-H-2	Clean Line Stage 2 Burner (Ware)	2.50	2017
WH-H-3	Dry-Off Oven Burner 1 (Ware)	2.00	2017
WH-H-4	Dry-Off Oven Burner 2 (Ware)	2.00	2017
WH-H-5	Primer Oven (Ware)	5.00	2017
WH-H-6	Topcoat Black Oven Burner 1 (Ware)	3.50	2017
WH-H-7	Topcoat Black Oven Burner 2 (Ware)	3.50	2017
WH-H-8	Topcoat Color Oven Burner 1 (Ware)	3.50	2017
WH-H-9	Topcoat Color Oven Burner 2 (Ware)	3.50	2017
WH-H-10	Space Heaters - x29 (Ware)	9.39	2017

Emission Limits

EU	NO _X		СО	
EU	lb/hr	TPY	lb/hr	TPY
MA-H-1	0.34	1.50	0.29	1.26
MA-H-2	0.31	1.37	0.26	1.15
MA-H-3	0.45	1.98	0.38	1.66
MA-H-4	0.31	1.37	0.26	1.15
MA-H-5	0.29	1.29	0.25	1.08
MA-H-6	0.04	0.17	0.03	0.14
MA-H-7	0.05	0.24	0.05	0.20
MA-H-8	0.08	0.34	0.07	0.29
MA-H-9	0.82	3.59	0.69	3.02
MT-H-1	0.15	0.64	0.12	0.54
MT-H-2	0.83	3.65	1.47	6.44

EU	NO _X		CO	
EU	lb/hr	TPY	lb/hr	TPY
MT-H-3	0.15	0.64	0.12	0.54
MT-H-4	0.83	3.65	2.46	10.77
MT-H-5	0.59	2.58	0.49	2.16
MT-H-6	0.82	3.61	0.69	3.03
MT-B-1	0.74	3.22	0.62	2.71
WH-H-1	0.25	1.07	0.21	0.90
WH-H-2	0.25	1.07	0.21	0.90
WH-H-3	0.20	0.86	0.16	0.72
WH-H-4	0.20	0.86	0.16	0.72
WH-H-5	0.49	2.15	0.41	1.80
WH-H-6	0.34	1.50	0.29	1.26
WH-H-7	0.34	1.50	0.29	1.26
WH-H-8	0.34	1.50	0.29	1.26
WH-H-9	0.34	1.50	0.29	1.26
WH-H-10	0.92	4.03	0.77	3.39

- i.) The fuel-burning equipment shall be fired with pipeline grade natural gas. Compliance can be shown by a current gas company bill; for other gaseous fuel, a current lab analysis, stain-tube analysis, gas contract, tariff sheet, and other approved methods. Compliance shall be demonstrated at least once annually.
- ii.) For purposes of annual emission inventory submittals, the permittee shall calculate carbon monoxide emissions using the emission test data from October 10, 2006 for MT-H-2 and MT-H-4.

d. Chrome Conversion Coating

i.) Facility shall maintain records of the surface area (ft²) of the chrome conversion coating tank.

e. Emergency Engine(s)

ID#	Equipment Type	Size / Rating	Commenced Construction
MA-GEN-1	Emergency Generator (Main) (s/n JGNXB08.02NN)	128-Hp	9/1/2018
MT-GEN-1	Emergency Generator 1 (Mont) (s/n 99A00856-S)	89-Hp	2/1/1999
MT-GEN-2	Emergency Generator 2 (Mont) (s/n GTA8)	240-Нр	10/1/2004

i.) All emergency engines shall be fueled with diesel fuel containing a maximum sulfur content of 15 ppm by weight. Compliance shall be demonstrated by fuel delivery tickets. Compliance shall be demonstrated at least once every calendar year.

