

United States Environmental Protection Agency
Region 7
Air and Waste Management Division
Air Permitting and Compliance Branch
11201 Renner Boulevard
Lenexa, KS 66219

SYNTHETIC MINOR SOURCE PERMIT

Permit Number: R7-TMNSR-FY16-001

In accordance with the provisions of the Clean Air Act (CAA) and the Federal Minor New Source Review Program in Indian Country, 40 C.F.R. §§ 49.151-49.161,

Thurston Manufacturing Company

is authorized to operate air emissions units and to conduct other air pollutant emitting activities in accordance with the permit conditions listed in this permit.

This source is authorized to operate in the following location(s):

**1708 H Avenue
Thurston, Nebraska 68062**

Thurston Manufacturing Company is located in Thurston County, within the exterior boundaries of the Winnebago Indian Reservation.

Terms and conditions not otherwise defined in this permit have the meaning assigned to them in 40 C.F.R. Part 49. All terms and conditions of the permit are enforceable by the U.S. Environmental Protection Agency and citizens under the CAA.

This permit shall become effective on October 21, 2016.

Issued this 26 day of August, 2016 by



Becky Weber, Director
Air and Waste Management Division

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SECTION I - FACILITY DESCRIPTION

(A) General Source Information

Owner: Thurston Manufacturing Company
1708 H Avenue
Thurston, NE 68062

Facility: Thurston Manufacturing Company
1708 H Avenue
Thurston, NE 68062

County: Thurston

Reservation: Winnebago Indian Reservation

SIC Codes: 3523 (Farm Machinery and Equipment),
3531 (Construction Machinery and Equipment)

NAICS: 333111 (Farm Machinery and Equipment Manufacturing)

Thurston Manufacturing Company, Thurston, Nebraska, produces agricultural equipment and side-dump trailers. The manufacturing process includes a spray paint booth, plasma cutting table, shot blast machine, parts washer, welding, and fabrication machines with plasma torches.

Air pollutants at this facility include volatile organic compounds (VOC), hazardous air pollutants (HAP), particulate matter (PM), PM smaller than or equal to 10 microns (PM₁₀), and PM smaller than or equal to 2.5 microns (PM_{2.5}). The uncontrolled potential emissions for VOC, PM, PM₁₀, and PM_{2.5} are above Prevention of Significant Deterioration (PSD) major source thresholds. The uncontrolled potential emissions for VOC, HAP, PM₁₀, and PM_{2.5} are above the major source thresholds established under Title V of the CAA and the federal operating permit program regulations at 40 CFR Part 71 (Title V or Part 71).

This permit is being issued under authority of the Tribal Minor New Source Review Permit Program at 40 CFR Part 49 (TMNSR). Under 40 CFR 49.158, a synthetic minor source permit may be obtained under this program to establish a synthetic minor source for nonattainment major New Source Review (NSR), PSD and Title V purposes and/or a synthetic minor HAP source for CAA standards established for maximum achievable control technology (MACT) and Title V purposes. Any source that becomes a synthetic minor for NSR and Title V purposes but has other applicable requirements or becomes a synthetic minor for NSR but is major for Title V purposes, shall also apply for a Title V permit.

This permit authorizes facility-wide emission limits to avoid Title V and/or PSD permitting requirements for major sources with respect to VOC, total HAP, individual HAP, PM, PM₁₀ and PM_{2.5}. The restrictions replace those agreed to by the owner pursuant to the March 7, 1999, Potential to Emit (PTE) Transition Policy for Part 71 Implementation in Indian Country (50% PTE Transition Policy). In order to continue to avoid major source requirements, the permittee has requested a synthetic minor source permit and the reviewing authority has determined that facility-wide emissions must be limited to no more than 75 tons per year of VOCs, 24 tons per year of total HAP, 9 tons per year of any individual

HAP, 64 tons per year of PM, 63 tons per year of PM₁₀, and 62 tons per year of PM_{2.5}. See Section III: FACILITY-WIDE REQUIREMENTS.

(B) Emission Unit Descriptions

Emission Unit ID	Source Description	Construction Date	Identified Pollutant Emissions	Control Device – Pollutants Controlled	Control Device Efficiency	Emission Point(s)
<i>EU-1-PB</i>	Paint Booth using up to three (3) HVLP spray guns, each having a maximum operating capacity of 7 gals/hour	2012	<i>PM, PM₁₀, PM_{2.5}, VOC, organic HAP</i>	ventilation system equipped with filters - <i>PM, PM₁₀, PM_{2.5}</i>	90% per 2015 email	PB-1a PB-1b PB-1c
<i>EU-2-PCT</i>	Plasma Cutting Table with maximum cut rate of 8,700 inches per hour (145 inches per minute) on 1/2 inch standard carbon steel.	2014	<i>PM, PM₁₀, PM_{2.5}, NO_x, metal HAP</i>	down-draft ventilation system and dust collector - <i>PM, PM₁₀, PM_{2.5}, metal HAP</i>	90% per 2015 email	PCT-1
<i>EU-3-SBM</i>	Shot Blast Machine having a maximum design shot consumption capacity of 18,040 pounds per hour.	2012	<i>PM, PM₁₀, PM_{2.5}</i>	dust collector - <i>PM, PM₁₀, PM_{2.5}</i>	99% per 2012 application	SBM-1
<i>EU-4-PW</i>	Parts Washer with natural gas-fired burner having maximum hourly design rate of 200,000 BTU/hour.	2012/2013	<i>PM, PM₁₀, PM_{2.5}, CO, NO_x, VOC, GHG, HAP</i>	None		PW-1
<i>EU-5-GMAW</i>	Welding- GMAW - Twelve (12) welders, each having a maximum hourly design rate of 21.7 lbs./hr. using E70S wire/rod/electrode - Four (4) welders, each with a maximum hourly design rate of 284.1 lbs./hr. using E308 wire/rod/electrode	Unknown	<i>PM, PM₁₀, PM_{2.5}, NO_x, metal HAP</i>	None		W-1
<i>EU-6-FCAW</i>	Welding- FCAW - Seven (7) welders, each having a maximum hourly design rate of 16.5 lbs./hr. using E70T wire/rod/electrode	Unknown	<i>PM, PM₁₀, PM_{2.5}, NO_x, metal HAP</i>	None		W-2
<i>EU-7-FMI</i>	Fabrication Machine 1 with plasma torch having a maximum cut rate of 7,080 inches per hour (118 inches per minute) on an average thickness of 1/2 inch mild steel with a 1/4 inch electrode tip.	Unknown	<i>PM, PM₁₀, PM_{2.5}, NO_x, metal HAP</i>	dust collector - <i>PM, PM₁₀, PM_{2.5}, metal HAP</i>	90% per 2012 application	FM-1
<i>EU-8-FM2</i>	Fabrication Machine 2 with plasma torch having a maximum cut rate of 8,700 inches per hour (145 inches per minute) on an average thickness of 1/2 inch mild steel with a 1/4 inch electrode tip.	Unknown	<i>PM, PM₁₀, PM_{2.5}, NO_x, metal HAP</i>	dust collector - <i>PM, PM₁₀, PM_{2.5}, metal HAP</i>	90% per 2012 application	FM-2

SECTION II - UNIT-SPECIFIC REQUIREMENTS

(A) Paint Booth *EU-1-PB*

(1) Emission Limitations [40 C.F.R. § 49.155 (a) (2)]

- i. The permittee shall operate the paint booth with no more than three (3) spray guns, each with a maximum operating capacity of seven (7) gallons per hour.
- ii. The permittee shall perform all spray applications with a high volume, low pressure (HVLP) spray gun, electrostatic application, airless spray gun, or air-assisted airless spray gun. An equivalent technology may be used if it has been demonstrated by the spray gun manufacturer to achieve a transfer efficiency comparable to that of a HVLP spray gun and for which the spray gun manufacturer has obtained written approval from the U.S. Environmental Protection Agency (EPA). The requirements of this condition do not apply to spray guns with a cup capacity less than 3.0 fluid ounces (89 cc).
- iii. The permittee shall conduct all spray gun cleaning so that an atomized mist or spray of gun cleaning solvent and paint residue is not created outside of a container. Spray gun cleaning may be done with, for example, hand cleaning of parts of the disassembled gun in a container of solvent, by flushing solvent through the gun without atomizing the solvent and paint residue, or by using a fully enclosed spray gun washer. A combination of non-atomizing methods may also be used.
- iv. The permittee shall operate and maintain the paint booth ventilation system in a manner consistent with good air pollution control practices for minimizing emissions and considering the manufacturer's specifications and instructions.
- v. The permittee shall operate and maintain the paint booth with a full roof, at least three complete walls or complete side curtains, and ventilation so that air is drawn into the booth. The walls and roof of a booth may have openings, if needed, to allow for conveyors and parts to pass through the booth during the coating process.
- vi. The permittee shall operate and maintain the paint booth ventilation system equipped with exhaust filters demonstrated by the manufacturer to achieve at least 98 percent capture of coating overspray.
- vii. The permittee shall operate and maintain the paint booth with an operational device used to measure the static differential pressure across each set of exhaust filters exhausting to the three paint booth stacks.
- viii. The permittee shall ensure and certify that all new and existing personnel, including contract personnel, who are assigned to spray apply surface coatings, have completed a training program as required by this permit.
- ix. The permittee shall maintain a training program that includes, at a minimum, the following:

- a. Hands-on and classroom instruction that addresses, at a minimum, initial and refresher training in the following topics:
 1. Spray gun equipment selection, set up, and operation, including measuring coating viscosity, selecting the proper fluid tip or nozzle, and achieving the proper spray pattern, air pressure and volume, and fluid delivery rate.
 2. Spray technique for different types of coatings to improve transfer efficiency and minimize coating usage and overspray, including maintaining the correct spray gun distance and angle to the part, using proper banding and overlap, and reducing lead and lag spraying at the beginning and end of each stroke.
 3. Routine inspection, operation, and maintenance of the spray booth.
 4. Environmental compliance with the requirements of this permit.
- b. The methods to be used at the completion of initial or refresher training to demonstrate, document, and provide certification of successful completion of the required training.
- c. Training and certification of currently assigned personnel must be completed no later than 180 days after permit issuance. Training and certification of newly hired or reassigned personnel must be completed no later than 180 days of being assigned to spray apply surface coatings.
- d. Training and certification will be valid for a period not to exceed five years from the date personnel are certified as successfully completing the required training. Personnel shall receive refresher training and be recertified every five years.