- ii.) Operation of each emergency engine shall not exceed 500 hours per calendar year.
- iii.) Each emergency engine shall be equipped with a non-resettable hour meter.
- iv.) Each emergency engine shall have a permanent identification plate attached, which shows the make, model number, and serial number.

f. Gasoline Tank

Parameter	GAS TK-1
Working/Breathing Emissions, VOC TPY	0.14
Working/Breathing Emissions, HAP TPY	0.01

i.) Compliance with the annual emission limit shall be demonstrated by not exceeding a gasoline throughput shall be limited to 3,300 gpy (monthly, 12- month rolling total).

g. Plasma and Laser Cutting

- i.) Emissions of PM from the plasma cutting operation shall be captured and emissions routed to a dust collector with a minimum control efficiency of 90%. All capture and control devices shall be operated and maintained according to the manufacturer's specifications and operating instructions.
- ii.) Emissions of PM from the laser cutting operation shall be captured and emissions routed to a dust collector with a minimum control efficiency of 99%. All capture and control devices shall be operated and maintained according to the manufacturer's specifications and operating instructions.
- iii.) NO_X emissions from the laser cutting operation shall be limited to 11.46 TPY. Facility shall keep records of the number of laser-cutting equipment and hours of operation to demonstrate compliance with this limit. The NO_X emission shall be calculated using methodology listed in the memorandum, which shows one laser-cutting equipment's PTE is 3.82 TPY of NO_X under continuous operation.
- iv.) Facility shall keep a copy of the up-to-date manufacturing specifications for each control device which should specify the acceptable pressure differential range required for proper operation, or the minimum frequency of filter replacement recommended by the manufacturer.
- v.) Permittee shall monitor and record the pressure differential across each filter once per day when operating and keep records of filter replacement (to include the date of replacement) occurring at a minimum by the frequency recommended by the manufacture.
- 2. The owner/operator shall comply with all applicable requirements of NESHAP Subpart ZZZZ and shall comply with all sections including, but not necessarily restricted to, the following.

- a. §63.6580 What is the purpose of subpart ZZZZ?
- b. §63.6585 Am I subject to this subpart?
- c. §63.6590 What parts of my plant does this subpart cover?
- d. §63.6595 When do I have to comply with this subpart?
- e. §63.6600 What emission limitations must I meet if I own or operate a stationary RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions?
- f. §63.6601 What emission limitations must I meet if I own or operate a new or reconstructed 4SLB with a site rating of greater or equal to 250 brake HP and less than or equal to 500 brake HP located at a major source of HAP emissions?
- g. §63.6602 What emission limitations must I meet if I own or operate an existing stationary RICE with a site rating of equal or less than 500 brake HP located at an area source of HAP emissions?
- h. §63.6603 What emission limitations and operating limitations must I meet if I own or operate an existing stationary RICE located at an area source of HAP emissions?
- i. §63.6604 What fuel requirements must I meet if I own or operate a stationary CI RICE?
- j. §63.6605 What are my general requirements for complying with this subpart?
- k. §63.6610 By what date must I conduct the initial performance tests or other initial compliance demonstrations if I own or operating a stationary RICE with a site rating of more than 500 brake HP located at an area source of HAP emissions?
- 1. §63.6611 By wat date must I conduct the initial performance tests or other initial compliance demonstration if I own or operate an existing stationary RICE with a site rating of less than or equal to 500 brake HP located at a major source of HAP emissions?
- m. §63.6612 By wat date must I conduct the initial performance tests or other initial compliance demonstration if I own or operate a new or reconstructed 4SLB SI stationary RICE with a site rating of greater than or equal to 250 and less than or equal to 500 brake HP located at a major source of HAP emissions?
- n. §63.6615 When must I conduct subsequent performance tests?
- o. §63.6620 What performance tests and other procedures must I use?
- p. §63.6625 What are my monitoring, installation, operation, and maintenance requirements?
- q. §63.6630 How do I demonstrate initial compliance with the emission limitations and operating limitations?
- r. §63.6635 How do I monitor and collect data to demonstrate continuous compliance?
- s. §63.6640 How do I demonstrate continuous compliance with the emission limitations and operating limitations?
- t. §63.6645 What notifications must I submit and when?
- u. §63.6650 What reports must I submit and when?
- v. §63.6655 What records must I keep?
- w. §63.6660 In what form and how long must I keep my records?
- x. §63.6665 What parts of the General Provisions apply to me?
- y. §63.6670 Who implements and enforces this subpart?