(2) Monitoring and Recordkeeping Requirements [40 C.F.R. § 49.155(a) (3) & (4)]

- i. The permittee shall maintain an onsite inventory of all spray guns that includes the manufacturer, model, and documentation of the transfer efficiency and maximum operating capacity for each.
- ii. The permittee shall maintain records of all materials used (including but not limited to coatings, thinners, and clean-up solvents). The records for each material used shall include the following information summarized monthly:
 - a. the supplier;
 - b. product name;
 - c. product code;
 - d. amount used (gallons/month);
 - e. density (lbs./gal);
 - f. maximum solids content percent by weight;
 - g. maximum VOC content percent by weight;
 - h. name of all individual HAP constituents; and

- i. maximum content percent by weight for each individual HAP constituent.
- iii. Each month, the permittee shall calculate and record the emissions of PM, PM₁₀ and PM_{2.5} for each material used (including but not limited to coatings, thinners, and clean-up solvents) using the following equation:

$$E_{PB-PM} = \sum_{i=1}^n (U_i) * (D_i) * (S_i/100) * \left(1 - \frac{TE}{100}\right) * \left(1 - \frac{CE}{100}\right) * (1 \text{ ton}/2000 \text{ lbs})$$

Where:

E_{PB-PM} = emissions of PM, PM₁₀ or PM_{2.5} "i" from "n" materials used each calendar month (tons/month)

PM emissions, PM₁₀ emissions and PM_{2.5} emissions from the paint booth are assumed the same and will be calculated using the same equation

n = number of solids-containing materials used each month

U_i = Usage rate in gallons per month of a given material

D_i = Density (lbs. /gallon) of a given material

S_i = maximum Solids content percent by weight in a given material

TE = Transfer Efficiency (%) of the spray guns. This value shall equal 75% or a value determined from the most recent valid compliance demonstration.

CE = Control Efficiency (%) of the dry filters. This value is assumed to be 90%. The assumed control efficiency value is less than the value determined by the procedure used to demonstrate filter efficiency consistent with the ASHRAE Method 52.1 (which expresses efficiency as an overall weight percentage and does not specify the ability the filters to control particle sizes in the range represented by PM_{2.5} and PM₁₀).

- iv. Each month, the permittee shall calculate and record emissions of VOC for each material used (including but not limited to coatings, thinners, and clean-up solvents), assuming that all VOC used are emitted, and using the following equation:

$$E_{PB-VOC} = \sum_{i=1}^n (U_i) * (D_i) * (V_i/100) * (1 \text{ ton}/2000 \text{ lbs})$$

Where:

E_{PB-VOC} = emissions of VOC "i" from "n" materials used each calendar month (tons/month)

n = number of VOC-containing materials used each month

U_i = Usage rate in gallons per month of a given material

D_i = Density (lbs. /gal) of a given material

V_i = maximum VOC content percent by weight in a given material

- v. Each month, the permittee shall calculate and record the sum of emissions of each individual HAP (including but not limited to xylene, ethyl benzene, toluene, naphthalene, hexane, and methanol) for each material used (including but not limited

to coatings, thinners, and clean-up solvents), assuming that all HAP used are emitted, using the following equation:

$$E_{PB-HAP_i} = \sum_{j=1}^n (U_j) * (D_j) * (H_{ji}/100) * (1 \text{ ton}/2000 \text{ lbs})$$

Where:

E_{PB-HAP_i} = sum of emissions of an individual HAP "i" from "n" materials used each calendar month (tons/month)

n = number of HAP-containing materials used each month

U_j = Usage rate in gallons per month of a given material "j" containing an individual HAP constituent

D_j = Density (lbs. /gallon) of a given material "j" used

H_{ji} = maximum Individual HAP "i" content percent by weight in a given material "j"

- vi. Each month, the permittee shall calculate and record the total HAP emissions from all materials used by summing all of the individual HAP emissions:

$$E_{PB-HAP-total} = \sum_{i=1}^m E_{PB-HAP_i}$$

Where:

$E_{PB-HAP-total}$ = Total emissions of all HAPs combined used each calendar month (tons/month)

m = Total number of individual HAPs contained in the HAP-containing materials used each calendar month

E_{PB-HAP_i} = sum of emissions of an individual HAP "i" from all materials used each month calculated using the equation in Section II (A) (2) v.

- vii. The permittee shall maintain a copy of the manufacturer's specifications and instructions for the paint booth ventilation system to reference during operation and maintenance.
- vii. For each exhaust filter used with the Paint Booth, the permittee shall maintain purchase records and the manufacturer's certification that the filter has been demonstrated to achieve at least 98 percent capture of coating overspray. The procedure used to demonstrate filter efficiency shall be consistent with the American Society of Heating, Refrigerating, and Air-Conditioning Engineers (ASHRAE) Method 52.1, "Gravimetric and Dust-Spot Procedures for Testing Air-Cleaning Devices Used in General Ventilation for Removing Particulate Matter, June 4, 1992." The test coating for measuring filter efficiency shall be a high solids bake enamel delivered at a rate of at least 135 grams per minute from a conventional (non-HVLP) air-atomized spray gun operating at 40 pounds per square inch (psi) air pressure; the air flow rate across the filter shall be 150 feet per minute.
- viii. The permittee shall monitor and record differential pressure readings for each measurement device at least once every 24 hours while the spray booth is operating.

The permittee shall use the readings to establish a normal operating range and filter change out schedule considering the manufacturer's specifications and instructions. If a reading is not within the normal operating range, the permittee shall stop spray applications immediately and operations shall not resume until the problem has been identified and corrected.

- ix. The permittee shall clearly post the established normal operating differential pressure range at the location of the measurement device.
- x. The permittee shall maintain an on-site inventory of spare filters for the paint booth on hand at all times to ensure rapid replacement in the event of filter failure.
- xi. The permittee shall visually inspect each set of exhaust filters at least once every operating day for alignment, saturation, tears, holes and any other condition that may affect the filter's performance.
- xii. The permittee shall visually inspect the exterior of the spray booth enclosure at least once every 24 hours while the spray booth is operating for evidence of overspray. If evidence of overspray is apparent, the permittee shall take corrective action to eliminate overspray from the exterior of spray booth enclosure.
- xiii. The permittee shall keep a written log of all inspections, maintenance and repair work performed on the Paint Booth. The log shall include the time and date that each activity was performed, and the name with initials of the person performing the work. At a minimum the log shall include:
 - a. Differential pressure measurement device readings;
 - b. Inspections conducted of each set of exhaust filters;
 - c. All exhaust filter replacements including date, filter description (manufacturer, model number and filter efficiency), explanation for replacement, and;
 - d. Observations of the spray booth enclosure exterior for evidence of overspray and all corrective actions taken to reduce overspray.
- xiv. The permittee shall maintain a current written record of all personnel assigned by the permittee to spray apply surface coatings that includes name, job description, date assigned, and all certifications of successful completion of required training.

(B) Plasma Cutting Table *EU-2-PCT*

(1) Emission Limitations [40 C.F.R. § 49.155(a) (2)]

- i. The permittee shall operate the cutting table with no more than one plasma torch having a maximum cut rate of 8,700 inches per hour (145 inches per minute) on ½ inch standard carbon steel.
- ii. The permittee shall operate and maintain the cutting table with a drawdown ventilation system and dust collection system with exhaust filters documented by the

manufacturer to achieve filter efficiencies greater than 99% for particle sizes greater than 0.3 microns.

- iii. The permittee shall operate and maintain the cutting table plasma torch, drawdown ventilation system and dust collection system in a manner consistent with good air pollution control practices for minimizing emissions and considering the manufacturer's specifications and instructions.
- iv. The permittee shall operate the drawdown ventilation system and dust collection system at all times whenever the plasma torch is in use.
- v. The permittee shall operate the dust collector with an operational device used to measure the differential pressure across the control device, monitor performance, and establish a change out schedule for the dust collector filters.

(2) Monitoring and Recordkeeping Requirements [40 C.F.R. § 49.155(a) (3) & (4)]

- i. The permittee shall maintain a copy of the manufacture's specifications and instructions for the cutting table plasma torch to verify maximum cut rate and to reference during operation and maintenance.
- ii. The permittee shall maintain a written operational log for the plasma cutting table that includes the following information, summarized monthly, for each unique cutting operation:
 - a. thickness and type of base metal (e.g. 1/2 inch mild steel);
 - b. designation of base metal with individual HAP composition (e.g. AISI/SAE No.1013 with 1.40% Mn by weight);
 - c. density of base metal (e.g. 0.283 lb./cubic inch for mild steel);
 - d. estimated kerf (width of cut) as a fraction of an inch, as derived from torch manufacturer specifications given the thickness and type of base metal, output current, plasma gas and shield gas *{Per HPR260XD specification: for 0.47 inch thick mild steel, 260A, O2/Air, the estimated kerf width compensation is 0.11 inch}*;
 - e. number of minutes in cutting operation; and
 - f. length of metal cut in inches.
- iii. The permittee shall maintain a copy of the manufacture's specifications and instructions for the drawdown ventilation system and dust collector to reference during operation and maintenance.
- iv. The permittee shall maintain purchase records, including name of manufacturer, part number, quantity, and MSDS for each consumable material used by cutting table plasma torch and dust collector.
- v. For each exhaust filter used in the dust collector, the permittee shall maintain the manufacturer's documentation that the filter has been demonstrated to achieve filter efficiencies greater than 99% for particle sizes greater than 0.3 microns, as rated by

the ASHRAE 52.2 test method. It is noted that ASHRAE Test Method 52.2 does not specify the ability the filters to control particle sizes in the full range represented by PM_{2.5} and PM₁₀.