- 3. This facility is subject to NESHAP Subpart CCCCCC and shall comply with all applicable requirements as listed below.
 - a. §63.11110 What is the purpose of this subpart?
 - b. §63.11111 Am I subject to the requirements in this subpart?
 - c. §63.11112 What parts of my affected source does this subpart cover?
 - d. §63.11113 When do I have to comply with this subpart
 - e. §63.11115 What are my general duties to minimize emissions?
 - f. §63.11116 Requirements for facilities with monthly throughput of less than 10,000 gallons of gasoline.
 - g. §63.11117 Requirements for facilities with monthly throughput of 10,000 gallons of gasoline or more.
 - h. §63.11118 Requirements for facilities with monthly throughput of 100,000 gallons of gasoline or more.
 - i. §63.11120 What testing and monitoring requirements must I meet?
 - j. §63.11124 What notifications must I submit and when?
 - k. §63.11125 What are my recordkeeping requirements?
 - 1. §63.11126 What are my reporting requirements?
 - m. §63.11130 What parts of the General Provisions apply to me?
 - n. §63.11131 Who implements and enforces this subpart?
 - o. §63.11132 What definitions apply to this subpart?
- 4. The facility is subject to NESHAP Subpart WWWWWW and shall comply with all applicable sections including, but not necessarily restricted to, the following.
 - a. §63.11504 Am I subject to this subpart?
 - b. §63.11505 What parts of my plant does this subpart cover?
 - c. §63.11506 What are my compliance dates?
 - d. §63.11507 What are my standards and management practices?
 - e. §63.11508 What are my compliance requirements?
 - f. §63.11509 What are my notification, reporting, and recordkeeping requirements?
 - g. §63.11510 What General Provisions apply to this subpart?
 - h. §63.11511 What definitions apply to this subpart?
 - i. §63.11512 Who implements and enforces this subpart?
- 5. The owner/operator shall comply with all applicable requirements of NSPS Subpart IIII, for each affected compression ignition reciprocating internal combustion engine (RICE) including but not limited to the following.
 - a. §60.4200 Am I subject to this subpart?
 - b. §60.4204 What emission standards must I meet for non-emergency engines if I am an owner or operator of a stationary CI internal combustion engine?
 - c. §60.4205 What emission standards must I meet for emergency engines if I am an owner or operator of a stationary CI internal combustion engine?
 - d. §60.4206 How long must I meet the emission standards if I am an owner or operator of a stationary CI internal combustion engine?

- e. §60.4207 What fuel requirements must I meet if I am an owner or operator of a stationary CI internal combustion engine subject to this subpart?
- f. §60.4208 What is the deadline for importing and installing stationary CI ICE produced in the previous model year?
- g. §60.4209 What are the monitoring requirements if I am an owner or operator of a stationary CI internal combustion engine?
- h. §60.4211 What are my compliance requirements if I am an owner or operator of a stationary CI internal combustion engine?
- i. §60.4212 What test methods and other procedures must I use if I am an owner or operator of a stationary CI internal combustion engine with a displacement of less than 30 liters per cylinder?
- j. §60.4214 What are my notification, reporting, and recordkeeping requirements if I am an owner or operator of a stationary CI internal combustion engine?
- k. §60.4218 What parts of the General Provisions apply to me?
- 1. §60.4219 What definitions apply to this subpart?
- 6. The permittee shall keep and maintain the following records. These records shall be retained on-site for a period of at least five years following the dates of recording and shall be made available to regulatory personnel upon request.
 - a. Usage of coatings, thinners, and solvents by type and volume (monthly and 12-month rolling total).
 - b. Material Safety Data Sheets (MSDS) for all products used, which document the VOC content and HAP content of each product.
 - c. Total emissions of all VOCs, PM₁₀, and HAPs (monthly and 12-month rolling total) for coating operation per Specific Condition 1(a)(i).
 - d. Records for determining compliance with OAC 252:100-37-25.
 - e. Records for determining compliance with OAC 252:100-39-46.
 - f. Amount of collected cleaning solvent or wastes for disposal (monthly and 12-month rolling total).
 - g. Records demonstrating compliance with OAC 252:100-39-42(a).
 - h. Inspection and maintenance of all air pollution control devices (daily when operating).
 - i. Records of the acceptable limit(s) of pressure drop certified by the manufacturer for each dry particulate control system; records of the acceptable frequency of filter changes as recommend by the manufacture for each dry particulate control system. The document should be directly from the filter or booth manufacturer.
 - j. Total natural gas fuel usage (monthly, 12-month rolling total) per Specific Condition No. 1 (c)(i).
 - k. Records of the surface area (ft²) of the chrome conversion coating tank.
 - 1. Records of the gasoline throughput (monthly and 12-month rolling total).
 - m. Records of number of laser-cutting equipment and operating hours per Specific Condition No. 1(g)(iii).
 - n. Records required by 40 CFR Part 60, Subpart IIII.
 - o. Records required by 40 CFR Part 63, Subpart ZZZZ.
 - p. Records required by 40 CFR Part 63, Subpart CCCCCC.

- q. Records required by 40 CFR Part 63, Subpart WWWWWW.
- 7. The permittee shall be authorized to operate the facility continuously (24-hours per day, every day of the week).
- 8. This permit supersedes all previous Air Quality permits for this facility, which are now cancelled.

MINOR SOURCE PERMIT TO OPERATE / CONSTRUCT AIR POLLUTION CONTROL FACILITY STANDARD CONDITIONS

(February 13, 2020)

- A. The issuing Authority for the permit is the Air Quality Division (AQD) of the Oklahoma Department of Environmental Quality (DEQ) in accordance with and under the authority of the Oklahoma Clean Air Act. The permit does not relieve the holder of the obligation to comply with other applicable federal, state, or local statutes, regulations, rules, or ordinances. This specifically includes compliance with the rules of the other Divisions of DEQ: Land Protection Division and Water Quality Division.
- B. A duly issued construction permit or authorization to construct or modify will terminate and become null and void (unless extended as provided in OAC 252:100-7-15(g)) if the construction is not commenced within 18 months after the date the permit or authorization was issued, or if work is suspended for more than 18 months after it is commenced. [OAC 252:100-7-15(f)]
- C. The recipient of a construction permit shall apply for a permit to operate (or modified operating permit) within 180 days following the first day of operation. [OAC 252:100-7-18(a)]
- D. Unless specified otherwise, the term of an operating permit shall be unlimited.
- E. Notification to the Air Quality Division of DEQ of the sale or transfer of ownership of this facility is required and shall be made in writing by the transferor within 30 days after such date. A new permit is not required.

 [OAC 252:100-7-2(f)]
- F. The following limitations apply to the facility unless covered in the Specific Conditions:
- 1. No person shall cause or permit the discharge of emissions such that National Ambient Air Quality Standards (NAAQS) are exceeded on land outside the permitted facility.

[OAC 252:100-3]

- 2. All facilities that emit air contaminants are required to file an emission inventory and pay annual operating fees based on the inventory. Instructions are available on the Air Quality section of the DEQ web page. www.deq.ok.gov [OAC 252:100-5]
- 3. Deviations that result in emissions exceeding those allowed in this permit shall be reported consistent with the requirements of OAC 252:100-9, Excess Emission Reporting Requirements. [OAC 252:100-9]
- 4. Open burning of refuse and other combustible material is prohibited except as authorized in the specific examples and under the conditions listed in the Open Burning subchapter.