- vi. The permittee shall monitor and record the differential pressure across the control device at least once every 24 hours while the cutting table plasma torch is operating. The permittee shall use the readings to establish a normal operating range and filter change out schedule considering the manufacturer's specifications and instructions. If a reading is not within the normal operating range, the permittee shall shut down the cutting table plasma torch and dust collector immediately and operations shall not resume until the problem has been identified and corrected.
- vii. The permittee shall clearly post the established normal operating differential pressure range at the location of the measurement device.
- viii. The permittee shall maintain an on-site inventory of spare filters for the dust collector on hand at all times to ensure rapid replacement in the event of filter failure.
- ix. The permittee shall maintain a maintenance log for the drawdown ventilation system and dust collector. The log shall include the time and date that each activity was performed, and the name with initials of the person performing the work. The log shall describe the following:
 - a. Scheduled maintenance activities, repair actions, and replacements.
 - b. Incidents of malfunction and impact on emissions, duration of event, probable cause, and corrective actions.
- x. Each month, the permittee shall calculate and record emissions of PM, PM₁₀, and PM_{2.5} from the plasma cutting table operations using the following equations:

$$E_{PCT-PM} = \sum_{u=1}^n (EF_{PCT-PMu}) * (L_{MCu}) * \left(1 - \frac{CE}{100}\right) * (1 \text{ ton}/2000 \text{ lbs})$$

Where:

E_{PCT-PM} = PM, PM₁₀, or PM_{2.5} emissions from plasma cutting table (tons/month)
 PM emissions, PM₁₀ emissions and PM_{2.5} emissions from the plasma cutting table
 are assumed the same and calculated using same PM emission factor

n = number of unique cutting operations

L_{MCu} = Length of metal cut for a unique cutting operation (inches/month)

CE = Control Efficiency percentage. This value is assumed to be 90%.

$EF_{PCT-PMu}$ = PM Emission Factor (lbs. /inch) derived from equation below for a unique cutting operation:

$$EF_{PCT-PMu} = \sum_{u=1}^n (D_u) * (T_u) * (K_u) * (FG)$$

Where:

n = number of unique cutting operations
D_u = Density of base metal in lbs. /cubic inch
T_u = Thickness of base metal as a fraction of an inch
K_u = Kerf (width of cut) as a fraction of an inch, as derived from torch manufacturer specification given the thickness and type of base metal, the output current, plasma gas, and shield gas. {Per HPR260XD specification: for 0.47 inch thick mild steel, 260A, O2/Air, the estimated kerf width compensation is 0.11 inch}
FG = Fume Generation = % of particulate generated as a fraction of total metal cut = 0.05

- xi. Each month, the permittee shall calculate and record the Individual HAP (including but not limited to manganese) emissions from the plasma cutting table using the following equation:

$$E_{PCT-HAP_i} = \sum_{u=1}^n (E_{PCT-PM_u}) * (\% \text{ weight } HAP_{iu})$$

Where:

E_{PCT-HAP_i} = sum of emissions of an Individual HAP "i" from "n" number of unique cutting operations (tons/month)

Assume the percentage of individual HAP in the emissions of PM is the same as the percentage of individual HAP in the uncut base metal

E_{PCT-PM_u} = PM emissions for a unique cutting operation (tons/month)

% weight *HAP_{iu}* = Maximum Individual HAP "i" content percent by weight as a fraction (e.g., 100% is 1.0 and 50% is 0.50) in material consumed for a unique cutting operation "u"

- xii. Each month, the permittee shall determine and record the total HAP emissions from the plasma cutting table by summing all individual HAP emissions using the following equation:

$$E_{PCT-HAP_{total}} = \sum_{i=1}^m (E_{PCT-HAP_i})$$

Where:

E_{PCT-HAP-total} = Total emissions of all HAPs combined used each calendar month (tons/month)

m = Total number of individual HAPs contained in the HAP-containing materials used each calendar month

E_{PCT-HAP_i} = sum of emissions of an individual HAP "i" from all unique cutting operations calculated using the equation in Section II (B) (2) xii.

- xiii. Each month, the permittee shall calculate and record the NOx emissions from the plasma cutting table using the following equation:

$$E_{PCT-NOx} = \sum_{u=1}^n (EF_{PCT-NOx}) * (T_{COu}) * (1 \text{ ton} / 2000 \text{ lbs.})$$

Where:

$E_{PCT-NOx}$ = Nitrogen oxide emissions from plasma cutting table (tons/month)

n = number of unique cutting operations

$EF_{PCT-NOx}$ = NOx Emission Factor = 0.873 lb. /hour

T_{COu} = Time of a Unique Cutting Operation "u" (hours/month) = minutes of unique cutting operation "u" per month * (1hour/60min)

(C) Shot Blast Machine EU-3-SBM

(1) Emission Limitations [40 C.F.R. § 49.155(a) (2)]

- i. The permittee shall operate the Shot Blast Machine using only abrasive materials that do not contain volatile organic compounds (VOC) or hazardous air pollutants (HAP).
- ii. The permittee shall operate the Shot Blast Machine having a maximum design shot consumption capacity of 18,040 pounds per hour.
- iii. The permittee shall operate the Shot Blast Machine only with the emissions vented through a dust collector equipped with exhaust filters documented by the manufacturer to achieve filter efficiencies greater than 99% for particle sizes greater than 0.3 microns.
- iv. The permittee shall operate the dust collector with an operational device used to measure the differential pressure across the control device.

(2) Monitoring and Recordkeeping Requirements [40 C.F.R. § 49.155(a) (3) & (4)]

- i. For each abrasive material used in the Shot Blast Machine, the permittee shall maintain purchase records and MSDS to be reviewed at the time of delivery to ensure the contents do not include volatile organic compounds (VOC) or hazardous air pollutants (HAP).
- ii. The permittee shall maintain manufacturers' specifications and instructions for the Shot Blast Machine and dust collector to verify the maximum design shot consumption capacity of 18,040 pounds per hour and to reference during operation and maintenance.
- iii. The permittee shall maintain a written operational log for the shot blast operation that includes the following information summarized monthly:
 - a. supplier product name(s) of each abrasive material used.
 - b. number of minutes that the Shot Blast Machine is in operation.

- iv. For each exhaust filter used in the dust collector, the permittee shall maintain purchase records and the manufacturer's documentation that the filter has been demonstrated to achieve filter efficiencies greater than 99% for particle sizes greater than 0.3 microns, as rated by the ASHRAE 52.2 test method. It is noted that ASHRAE Test Method 52.2 does not specify the ability the filters to control particle sizes in the full range represented by PM2.5 and PM10.
- v. The permittee shall monitor and record the differential pressure across the control device at least once every 24 hours while the Shot Blast Machine is operating to establish a normal operating range and filter change out schedule considering the manufacturer's specifications and instructions. If a reading not within the normal operating range, the permittee shall shut down the Shot Blast Machine and dust collector immediately and operations shall not resume until the problem has been identified and corrected.
- vi. The permittee shall clearly post the established operating differential pressure range at the location of the measurement device.
- vii. The permittee shall maintain an on-site inventory of spare filters for the dust collector on hand at all times to ensure rapid replacement in the event of filter failure. The filters shall be made of materials appropriate for operating conditions expected to occur (i.e. temperature limits, acidic and alkali resistance, and abrasion resistance).
- viii. The permittee shall maintain a written log for the Shot Blast Machine and dust collector that describes the following:
 - a. Scheduled maintenance activities, repair actions, and replacements.
 - b. Incidents of malfunction and impact on emissions, duration of event, probable cause, and corrective actions.

The log shall include the time and date that each activity was performed, and the name with initials of the person performing the work.

- ix. Each month, the permittee shall calculate and record PM, PM₁₀, and PM_{2.5} emissions from the shot blast machine using the following equation:

$$E_{SBM-p} = (EF_{SBM-p}) * STR * (T_{SBMO}) * \left(1 - \frac{CE}{100}\right) * (1 \text{ ton}/2000 \text{ lbs.})$$

Where:

E_{SBM-p} = emissions of a pollutant "p" (PM, PM₁₀, or PM_{2.5}) from the shot blast machine (tons/month)

EF_{SBM-p} = Emission Factor for pollutant "p" (PM, PM₁₀, or PM_{2.5}) from table below

STR = Shot Throughput Rate = 0.15 tons of shot per minute of operation

T_{SBMO} = Time in minutes that shot blast machine in operation each month

CE = Control Efficiency (%) of the dust collector. This value is assumed to be 99%.

<i>Regulated Pollutant</i>	<i>EF_{SBM-PM}</i> <i>(lbs. of pollutant per ton of shot)</i>
<i>PM</i>	<i>5.40</i>
<i>PM₁₀</i>	<i>2.60</i>
<i>PM_{2.5}</i>	<i>0.26</i>

(D) Parts Washer EU-4-PW

(1) Emission Limitations [40 C.F.R. § 49.155(a) (2)]

- i. The permittee shall operate the parts washer using only wash solutions that do not contain volatile organic compounds (VOC) or hazardous air pollutants (HAP).
- ii. The permittee shall operate the parts washer using a natural gas-fired burner with a maximum hourly design rate of 200,000 BTU/hour.
- iii. The permittee shall operate and maintain the Parts Washer in a manner consistent with good air pollution control practices for minimizing emissions and considering the manufacturer's specifications and instructions.

(2) Monitoring and Recordkeeping Requirements [40 C.F.R. § 49.155(a) (3) & (4)]

- i. The permittee shall maintain manufacturer's specifications and instructions to verify the maximum hourly design rate of the natural gas-fired burner and to reference during operation and maintenance.
- ii. For each wash solution used in the Parts Washer, the permittee shall maintain purchase records and MSDS to be reviewed at the time of delivery to ensure the solution does not contain VOC or HAP.
- iii. Each month, the permittee shall determine and record the quantity of natural gas used by the Parts Washer burner. If there is no dedicated meter installed for the burner, the permittee shall determine the quantity by multiplying the number of hours that the burner is in use by the potential natural gas throughput of 0.0002 MMSCF per hour.
- iv. Each month, the permittee shall calculate and record the PM, PM₁₀, PM_{2.5}, VOC and individual HAP emissions from the natural gas burner using the following equation:

$$E_{PW-p} = (EF_{PW-p}) * (NG_U) * (1 \text{ ton}/2000 \text{ lbs.})$$

Where:

E_{PW-p} = emissions of a pollutant "p" from Parts Washer natural gas combustion burner (tons/month)

EF_{PW-p} = emission factor (EF) for a given pollutant "p" from table below

NG_U = natural gas usage (MMscf/month)

<i>Regulated Pollutant "p"</i>	<i>EF_{PW} (lb./MMSCF)</i>
<i>PM</i>	<i>1.9</i>
<i>PM₁₀</i>	<i>7.6</i>
<i>PM_{2.5}</i>	<i>7.6</i>
<i>VOC</i>	<i>5.5</i>
<i>NO_x</i>	<i>100</i>
<i>Benzene</i>	<i>0.0021</i>
<i>Dichlorobenzene</i>	<i>0.0012</i>
<i>Formaldehyde</i>	<i>0.075</i>
<i>Hexane</i>	<i>1.8</i>
<i>Toluene</i>	<i>0.0034</i>
<i>Lead</i>	<i>0.0005</i>
<i>Cadmium</i>	<i>0.0011</i>
<i>Chromium</i>	<i>0.0014</i>
<i>Manganese</i>	<i>0.00038</i>
<i>Nickel</i>	<i>0.0021</i>

- v. Each month, the permittee shall determine and record total HAP emissions from the Parts Washer natural gas combustion burner (tons/month) by summing all individual HAP emissions using the following equation:

$$E_{PW-HAP_{total}} = \sum_{i=1}^m (E_{PW-HAP_i})$$

Where:

E_{PW-HAP-total} = Total emissions of all HAPs combined from parts washer each calendar month (tons/month)

m = number of individual HAP emissions from parts washer each calendar month

E_{PW-HAP_i}

 = emissions of an individual HAP "i" pollutant from the parts washer calculated using the equation in Section II (D) (2) iv.

(E) Welding- Gas Metal Arc Welding (GMAW) EU-5-GMAW

(1) Emission Limitations [40 C.F.R. § 49.155(a) (2)]

- i. The permittee shall limit GMAW welding operations using type E70S wire/rod/electrode to no more than twelve (12) welders, each with a maximum hourly design rate of 21.7 lbs. /hr. (collectively using no more 260.4 lbs. /hour).
- ii. The permittee shall limit GMAW welding operations using type E308 wire/rod/electrode to no more than four (4) welders, each with a maximum hourly design rate of 284.1 lbs. /hr. (collectively using no more 1,136.4 lbs. /hour).

- iii. The permittee shall operate and maintain each welder in a manner consistent with good air pollution control practices for minimizing emissions and considering the manufacturer's specifications and instructions.

(2) Monitoring and Recordkeeping Requirements [40 C.F.R. § 49.155(a) (3) & (4)]

- i. For each of the welders used for GMAW welding operations, the permittee shall maintain manufacturer specifications and instructions to verify the maximum hourly design rate and to reference during operation and maintenance.
- ii. For each of the welders used for GMAW welding operations, the permittee shall maintain a record of all inspections, maintenance, and repairs.
- iii. For each of the welders used for GMAW welding operations, the permittee shall maintain purchase records and the MSDS for each model of GMAW type E70 wire/rod/electrode and type E308 wire/rod/electrode.
- iv. For each of the welders used for GMAW welding operations, the permittee shall maintain a written operating log with the following information summarized monthly:
 - a. manufacturer and model of the welder (e.g. Thermal Arc/Hobart - Fabstar 4030);
 - b. manufacturer and model of all optional equipment used with the welder (e.g. Thermal Arc - Ultrafeed VA4000 wire feeder); and
 - c. Wire/rod/electrode consumed, including the type, make, model, diameter, total length and total mass (lbs.).
- v. Each month, the permittee shall determine and record the total mass of each type of wire/rod/electrode consumed by all GMAW welders.
- vi. Each month, the permittee shall calculate and record the emissions of PM, PM₁₀, PM_{2.5} and each individual HAP (manganese, nickel, chromium and cobalt) from the GMAW Operations using the following equation:

$$E_{GMAW-p} = \sum_{e=1}^n (EF_{GMAW-pe}) * (W_e) * (1 \text{ ton}/2000 \text{ lbs})$$

Where:

E_{GMAW-p} = sum of emissions of a pollutant "p" for "n" number of types of wire/rod/electrode combined (tons/month) used for GMAW

n = number of types of wire/rod/electrode used for GMAW

$EF_{GMAW-pe}$ = emission factor (EF) for pollutant "p" for "e" type of wire/rod/electrode used (lbs. of pollutant /1,000 lbs. wire/rod/electrode consumed) from table below

W_e = Amount of applicable type of wire/rod/electrode (e.g. E70S or E308L) consumed (lbs./month)

Wire/Rod/ Electrode	PM/PM ₁₀ /PM _{2.5} EF (lbs./1,000 lbs.)	Mn EF (lbs./1,000lbs)	Ni EF (lbs./1,000lbs)	Cr EF (lbs./1,000lbs)	Co EF (lbs./1,000lbs)
GMAW- E70S	5.2	0.318	0.001	0.001	0.001
GMAW- E308L	5.4	0.346	0.184	0.524	0.001

Note: PM emissions, PM₁₀ emissions and PM_{2.5} emissions from GMAW operations for a given wire/rod/electrode are assumed the same and calculated using same PM emission factor

- vii. Each month, the permittee shall determine and record total HAP emissions from all GMAW operations (tons/month) by summing all individual HAP emissions using the following equation:

$$E_{GMAW-HAP_{total}} = \sum_{i=1}^m (E_{GMAW-HAP_i})$$

Where:

$E_{GMAW-HAP_{total}}$ = Total emissions of all HAPs combined from all GMAW operations (tons/month)

m = number of individual HAP "i" pollutant emissions from GMAW operations

$E_{GMAW-HAP_i}$ = emissions of an individual HAP "i" pollutant from GMAW operations calculated using the equation in Section II (E) (2) vi.

(F) Welding- Flux Cored Arc Welding (FCAW) EU-6-FCAW

(1) Emission Limitations [40 C.F.R. § 49.155 (a) (2)]

- i. The permittee shall limit FCAW welding operations using type E70T wire/rod/electrode to no more than seven (7) welders, each with a maximum hourly design rate of 16.5 lbs. /hour (collectively using no more than 115 lbs. /hour).
- ii. The permittee shall operate and maintain each welder in a manner consistent with good air pollution control practices for minimizing emissions and considering the manufacturer's specifications and instructions.

(2) Monitoring and Recordkeeping Requirements [40 C.F.R. § 49.155(a) (3) & (4)]

- i. For each welder used for FCAW welding operations, the permittee shall maintain the manufacturer's specifications and instructions to verify the maximum hourly design rate and to reference during operation and maintenance.
- ii. For each of the welders used for FCAW welding operations, the permittee shall maintain a record of all inspections, maintenance, and repairs.

- iii. For each of the welders used for FCAW welding operations, the permittee shall maintain purchase records and the MSDS for each model of wire/rod/electrode.
- iv. For each of the welders used for FCAW welding operations, the permittee shall maintain a written operating log with the following information summarized monthly:
 - a. manufacturer and model of the welder (e.g. Lincoln - IdealArc CV-400);
 - b. manufacturer and model of all optional equipment used with the welder (e.g. Lincoln Electric - LN-25 PRO wire feeder);
 - c. gas(es) consumed;
 - d. wire/rod/electrode(s) consumed, including the type, make, model, diameter, total length and total mass (lbs.); and
 - e. Operator name(s).
- v. Each month, the permittee shall determine and record the total mass of wire/rod/electrode used by all FCAW welders.
- vi. Each month, the permittee shall calculate and record the emissions of PM, PM10, PM2.5 and each individual HAP (manganese, nickel and chromium) from the FCAW Welding Operations using the following equation:

$$E_{FCAW-p} = (EF_{FCAW-p}) * (W) * (1 \text{ ton}/2000 \text{ lbs.})$$

Where:

E_{FCAW-p} = emissions of a pollutant "p" from FCAW operations (tons/month)

EF_{FCAW-p} = emission factor (EF) for pollutant "p" (lbs. of pollutant /1,000 lbs. wire/rod/electrode consumed) from table below

W = Amount of wire/rod/electrode consumed (lbs. /month)

Wire/Rod/ Electrode	PM/PM ₁₀ /PM _{2.5} EF (lbs. /1,000 lbs.)	Mn EF (lbs./1,000lbs)	Ni EF (lbs./1,000lbs)	Cr EF (lbs./1,000lbs)
FCAW- E70T	15.1	0.891	0.005	0.004

Note: PM emissions, PM₁₀ emissions and PM_{2.5} emissions from FCAW operations for a given wire/rod/electrode are assumed the same and calculated using same PM emission factor

- vii. Each month, the permittee shall determine and record total HAP emissions from all FCAW operations (tons/month) by summing all individual HAP emissions using the following equation:

$$E_{FCAW-HAP_{total}} = \sum_{i=1}^m (E_{FCAW-HAP_i})$$

Where:

$E_{FCAW-HAP-total}$ = Total emissions of all HAPs combined from all FCAW operations
(tons/month)

m = number of individual HAP "i" pollutant emissions from FCAW operations

$E_{FCAW-HAP_i}$ = emissions of an individual HAP "i" pollutant from FCAW operations
calculated using the equation in Section II (E) (2) vi.

(G) Fabrication Machine 1 with Plasma Torch EU-7-FM1

(1) Emission Limitations [40 C.F.R. § 49.155(a) (2)]

- i. The permittee shall operate the fabrication machine with no more than one plasma torch having a maximum cut rate of 7,080 inches per hour (118 inches per minute) on an average thickness of 1/2 inch mild steel with a 1/4 inch electrode tip.
- ii. The permittee shall operate and maintain the fabrication machine at all times with the emissions vented through a dust collector equipped with exhaust filters documented by the manufacturer to achieve at least a MERV 13 rating with particle removal efficiency greater than 90% for particle sizes 1.0 to 10.0 microns.
- iii. The permittee shall operate and maintain the fabrication machine, plasma torch and dust collector in a manner consistent with good air pollution control practices for minimizing emissions and considering the manufacturer's recommended operating procedures.
- iv. The permittee shall operate the dust collector with an operational device used to measure the differential pressure across the control device.