[OAC 252:100-13]

- 5. No particulate emissions from new fuel-burning equipment with a rated heat input of 10 MMBTUH or less shall exceed 0.6 lbs/MMBTU. [OAC 252:100-19]
- 6. No discharge of greater than 20% opacity is allowed except for short-term occurrences which consist of not more than one six-minute period in any consecutive 60 minutes, not to exceed three such periods in any consecutive 24 hours. In no case shall the average of any six-minute period exceed 60% opacity.

 [OAC 252:100-25]
- 7. No visible fugitive dust emissions shall be discharged beyond the property line on which the emissions originate in such a manner as to damage or to interfere with the use of adjacent

- properties, or cause air quality standards to be exceeded, or interfere with the maintenance of air quality standards. [OAC 252:100-29]
- 8. No sulfur oxide emissions from new gas-fired fuel-burning equipment shall exceed 0.2 lbs/MMBTU. No existing source shall exceed the listed ambient air standards for sulfur dioxide.

 [OAC 252:100-31]
- 9. Volatile Organic Compound (VOC) storage tanks built after December 28, 1974, and with a capacity of 400 gallons or more storing a liquid with a vapor pressure of 1.5 psia or greater under actual conditions shall be equipped with a permanent submerged fill pipe or with an organic material vapor-recovery system. [OAC 252:100-37-15(b)]
- 10. All fuel-burning equipment shall at all times be properly operated and maintained in a manner that will minimize emissions of VOCs. [OAC 252:100-37-36]
- G. Any owner or operator subject to provisions of NSPS shall provide written notification as follows: [40 CFR 60.7 (a)]
- 1. A notification of the date construction (or reconstruction as defined under §60.15) of an affected facility is commenced postmarked no later than 30 days after such date. This requirement shall not apply in the case of mass-produced facilities which are purchased in completed form.
- 2. A notification of any physical or operational change to an existing facility which may increase the emission rate of any air pollutant to which a standard applies, unless that change is specifically exempted under an applicable subpart or in §60.14(e). This notice shall be postmarked 60 days or as soon as practicable before the change is commenced and shall include information describing the precise nature of the change, present and proposed emission control systems, productive capacity of the facility before and after the change, and the expected completion date of the change. The Administrator may request additional relevant information subsequent to this notice.
- 3. A notification of the actual date of initial start-up of an affected facility postmarked within 15 days after such date.
- 4. If a continuous emission monitoring system is included in the construction, a notification of the date upon which the test demonstrating the system performance will commence, along with a pretest plan, postmarked no less than 30 days prior to such a date.
- H. Any owner or operator subject to provisions of NSPS shall maintain records of the occurrence and duration of any start-up, shutdown, or malfunction in the operation of an affected facility or any malfunction of the air pollution control equipment. [40 CFR 60.7 (b)]
- I. Any owner or operator subject to the provisions of NSPS shall maintain a file of all measurements and other information required by this subpart recorded in a permanent file suitable for inspection. This file shall be retained for at least five years following the date of such measurements, maintenance, and records.

 [40 CFR 60.7 (f)]
- J. Any owner or operator subject to the provisions of NSPS shall conduct performance test(s) and furnish to AQD a written report of the results of such test(s). Test(s) shall be conducted within 60 days after achieving the maximum production rate at which the facility will be operated, but not later than 180 days after initial start-up. [40 CFR 60.8]



Ameristar Perimeter Security USA, Inc.

Attn.: Kristin Ruyle 1555 N. Mingo Rd. Tulsa, OK 74116

SUBJECT: Evaluation of Permit Application No. 99-035-O (M-4)

Ameristar Perimeter Security USA Inc.