(2) Monitoring and Recordkeeping Requirements [40 C.F.R. § 49.155(a) (3) & (4)]

- i. The permittee shall maintain a copy of the manufactures' specifications and instructions for the fabrication machine, plasma torch, and dust collector to verify maximum cut rate and to reference during operation and maintenance.
- ii. The permittee shall maintain a written operational log for the Fabrication Machine 1 with plasma torch that includes the following information, summarized monthly, for each unique cutting operation:
 - a. thickness and type of base metal (e.g. 1/2 inch mild steel);
 - b. designation of base metal with individual HAP composition (e.g. AISI/SAE No.1013 with 1.40% Mn by weight);
 - c. density of base metal (e.g. 0.283 lb./cubic inch for mild steel);
 - d. estimated kerf (width of cut) as a fraction of an inch, as derived from torch manufacturer specifications given the thickness and type of base metal, output current, plasma gas and shield gas;
 - e. number of minutes in cutting operation; and
 - f. length of metal cut in inches.

- iii. The permittee shall maintain purchase records, including name of manufacturer, part number, quantity, and MSDS for each consumable material used by the fabrication machine 1 with plasma torch.
- iv. For each exhaust filter used in the dust collector, the permittee shall maintain the manufacturer's documentation that the filter has been demonstrated to achieve at least a MERV 13 rating with particle removal efficiency greater than 90% for particle sizes 1.0 to 10.0 microns as determined by the procedure used to demonstrate filter efficiency consistent with the ASHRAE Test Method 52.2. It is noted that ASHRAE Test Method 52.2 does not specify the ability the filters to control particle sizes in the full range represented by PM_{2.5} and PM₁₀.
- v. The permittee shall monitor and record the differential pressure across the control device at least once every 24 hours while the fabrication machine 1 with plasma torch is operating. The permittee shall use the readings to establish a normal operating range and filter change out schedule considering the manufacturer's specifications and instructions. If a reading is not within the normal operating range, the permittee shall shut down the fabrication machine 1 with plasma torch and dust collector immediately and operations shall not resume until the problem has been identified and corrected.
- vi. The permittee shall clearly post the established normal operating differential pressure range at the location of the measurement device.
- vii. The permittee shall maintain an on-site inventory of spare filters for the dust collector on hand at all times to ensure rapid replacement in the event of filter failure.
- viii. The permittee shall maintain a maintenance log for the fabrication machine 1 with plasma torch and dust collector. The log shall include the time and date that each activity was performed, and the name with initials of the person performing the work. The log shall describe the following:
 - a. Scheduled maintenance activities, repair actions, and replacements.
 - b. Incidents of malfunction and impact on emissions, duration of event, probable cause, and corrective actions.
- ix. Each month, the permittee shall calculate and record emissions of PM, PM₁₀, and PM_{2.5} from EU-7-FM1 operations using the following equations:

$$E_{FM1-PM} = \sum_{u=1}^n (EF_{FM1-PMu}) * (LMCu) * \left(1 - \frac{CE}{100}\right) * (1 \text{ ton}/2000 \text{ lbs})$$

Where:

E_{FM1-PM} = PM, PM₁₀, or PM_{2.5} emissions from EU-7-FM1 (tons/month)
 PM emissions, PM₁₀ emissions and PM_{2.5} emissions from EU-7-FM1 are assumed the same and calculated using same PM emission factor
 n = number of unique cutting operations

L_{MCu} = Length of metal cut for a unique cutting operation (inches/month)

CE = Control Efficiency percentage. This value is assumed to be 90%.

$EF_{FM1-PMu}$ = PM Emission Factor (lbs. /inch) derived from equation below for a unique cutting operation:

$$EF_{FM1-PMu} = \sum_{u=1}^n (D_u) * (T_u) * (K_u) * (FG)$$

Where:

n = number of unique cutting operations

D_u = Density of base metal in lbs. /cubic inch

T_u = Thickness of base metal as a fraction of an inch

K_u = Kerf (width of cut) as a fraction of an inch, as derived from torch manufacturer specification given the thickness and type of base metal, the output current, plasma gas, and shield gas. {Per HT2000 specification: for 0.5 inch thick mild steel, 200A, O2/Air, the estimated kerf width compensation is 0.128 inch}

FG = Fume Generation = % of particulate generated as a fraction of total metal cut = 0.05

- x. Each month, the permittee shall calculate and record the Individual HAP (including but not limited to manganese) emissions from EU-7-FM1 operations using the following equation:

$$E_{FM1-HAP_i} = \sum_{u=1}^n (E_{FM1-PMu}) * (\% \text{ weight } HAP_{iu})$$

Where:

$E_{FM1-HAP-i}$ = sum of emissions of an Individual HAP "i" from "n" number of unique cutting operations (tons/month)

Assume the percentage of individual HAP in the emissions of PM is the same as the percentage of individual HAP in the uncut base metal

$E_{FM1-PMu}$ = PM emissions for a unique cutting operation (tons/month)

% weight HAP_{iu} = Maximum Individual HAP "i" content percent by weight as a fraction (e.g., 100% is 1.0 and 50% is 0.50) in material consumed for a unique cutting operation "u"

- xi. Each month, the permittee shall determine and record the total HAP emissions from EU-7-FM1 by summing all individual HAP emissions using the following equation:

$$E_{FM1-HAP_{total}} = \sum_{i=1}^m (E_{FM1-HAP_i})$$

Where:

$E_{FM1-HAP-total}$ = Total emissions of all HAPs combined used (tons/month)

m = Total number of individual HAPs contained in the HAP-containing materials used each calendar month

$E_{FMI-HAP i}$ = sum of emissions of an individual HAP "i" from all unique cutting operations calculated using the equation in Section II (G) (2) x.

- xii. Each month, the permittee shall calculate and record the NOx emissions from EU-7-FM1 using the following equation:

$$E_{FM1-NOx} = \sum_{u=1}^n (EF_{FM1-NOx}) * (T_{COu}) * (1 \text{ ton} / 2000 \text{ lbs.})$$

Where:

$E_{FM1-NOx}$ = Nitrogen oxide emissions from EU-7-FM1 (tons/month)

n = number of unique cutting operations

$EF_{FM1-NOx}$ = NOx Emission Factor = 0.873 lb. /hour

T_{COu} = Time of a Unique Cutting Operation "u" (hours/month) = minutes of unique cutting operation "u" per month * (1hour/60min)

(H) Fabrication Machine 2 with Plasma Torch EU-8-FM2

(1) Emission Limitations [40 C.F.R. § 49.155(a) (2)]

- i. The permittee shall operate the fabrication machine with no more than one plasma torch having a maximum cut rate of 8,700 inches per hour (145 inches per minute) on 1/2 inch mild steel with a 1/4 inch electrode tip.
- ii. The permittee shall operate and maintain the fabrication machine at all times with the emissions vented through a dust collection system equipped with exhaust filters documented by the manufacturer to achieve at least a MERV 13 rating with particle removal efficiency greater than 90% for particle sizes 1.0 to 10.0 microns.
- iii. The permittee shall operate and maintain the fabrication machine, plasma torch and dust collection system in a manner consistent with good air pollution control practices for minimizing emissions and considering the manufacturer's recommended operating procedures.
- iv. The permittee shall operate the dust collector with an operational device used to measure the differential pressure across the control device.

(2) Monitoring and Recordkeeping Requirements [40 C.F.R. § 49.155(a) (3) & (4)]

- i. The permittee shall maintain a copy of the manufactures' specifications and instructions for the fabrication machine, plasma torch, and dust collector to verify maximum cut rate and to reference during operation and maintenance.

- ii. The permittee shall maintain a written operational log for the Fabrication Machine 2 with plasma torch that includes the following information, summarized monthly, for each unique cutting operation:
 - a. thickness and type of base metal (e.g. 1/2 inch mild steel);
 - b. designation of base metal with individual HAP composition (e.g. AISI/SAE No.1013 with 1.40% Mn by weight);
 - c. density of base metal (e.g. 0.283 lb./cubic inch for mild steel);
 - d. estimated kerf (width of cut) as a fraction of an inch, as derived from torch manufacturer specifications given the thickness and type of base metal, output current, plasma gas and shield gas;
 - e. number of minutes in cutting operation; and
 - f. length of metal cut in inches.
- iii. The permittee shall maintain purchase records, including name of manufacturer, part number, quantity, and MSDS for each consumable material used by the fabrication machine 1 with plasma torch and dust collector.
- iv. For each exhaust filter used in the dust collector, the permittee shall maintain the manufacturer's documentation that the filter has been demonstrated to achieve at least a MERV 13 rating with particle removal efficiency greater than 90% for particle sizes 1.0 to 10.0 microns as determined by the procedure used to demonstrate filter efficiency consistent with the ASHRAE Test Method 52.2. It is noted that ASHRAE Test Method 52.2 does not specify the ability the filters to control particle sizes in the full range represented by PM2.5 and PM10.
- v. The permittee shall monitor and record the differential pressure across the control device at least once every 24 hours while the fabrication machine 2 with plasma torch is operating. The permittee shall use the readings to establish a normal operating range and filter change out schedule considering the manufacturer's specifications and instructions. If a reading is not within the normal operating range, the permittee shall shut down the fabrication machine 2 with plasma torch and dust collector immediately and operations shall not resume until the problem has been identified and corrected.
- vi. The permittee shall clearly post the established normal operating differential pressure range at the location of the measurement device.
- vii. The permittee shall maintain an on-site inventory of spare filters for the dust collector on hand at all times to ensure rapid replacement in the event of filter failure.
- viii. The permittee shall maintain a maintenance log for the fabrication machine 2 with plasma torch and dust collector. The log shall include the time and date that each activity was performed, and the name with initials of the person performing the work. The log shall describe the following:
 - a. Scheduled maintenance activities, repair actions, and replacements.

- b. Incidents of malfunction and impact on emissions, duration of event, probable cause, and corrective actions.
- ix. Each month, the permittee shall calculate and record emissions of PM, PM₁₀, and PM_{2.5} from EU-8-FM2 operations using the following equations:

$$E_{FM2-PM} = \sum_{u=1}^n (EF_{FM2-PMu}) * (L_{MCu}) * \left(1 - \frac{CE}{100}\right) * (1 \text{ ton}/2000 \text{ lbs})$$

Where:

E_{FM2-PM} = PM, PM₁₀, or PM_{2.5} emissions from EU-8-FM2 (tons/month)
 PM emissions, PM₁₀ emissions and PM_{2.5} emissions from EU-8-FM2 are assumed the same and calculated using same PM emission factor

n = number of unique cutting operations

L_{MCu} = Length of metal cut for a unique cutting operation (inches/month)

CE = Control Efficiency percentage is assumed to be 90%.

$EF_{FM2-PMu}$ = PM Emission Factor (lbs. /inch) derived from equation below for a unique cutting operation:

$$EF_{FM2-PMu} = \sum_{u=1}^n (D_u) * (T_u) * (K_u) * (FG)$$

Where:

n = number of unique cutting operations

D_u = Density of base metal in lbs. /cubic inch

T_u = Thickness of base metal as a fraction of an inch

K_u = Kerf (width of cut) as a fraction of an inch, as derived from torch manufacturer specification given the thickness and type of base metal, the output current, plasma gas, and shield gas. {Per HPR260XD specification: for 0.47 inch thick mild steel, 260A, O₂/Air, the estimated kerf width compensation is 0.11 inch}

FG = Fume Generation = % of particulate generated as a fraction of total metal cut = 0.05

- x. Each month, the permittee shall calculate and record the Individual HAP (including but not limited to manganese) emissions from EU-8-FM2 operations using the following equation:

$$E_{FM2-HAP_i} = \sum_{u=1}^n (E_{FM2-PMu}) * (\% \text{ weight HAP}_{iu})$$

Where:

$E_{FM2-HAP-i}$ = sum of emissions of an Individual HAP "i" from "n" number of unique cutting operations (tons/month)

Assume the percentage of individual HAP in the emissions of PM is the same as the percentage of individual HAP in the uncut base metal

$E_{FM2-PMu}$ = PM emissions for a unique cutting operation (tons/month)
 % weight HAP_{iu} = Maximum Individual HAP "i" content percent by weight as a fraction (e.g., 100% is 1.0 and 50% is 0.50) in material consumed for a unique cutting operation "u"

- xi. Each month, the permittee shall determine and record the total HAP emissions from EU-8-FM2 operations by summing all individual HAP emissions using the following equation:

$$E_{FM2-HAP_{total}} = \sum_{i=1}^m (E_{FM2-HAP_i})$$

Where:

$E_{FM2-HAP_{total}}$ = Total emissions of all HAPs combined used (tons/month)
 m = Total number of individual HAPs contained in the HAP-containing materials used each calendar month
 $E_{FM2-HAP_i}$ = sum of emissions of an individual HAP "i" from all unique cutting operations calculated using the equation in Section II (H) (2) x.

- xii. Each month, the permittee shall calculate and record the NOx emissions from EU-8-FM2 using the following equation:

$$E_{FM2-NOx} = \sum_{u=1}^n (EF_{FM2-NOx}) * (T_{COu}) * (1 \text{ ton} / 2000 \text{ lbs.})$$

Where:

$E_{FM2-NOx}$ = Nitrogen oxide emissions from EU-8-FM2 (tons/month)
 n = number of unique cutting operations
 $EF_{FM2-NOx}$ = NOx Emission Factor = 0.873 lb. /hour
 T_{COu} = Time of a Unique Cutting Operation "u" (hours/month) = minutes of unique cutting operation "u" per month * (1hour/60min)

SECTION III: FACILITY-WIDE REQUIREMENTS

(A) Facility-wide PM Emission Limitation, Monitoring and Recordkeeping Requirements.

(1) PM Emissions Limitation [40 C.F.R. § 49.155(a) (2)]

- i. PM emissions from all emission units listed in Section I (B) at this facility shall not exceed 64 tons per year as determined on a 12-month rolling sum basis.

(2) PM Monitoring and Recordkeeping Requirements [40 C.F.R. § 49.155(a) (3) & (4)]

- i. Within ten days of the end of each month, the permittee shall calculate and record the facility-wide PM emissions on a 12-month rolling sum basis, which shall be determined by calculating the emissions (tons) for the month using the following equation and then adding the emissions (tons) calculated for the previous 11 months.

$$E_{PM-All} = E_{PB-PM} + E_{PCT-PM} + E_{SBM-PM} + E_{PW-PM} + E_{GMAW-PM} + E_{FCAW-PM} + E_{FM1-PM} + E_{FM2-PM}$$

Where:

E_{PM-All} = PM emissions (tons/month) from all emission units at this facility listed in Section I (B).

E_{PB-PM} = PM emissions from the paint booth (tons/month) calculated in Section II (A) (2) iii.

E_{PCT-PM} = PM emissions from plasma cutting table (tons/month) calculated in Section II (B) (2) x.

E_{SBM-PM} = PM emissions from shot blast operation (tons/month) calculated in Section II (C) (2) viii.

E_{PW-PM} = PM emissions from Parts Washer natural gas combustion burner (tons/month) calculated in Section II (D) (2) iv.

$E_{GMAW-PM}$ = PM emissions from gas metal arc welding for each type of wire/rod/electrode combined (tons/month) calculated in Section II (E) (2) vi.

$E_{FCAW-PM}$ = PM emissions from flux core arc welding (tons/month) calculated in Section II (F) (2) vi.

E_{FM1-PM} = PM emissions from Fabrication Machine 1 with Plasma Torch (tons/month) calculated in Section II (G) (2) ix.

E_{FM2-PM} = PM emissions from Fabrication Machine 2 with Plasma Torch (tons/month) calculated in Section II (H) (2) ix.

(B) Facility-wide PM₁₀ Emission Limitation, Monitoring and Recordkeeping Requirements.

(1) PM₁₀ Emissions Limitation [40 C.F.R. § 49.155(a) (2)]

- i. PM₁₀ emissions from all emission units listed in Section I (B) at this facility shall not exceed 63 tons per year, as determined on a 12-month rolling sum basis.

(2) PM₁₀ Monitoring and Recordkeeping Requirements [40 C.F.R. § 49.155(a) (3) & (4)]

- i. Within ten days of the end of each month, the permittee shall calculate and record the facility-wide PM₁₀ emissions on a 12-month rolling sum basis, which shall be determined by calculating the emissions (tons) for the month using the following equation and then adding the emissions (tons) calculated for the previous 11 months.

$$E_{PM10-All} = E_{PB-PM} + E_{PCT-PM} + E_{SBM-PM} + E_{PW-PM} + E_{GMAW-PM} + E_{FCAW-PM} + E_{FMI-PM} + E_{FM2-PM}$$

Where:

$E_{PM10-All}$ = PM₁₀ emissions (tons/month) from all emission units at this facility listed in Section I (B).

E_{PB-PM} = PM emissions from the paint booth (tons/month) calculated in Section II (A) (2) iii.

E_{PCT-PM} = PM emissions from plasma cutting table (tons/month) calculated in Section II (B) (2) x.

E_{SBM-PM} = PM₁₀ emissions from shot blast operation (tons/month) calculated in Section II (C) (2) viii.

E_{PW-PM} = PM₁₀ emissions from Parts Washer natural gas combustion burner (tons/month) calculated in Section II (D) (2) iv.

$E_{GMAW-PM}$ = PM emissions from gas metal arc welding for each type of wire/rod/electrode combined (tons/month) calculated in Section II (E) (2) vi.

$E_{FCAW-PM}$ = PM emissions from flux core arc welding (tons/month) calculated in Section II (F) (2) vi.

E_{FMI-PM} = PM emissions from Fabrication Machine 1 with Plasma Torch (tons/month) calculated in Section II (G) (2) ix.

E_{FM2-PM} = PM emissions from Fabrication Machine 2 with Plasma Torch (tons/month) calculated in Section II (H) (2) ix.

(C) Facility-wide PM_{2.5} Emission Limitation, Monitoring and Recordkeeping Requirements.

(1) PM_{2.5} Emissions Limitation [40 C.F.R. § 49.155(a)(2)]

- i. PM_{2.5} emissions from all emission units listed in Section I (B) at this facility shall not exceed 62 tons per year, as determined on a 12-month rolling sum basis.

(2) PM_{2.5} Monitoring and Recordkeeping Requirements [40 C.F.R. § 49.155(a)(3)&(4)]

- i. Within ten days of the end of each month, the permittee shall calculate and record the facility-wide PM_{2.5} emissions on a 12-month rolling sum basis, which shall be determined by calculating the emissions (tons) for the month using the following equation and then adding the emissions (tons) calculated for the previous 11 months.

$$E_{PM2.5-All} = E_{PB-PM} + E_{PCT-PM} + E_{SBM-PM} + E_{PW-PM} + E_{GMAW-PM} + E_{FCAW-PM} + E_{FMI-PM} + E_{FM2-PM}$$

Where:

$E_{PM2.5-All}$ = $PM_{2.5}$ emissions (tons/month) from all emission units at this facility listed in Section I (B)

E_{PB-PM} = PM emissions from the paint booth (tons/month) calculated in Section II (A) (2) iii.

E_{PCT-PM} = PM emissions from plasma cutting table (tons/month) calculated in Section II (B) (2) x.

E_{SBM-PM} = $PM_{2.5}$ emissions from shot blast operation (tons/month) calculated in Section II (C) (2) viii.

E_{PW-PM} = $PM_{2.5}$ emissions from Parts Washer natural gas combustion burner (tons/month) calculated in Section II (D) (2) iv.

$E_{GM,AW-PM}$ = PM emissions from gas metal arc welding for each type of wire/rod/electrode combined (tons/month) calculated in Section II (E) (2) vi.

$E_{FC,AW-PM}$ = PM emissions from flux core arc welding (tons/month) calculated in Section II (F) (2) vi.

E_{FM1-PM} = PM emissions from Fabrication Machine 1 with Plasma Torch (tons/month) calculated in Section II (G) (2) ix.

E_{FM2-PM} = PM emissions from Fabrication Machine 2 with Plasma Torch (tons/month) calculated in Section II (H) (2) ix.

(D) Facility-wide VOC Emission Limitation, Monitoring and Recordkeeping Requirements.

(1) VOC Emissions Limitation [40 C.F.R. § 49.155(a)(2)]

- i. VOC emissions from all emission units listed in Section I (B) at this facility shall not exceed 75 tons per year, as determined on a 12-month rolling sum basis.