Ornamental Steel Fencing Manufacturing Facility (SIC 3446/NAICS 332323)

Facility ID: 3686

Latitude: 36.17800, Longitude: -95.86900

Physical Address: 1555 North Mingo, Tulsa, OK 74116

Dear Ms. Ruyle:

Enclosed is the permit authorizing operation at the referenced facility. Please note that this permit is issued subject to standard and specific conditions, which are attached. These conditions must be carefully followed since they define the limits of the permit and will be confirmed by periodic inspections.

Also note that you are required to annually submit an emission inventory for this facility. An emission inventory must be completed through DEQ's electronic reporting system by April 1st of every year. Any questions concerning the form or submittal process should be referred to the Emission Inventory Staff at (405) 702-4100.

Thank you for your cooperation. If you have any questions, please refer to the permit number above and contact the permit writer, Jennie Doan, at jennie.doan@deq.ok.gov, or at (918) 293-1615.

Sincerely,

DRAFT

Lee Warden, P.E.
Permit and Engineering Group Manager
AIR QUALITY DIVISION

Enclosure



Cherokee Nation

Attn.: Chuck Hoskin, Jr., Principal Chief

P.O. Box 948

Tahlequah, OK 74465

Re: Permit Application No. **99-035-O** (**M-4**)

Ameristar Perimeter Security USA, Inc. (Fac. ID: 3686) Section 30, Township 20N, Range 14E, Tulsa County

Dear Mr. Hoskin:

The Oklahoma Department of Environmental Quality (ODEQ), Air Quality Division (AQD), has received the Tier I application referenced above. A Tier I application requires AQD to provide a 30-day public comment period on the draft Tier I permit on the ODEQ website. Since the proposed project falls within your Tribal jurisdiction, AQD is providing this direct notice. This letter notification is in addition to email notifications provided to tribal contacts on record.

Copies of draft permits and comment opportunities are provided to the public on the ODEQ website at the following location: https://www.deq.ok.gov/permits-for-public-review/

If you prefer a copy of the draft permit, or direct notification by letter for any remaining public comment opportunities, if applicable, on the referenced permit action, please notify our Chief Engineer, Phillip Fielder, by e-mail at phillip.fielder@deq.ok.gov, or by letter at:

Department of Environmental Quality, Air Quality Division

Attn: Phillip Fielder, Chief Engineer

P.O. Box 1677

Oklahoma City, OK, 73101-1677

Thank you for your cooperation. If you have any questions, I can be contacted at (405) 702-4237, and Mr. Fielder may be reached at (405) 702-4185.

Sincerely,

Lee Warden, P.E.

Permits and Engineering Group Manager

AIR QUALITY DIVISION



Muscogee Creek Nation

Attn.: David Hill, Principal Chief

P.O. Box 580

Okmulgee, OK 74447

Re: Permit Application No. 99-035-O (M-4)

Ameristar Perimeter Security USA, Inc. (Fac. ID: 3686) Section 30, Township 20N, Range 14E, Tulsa County

Dear Mr. Hill:

The Oklahoma Department of Environmental Quality (ODEQ), Air Quality Division (AQD), has received the Tier I application referenced above. A Tier I application requires AQD to provide a 30-day public comment period on the draft Tier I permit on the ODEQ website. Since the proposed project falls within your Tribal jurisdiction, AQD is providing this direct notice. This letter notification is in addition to email notifications provided to tribal contacts on record.

Copies of draft permits and comment opportunities are provided to the public on the ODEQ website at the following location: https://www.deq.ok.gov/permits-for-public-review/

If you prefer a copy of the draft permit, or direct notification by letter for any remaining public comment opportunities, if applicable, on the referenced permit action, please notify our Chief Engineer, Phillip Fielder, by e-mail at phillip.fielder@deq.ok.gov, or by letter at:

Department of Environmental Quality, Air Quality Division

Attn: Phillip Fielder, Chief Engineer

P.O. Box 1677

Oklahoma City, OK, 73101-1677

Thank you for your cooperation. If you have any questions, I can be contacted at (405) 702-4237, and Mr. Fielder may be reached at (405) 702-4185.