(2) VOC Monitoring and Recordkeeping Requirements [40 C.F.R. § 49.155(a)(3)&(4)]

- i. Within ten days of the end of each month, the permittee shall calculate and record the facility-wide VOC emissions on a 12-month rolling sum basis, which shall be determined by calculating the emissions (tons) for the month using the following equation and then adding the emissions (tons) calculated for the previous 11 months.

$$E_{VOC-All} = E_{PB-VOC} + E_{PW-VOC} - E_{Offsite-VOC}$$

Where:

$E_{VOC-All}$ = VOC emissions (tons/month) from all emission units at this facility listed in Section I (B).

E_{PB-VOC} = VOC emissions from the paint booth (tons/month) calculated in Section II (A) (2) iv.

E_{PW-VOC} = VOC emissions from Parts Washer natural gas combustion burner (tons/month) calculated in Section II (D) (2) iv.

$E_{\text{Offsite-VOC}}$ = Credited amount of VOC content in waste collected from EU-1-PB operations that are shipped offsite (tons/month) as determined in Section III (J).

(E) Facility-wide NOx Monitoring and Recordkeeping Requirements.

(1) NOx Monitoring and Recordkeeping Requirements [40 C.F.R. § 49.155(a) (3)&(4)]

- i. Within ten days of the end of each month, the permittee shall calculate and record the facility-wide NOx emissions on a 12-month rolling sum basis, which shall be determined by calculating the emissions (tons) for the month using the following equation and then adding the emissions (tons) calculated for the previous 11 months.

$$E_{\text{NOx-All}} = E_{\text{PCT-NOx}} + E_{\text{PW-NOx}} + E_{\text{FM1-NOx}} + E_{\text{FM2-NOx}}$$

Where:

$E_{\text{NOx-All}}$ = NOx emissions (tons/month) from all emission units at this facility listed in Section I (B).

$E_{\text{PCT-NOx}}$ = NOx emissions from plasma cutting table (tons/month) calculated in Section II (B) (2) xiii.

$E_{\text{PW-NOx}}$ = NOx emissions from Parts Washer natural gas combustion burner (tons/month) calculated in Section II (D) (2) iv.

$E_{\text{FM1-NOx}}$ = NOx emissions from Fabrication Machine 1 with Plasma Torch (tons/month) calculated in Section II (G) (2) xii.

$E_{\text{FM2-NOx}}$ = NOx emissions from Fabrication Machine 2 with Plasma Torch (tons/month) calculated in Section II (H) (2) xii.

(F) Facility-wide Total HAP Emission Limitation, Monitoring and Recordkeeping Requirements.

(1) Total HAP Emissions Limitation [40 C.F.R. § 49.155 (a) (2)]

- i. Total HAP emissions from all emission units listed in Section I (B) at this facility shall not exceed 24 tons per year, as determined on a 12-month rolling sum basis

(2) Total HAP Monitoring and Recordkeeping Requirements [40 C.F.R. § 49.155 (a) (3)&(4)]

- i. Within ten days of the end of each month, the permittee shall calculate and record the facility-wide Total HAP emissions on a 12-month rolling sum basis, which shall be determined by calculating the emissions (tons) for the month using the following equation and then adding the emissions (tons) calculated for the previous 11 months.

$$E_{\text{HAP-Total}} = E_{\text{PB-HAP-Total}} + E_{\text{PCT-HAP-Total}} + E_{\text{PW-HAP-Total}} + E_{\text{GMAW-HAP-Total}} + E_{\text{FCAW-HAP-Total}} + E_{\text{FM1-HAP-Total}} + E_{\text{FM2-HAP-Total}} - E_{\text{Offsite-HAP-Total}}$$

Where:

$E_{HAP-Total-All}$ = Total HAP emissions (tons/month) from all emission units at this facility listed in Section I (B).

$E_{PB-HAP-Total}$ = Total HAP emissions from the paint booth (tons/month) calculated in Section II (A) (2) iv.

$E_{PCT-HAP-Total}$ = Total HAP emissions from plasma cutting table (tons/month) calculated in Section II (B) (2) xii.

$E_{PIW-HAP-Total}$ = Total HAP emissions from Parts Washer natural gas combustion burner (tons/month) calculated in Section II (D) (2) v.

$E_{GMAW-HAP-Total}$ = Total HAP emissions from gas metal arc welding for all types of wire/rod/electrode combined (tons/month) calculated in Section II (E) (2) vii.

$E_{FCAW-HAP-Total}$ = Total HAP emissions from flux core arc welding for all types of wire/rod/electrode combined (tons/month) calculated in Section II (F) (2) vii.

$E_{FM1-HAP-Total}$ = Total HAP emissions from Fabrication Machine 1 with Plasma Torch (tons/month) calculated in Section II (G) (2) xi.

$E_{FM2-HAP-Total}$ = Total HAP emissions from Fabrication Machine 2 with Plasma Torch (tons/month) calculated in Section II (H) (2) xi.

$E_{Offsite-HAP-Total}$ = Credited amount of total organic HAP content in waste collected from EU-1-PB operations that are shipped offsite (tons/month) as determined in Section III (J).

(G) Facility-wide Individual HAP Emission Limitation, Monitoring and Recordkeeping Requirements.

(1) Individual HAP Emissions Limitation [40 C.F.R. § 49.155(a) (2)]

- i. Individual HAP emissions from all emission units listed in Section I (B) at this facility shall not exceed 9 tons per year, as determined on a 12-month rolling sum basis.

(2) Individual HAP Monitoring & Recordkeeping Requirements [40 C.F.R. § 49.155 (a)(3)&(4)]

- i. Within ten days of the end of each month, the permittee shall calculate and record the facility-wide Individual HAP emissions on a 12-month rolling sum basis, which shall be determined by calculating the emissions (tons) for the month using the following equation and then adding the emissions (tons) calculated for the previous 11 months.

$$E_{HAP-Ind-All} = E_{PB-HAP-Ind} + E_{PCT-HAP-Ind} + E_{PIW-HAP-Ind} + E_{GMAW-HAP-Ind} + E_{FCAW-HAP-Ind} + E_{FM1-HAP-Ind} + E_{FM2-HAP-Ind} - E_{Offsite-HAP-i}$$

Where:

$E_{HAP-Ind-All}$ = Individual HAP emissions (tons/month) from all emission units at this facility listed in Section I (B) for each individual HAP pollutant

$E_{PB-HAP-Ind}$ = Individual HAP emissions from the paint booth for each individual HAP pollutant (tons/month) calculated in Section II (A) (2) v.

$E_{PCT-HAP-Ind}$ = Individual HAP emissions from plasma cutting table for each individual HAP pollutant (tons/month) calculated in Section II (B) (2) xi.

$E_{PW-HAP-Ind}$ = Individual HAP emissions from Parts Washer natural gas combustion burner for each individual HAP pollutant (tons/month) listed and calculated in Section II (D) (2) iv.

$E_{GMAW-HAP-Ind}$ = Individual HAP emissions from gas metal arc welding for each individual HAP pollutant (tons/month) calculated in Section II (E) (2) vi.

$E_{FCAW-HAP-Ind}$ = Individual HAP emissions from flux core arc welding for each individual HAP pollutant (tons/month) calculated in Section II (F) (2) vi.

$E_{FMI-HAP-Ind}$ = Individual HAP emissions from Fabrication Machine 1 with Plasma Torch for each individual HAP pollutant (tons/month) calculated in Section II (G) (2) x.

$E_{FM2-HAP-Ind}$ = Individual HAP emissions from Fabrication Machine 2 with Plasma Torch for each individual HAP pollutant (tons/month) calculated in Section II (H) (2) x.

$E_{Offsite-HAP-i}$ = Credited amount of Individual organic HAP content in waste collected from EU-1-PB operations that are shipped offsite (tons/month) as determined in Section III (J).

(H) Startup, Shutdown, Maintenance and Malfunction.

- (1) At all times, including periods of startup, shutdown, maintenance and malfunction, the permittee shall operate each emission unit, including any associated air pollution control equipment, in a manner consistent with good air pollution control practices for minimizing emissions and considering the manufacturer's recommended operating procedures. Determination of whether acceptable operating and maintenance procedures are being used will be based on information available to the EPA, which may include, but is not limited to, monitoring results, opacity observations, review of installation, operation and maintenance procedures, and inspection of the source. Emissions during the processes of startups, shutdowns, maintenance, and malfunctions shall be included in calculating the total tons per year emitted from all emission units listed in Section I (B) at this facility.

(I) Determination of material density and the maximum content percentages by weight

- (1) The density and the maximum content percentages by weight for Solids, VOC and Individual HAP shall be determined by referencing the Material Safety Data Sheet (MSDS) provided by the supplier for each material used or consumed. If a density or a content percentage is given as a range on the MSDS, the highest number in the range shall be recorded and used in all compliance calculations. Other alternative methods approved by the EPA may be used to determine the density and content percentages. In a written notice, the EPA may direct the permittee to determine the density and content percentages of any material, according to EPA or ASTM reference methods. If an EPA or ASTM reference method is used to determine the density or content percentage, the data obtained shall supersede the MSDS.

(J) VOC-containing and organic HAP-containing materials.

- (1) The permittee shall store all VOC-containing and organic HAP-containing materials (e.g., coatings, thinners, and clean-up solvents) in closed containers that are clearly labeled with the contents.

(2) The permittee may take credit for the amounts of VOC, individual organic HAP and total organic HAP content of waste generated from EU-1-PB operations that is shipped off-site if a representative sample of the waste (as defined in 40 CFR §260.10) has been analyzed for VOC and HAP content. In order to receive credit the permittee shall document the following:

- i. Date, place, and time of representative sampling
- ii. Date(s) analyses were performed
- iii. Company or entity that performed the analyses
- iv. Analytical techniques or methods used
- v. Results of waste analyses or measurements with determinations of percent by weight of VOC, percent by weight of individual organic HAP, and percent by weight of total organic HAP.
- vi. A copy of signed and dated manifest for waste shipped offsite.
- vii. Amount of waste shipped offsite (lbs.);
- viii. Amount of VOC content in waste shipped offsite in a calendar month as calculated using the following equation:

$$E_{\text{Offsite-VOC}} = \sum_{j=1}^n W_j * V_j / 100 * (1 \text{ ton} / 2000 \text{ lbs})$$

Where:

$E_{\text{Offsite-VOC}}$ = Amount of VOC content in waste "j" from "n" number of VOC-containing wastes shipped offsite in a given calendar month (tons/month)

W_j = Amount of a given VOC-containing waste "j" shipped offsite (lbs.)