Sincerely,

Lee Warden, P.E.

Permits and Engineering Group Manager

AIR QUALITY DIVISION



PERMIT

AIR QUALITY DIVISION
STATE OF OKLAHOMA
DEPARTMENT OF ENVIRONMENTAL QUALITY
707 N. ROBINSON, SUITE 4100
P.O. BOX 1677
OKLAHOMA CITY, OKLAHOMA 73101-1677

FESOP No. 99-035-O (M-4)

Ameristar Perimeter Security USA Inc.,_

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DRAFT	
specific conditions, both attached.	
Tulsa County, Oklahoma, subject to standard conditions date	ted February 13, 2020, and
a Metal Enclosure Fencing Products Fabrication Facility at 15	555 North Mingo Rd., Tulsa,
having complied with the requirements of the law, is hereby gr	ranted permission to operate

Permits and Engineering Group Manager

Department of Environmental Quality (DEQ) Air Quality Division (AQD) Acronym List 9-10-21

ACFM AD AFRC API ASTM	Actual Cubic Feet per Minute Applicability Determination Air-to-Fuel Ratio Controller American Petroleum Institute American Society for Testing and Materials	GAL GDF GEP GHG GR	Gallon (gal) Gasoline Dispensing Facility Good Engineering Practice Greenhouse Gases Grain(s) (gr)
BACT BAE BBL BHP BTU	Best Available Control Technology Baseline Actual Emissions Barrel(s) Brake Horsepower (bhp) British thermal unit (Btu)	H ₂ CO H ₂ S HAP HC HCFC HFR HON	Formaldehyde Hydrogen Sulfide Hazardous Air Pollutants Hydrocarbon Hydrochlorofluorocarbon Horizontal Fixed Roof Hazardous Organic NESHAP
C&E CAA	Compliance and Enforcement Clean Air Act Compliance Assurance Manitoring	HP HR	Horsepower (hp) Hour (hr)
CAM CAS CAAA CC CCR	Compliance Assurance Monitoring Chemical Abstract Service Clean Air Act Amendments Catalytic Converter Continuous Catalyst Regeneration	I&M IBR ICE	Inspection and Maintenance Incorporation by Reference Internal Combustion Engine
CD CEM CFC CFR	Consent Decree Continuous Emission Monitor Chlorofluorocarbon Code of Federal Regulations	LAER LB LB/HR LDAR	Lowest Achievable Emission Rate Pound(s) [Mass] (lb, lbs, lbm) Pound(s) per Hour (lb/hr) Leak Detection and Repair
CI CNG CO	Compression Ignition Compressed Natural Gas Carbon Monoxide or Consent Order	LNG LT	Liquefied Natural Gas Long Ton(s) (metric)
COA COM	Capable of Accommodating Continuous Opacity Monitor	M MAAC	Thousand (Roman Numeral) Maximum Acceptable Ambient Concentration
D DEF DG DSCF	Day Diesel Exhaust Fluid Demand Growth Dry Standard (At Standard Conditions)	MACT MM	Maximum Achievable Control Technology Prefix used for Million (Thousand- Thousand)
	Dry Standard (At Standard Conditions) Cubic Foot (Feet)	MMBTU MMBTUH	Million British Thermal Units (MMBtu) Million British Thermal Units per Hour
EGU EI EPA ESP EUG EUSGU	Electric Generating Unit Emissions Inventory Environmental Protection Agency Electrostatic Precipitator Emissions Unit Group Electric Utility Steam Generating Unit	MMSCF MMSCFD MSDS MWC MWe	(MMBtu/hr) Million Standard Cubic Feet (MMscf) Million Standard Cubic Feet per Day Material Safety Data Sheet Municipal Waste Combustor Megawatt Electrical
FCE FCCU FESOP	Full Compliance Evaluation Fluid Catalytic Cracking Unit Federally Enforceable State Operating	NA NAAQS NAICS	Nonattainment National Ambient Air Quality Standards North American Industry Classification
FIP FR	Permit Federal Implementation Plan Federal Register	NESHAP	System National Emission Standards for Hazardous Air Pollutants
GACT	Generally Achievable Control Technology	NH ₃ NMHC NGL	Ammonia Non-methane Hydrocarbon Natural Gas Liquids

NO_2	Nitrogen Dioxide	SER	Significant Emission Rate
NOx	Nitrogen Oxides	SI	Spark Ignition
NOI	Notice of Intent	SIC	Standard Industrial Classification
NSCR	Non-Selective Catalytic Reduction	SIP	State Implementation Plan
NSPS	New Source Performance Standards	SNCR	Selective Non-Catalytic Reduction
NSR	New Source Review	SO_2	Sulfur Dioxide
		SOx	Sulfur Oxides
O_3	Ozone	SOP	Standard Operating Procedure
O&G	Oil and Gas	SRU	Sulfur Recovery Unit
O&M	Operation and Maintenance	DIC	Buildi Recovery Cint
O&NG	Oil and Natural Gas	T	Tons
OAC	Oklahoma Administrative Code	TAC	Toxic Air Contaminant
OC	Oxidation Catalyst	TEG	Triethylene Glycol
D. 4. T.T.		THC	Total Hydrocarbons
PAH	Polycyclic Aromatic Hydrocarbons	TPY	Tons per Year
PAE	Projected Actual Emissions	TRS	Total Reduced Sulfur
PAL	Plant-wide Applicability Limit	TSP	Total Suspended Particulates
Pb	Lead	TV	Title V of the Federal Clean Air Act
PBR	Permit by Rule		
PCB	Polychlorinated Biphenyls	$\mu g/m^3$	Micrograms per Cubic Meter
PCE	Partial Compliance Evaluation	US EPA	U. S. Environmental Protection Agency
PEA	Portable Emissions Analyzer		
PFAS	Per- and Polyfluoroalkyl Substance	VFR	Vertical Fixed Roof
PM	Particulate Matter	VMT	Vehicle Miles Traveled
$PM_{2.5}$	Particulate Matter with an Aerodynamic	VOC	Volatile Organic Compound
	Diameter <= 2.5 Micrometers	VOL	Volatile Organic Liquid
PM_{10}	Particulate Matter with an Aerodynamic	VRT	Vapor Recovery Tower
	Diameter <= 10 Micrometers	VRU	Vapor Recovery Unit
POM	Particulate Organic Matter or Polycyclic		•
	Organic Matter	YR	Year
ppb	Parts per Billion		
ppm	Parts per Million	2SLB	2-Stroke Lean Burn
ppmv	Parts per Million Volume	4SLB	4-Stroke Lean Burn
ppmvd	Parts per Million Dry Volume	4SRB	4-Stroke Rich Burn
PSD	Prevention of Significant Deterioration		
psi	Pounds per Square Inch		
psia	Pounds per Square Inch Absolute		
psig	Pounds per Square Inch Gage		
Po-8	rounds per square men ouge		
RACT	Reasonably Available Control		
10.10.1	Technology		
RATA	Relative Accuracy Test Audit		
RAP	Regulated Air Pollutant or		
KAI	Reclaimed Asphalt Pavement		
RFG	Refinery Fuel Gas		
RICE	•		
RICE	Reciprocating Internal Combustion		
DO.	Engine Page 1 of 1 o		
RO	Responsible Official		
ROAT	Regional Office at Tulsa		
RVP	Reid Vapor Pressure		
SCC	Source Classification Code		
SCC	Source Classification Code		
SCF	Standard Cubic Foot		
SCFD	Standard Cubic Feet per Day		
SCFM	Standard Cubic Feet per Minute		
SCR	Selective Catalytic Reduction		