V_j = VOC content percent by weight in a given waste "j" shipped offsite

- ix. Amount of Individual organic HAP content in waste shipped offsite in a calendar month as calculated using the following equation:

$$E_{\text{Offsite-HAP}_i} = \sum_{j=1}^n (W_j) * (H_{ji} / 100) * (1 \text{ ton} / 2000 \text{ lbs})$$

Where:

$E_{\text{Offsite-HAP}_i}$ = Amount of individual organic HAP "i" content in "n" number of wastes shipped offsite in a given calendar month (tons/month)

W_j = Amount of a given waste "j" with individual organic HAP "i" content

H_{ji} = Individual organic HAP "i" content percent by weight in a given waste "j"

- x. Amount of Total organic HAP content in waste shipped offsite in a calendar month as calculated using the following equation:

$$E_{\text{Offsite-HAP}_{\text{total}}} = \sum_{i=1}^m E_{\text{Offsite-HAP}_i} * (1 \text{ ton} / 2000 \text{ lbs.})$$

Where:

$E_{\text{offsite-HAP-total}}$ = Total of all organic HAP content in waste shipped each calendar month (tons/month)

m = Total number of individual organic HAP contained in waste shipped each calendar month

$E_{\text{offsite-HAP } i}$ = Amount of an individual organic HAP "i" content in waste shipped each calendar month determined in Section III (J) ix.

The permittee may take credit for the documented amount of VOC, individual organic HAP or total organic HAP content in a waste by subtracting it as provided in the corresponding facility-wide emissions equation in Section III (D), Section III (F), or Section III (G) as of the date the waste is shipped off-site.

(K) Spray-applied coating operations.

- (1) The permittee shall conduct all spray-applied coating operations within the permitted spray paint booth.

(L) Records Retention Requirements.

- (1) The permittee shall keep all records required by this permit, including the following, on-site for a minimum of five (5) years, and available for inspection by the reviewing authority.
 - i. All specifications and maintenance requirements developed by the manufacturer, vendor, or permittee for all emission units listed in Section I (B) at this facility, and each associated emission control and monitoring device required in this permit.
 - ii. All calibration, maintenance, repairs, rebuilds or replacements conducted for all emission units listed in Section I (B) at this facility, and each associated emission control and monitoring device required in this permit.
 - iii. All information used to calculate the monthly and 12-month rolling PM, PM₁₀, PM_{2.5}, VOC, NO_x, individual HAP, and total HAP emissions for all emission units listed in Section I (B) at this facility.

- (2) The permittee shall keep all records legible and maintained in an orderly manner.

(M) Reporting Requirements [40 C.F.R. § 49.155(a) (5)]

- (1) Annual Reports. Once each year no later than April 1st, the permittee shall submit a written annual report to EPA as specified below:
 - i. The report shall cover the period for the previous calendar year.
 - ii. The report shall include the actual monthly and 12-month rolling PM, PM₁₀, PM_{2.5}, VOC, NO_x, individual HAP, and total HAP emissions in tons from all emission units listed in Section I (B) at this facility.
 - iii. The report shall include emissions from startups, shutdowns, and malfunctions.
 - iv. All reports shall be certified to truth and accuracy by the person primarily responsible for Clean Air Act compliance for the permittee.

v. A copy of the written annual report shall be submitted to:

Environmental Protection Department Manager
Winnebago Tribe of Nebraska
P.O. Box 687, Building 1 Mission Road
Winnebago, NE 68071.

(2) Deviation Reporting. The permittee shall promptly submit a written report to EPA any deviations of permit requirements, including those attributable to upset conditions, the probable cause of such deviation, and any corrective actions or preventative measures taken.

A "prompt" deviation report is one that is postmarked as follows:

- i. Within 30 days from the discovery of any deviation of the emission limits or operational limits that are left uncorrected for more than 24 hours after discovering the deviation; and
- ii. By April 1st for the discovery of a deviation of recordkeeping or other permit conditions during the preceding calendar year that do not affect the permittee's ability to meet the emission limits.

SECTION IV: GENERAL PERMIT REQUIREMENTS

(A) Definitions

- (1) Terms and conditions in this permit have the meaning assigned to them in 40 C.F.R. § 49.152 unless other regulations or statutes are referenced or applicable.

(B) Issuance and Effective Date of Permit

- (1) EPA is issuing this permit pursuant to the Federal Minor New Source Review Program in Indian Country, 40 C.F.R. §§ 49.151-49.161.
- (2) The Effective Date is specified on the first page of this permit.

(C) Construction without a Permit

- (1) If the permittee constructs or operates any source or modification not in accordance with the terms of any approval to construct, the permittee shall be subject to appropriate enforcement action.

(D) Construction Approval

- (1) Nothing in this permit shall alter the requirement for the permittee to obtain a construction permit prior to beginning construction or modification of an emission unit.
- (2) Approval for construction or installation shall not relieve the permittee of the responsibility to comply fully with applicable provisions of any other requirements of federal law or regulation, including Title V of the CAA.

(E) Modifications to Existing Permitted Emissions Units/Limits

- (1) For proposed modifications, as defined at 40 CFR 49.152(d), that would increase an emissions unit's allowable emissions of pollutants above its existing permitted annual allowable emissions limit, the permittee shall first obtain a permit modification pursuant to the TMNSR regulations approving the increase. For a proposed modification that is not otherwise subject to review under the PSD or TMNSR regulations, such proposed increase in the annual allowable emissions limit shall be approved through an administrative permit revision as provided at 40 CFR 49.159(f).

(F) Relaxation of Legally and Practically Enforceable Limits

- (1) At such time that a new or modified source within this permitted facility/source or modification of this permitted facility/source becomes a major stationary source or major modification solely by virtue of a relaxation in any legally and practically enforceable limitation which was established after August 7, 1980, on the capacity of the permitted facility/source to otherwise emit a pollutant, such as a restriction on hours of operation, then the requirements of the PSD regulations shall apply to the source or modification as though construction had not yet commenced on the source or modification.

(G) Compliance with Permit Requirements

- (1) The permittee shall comply with each term and condition in this permit. Failure to comply with any term or condition of this permit constitutes a violation of the permit, and may constitute a violation of the CAA and serve as grounds for:
 - i. An enforcement action under Section 113 of the CAA; or
 - ii. Termination, revocation and reissuance, or modification of this synthetic minor permit.
- (2) This permit currently requires monthly calculations of emissions. Should EPA determine that calculated emissions are approaching or exceeding an emission limit, or should EPA determine that the permittee is failing to maintain adequate monitoring and recordkeeping requirements, EPA may revise, reopen or modify the permit to require daily calculations of emissions and/or require additional control technologies and emission reduction measures. A revision that requires more frequent reporting of daily calculations of emissions is an administrative permit revision under the TMNSR program, 40 CFR 149.159(f) (2).
- (3) It is not a defense in an enforcement action for violation of this permit that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this permit.
- (4) Compliance with the terms of this permit does not relieve or exempt the permittee from compliance with other applicable Clean Air Act requirements or other applicable federal requirements, tribal, state or local laws or regulations.

(H) Prohibition on Violation of National Ambient Air Quality Standards and Prevention of Significant Deterioration Increments [40 CFR 49.155 (a) (7) (ii)]

- (1) The emission units subject to this construction permit shall not cause or contribute to a violation of any National Ambient Air Quality Standard (NAAQS) or to a violation of a Prevention of Significant Deterioration (PSD) increment.

(I) Submittals

- (1) Unless otherwise directed by the EPA or this permit, the permittee shall submit a copy of all test plans, reports, certifications, notifications and other information pertaining to compliance with this permit to:

Tribal Air Enforcement Coordinator
Air Compliance and Enforcement Section (ACES)
Air Permitting and Compliance Branch
Air and Waste Management Division
U.S. Environmental Protection Agency, Region 7
11201 Renner Boulevard
Lenexa, KS 66219

- (2) The permittee shall submit permit applications, applications for permit amendments, and other applicable permit information, which includes but is not limited to applications and information regarding installation of control equipment, replacement of an emissions unit, and requests for changes that contravene current permit terms, to:

Tribal Air Permits Coordinator
Air Permitting and Compliance Branch (APCO)
Air and Waste Management Division
U.S. Environmental Protection Agency, Region 7
11201 Renner Boulevard
Lenexa, KS 66219

(J) Severability

- (1) The terms and conditions in this permit are distinct and severable. Each permit term and condition is independent of the permit as a whole and remains valid regardless of a challenge to any other part of this permit. If any term or condition in this permit is held invalid, such invalidity shall not affect the validity or application of other terms or conditions.

(K) Entry and Inspection

- (1) Upon presentation of proper credentials, you, as the permittee, shall allow a representative of the EPA to:
- i. Enter upon your premises where a source is located or emissions-related activity is conducted or where records are required to be kept under the conditions of the permit;
 - ii. Have access to and copy, at reasonable times, any records that are required to be kept under the conditions of the permit;
 - iii. Inspect, during normal business hours or while the source is in operation, any facilities, equipment (including monitoring and air pollution control equipment), practices or operations regulated or required under the permit;
 - iv. Sample or monitor, at reasonable times, substances or parameters for the purpose of assuring compliance with the permit or other applicable requirements; and
 - v. Record any inspection by use of written, electronic, magnetic and photographic media.

(L) Circumvention

- (1) The permittee shall not build, erect, install or use any article, machine, equipment or process, the use of which conceals any emission which would otherwise constitute a violation of an applicable standard.

(M) Reservation

- (1) The permit does not convey any property rights of any sort or any exclusive privilege.

(N) Permit Revision, Reopening, Revocation and Reissuance, or Termination

- (1) EPA may revise, reopen, revoke and reissue, or terminate this permit for cause. The EPA may reopen this permit for a cause on its own initiative, e.g., if this permit contains a material mistake or the permittee fails to assure compliance with the applicable requirements.
 - (2) The filing by the permittee of a request for a permit revision, revocation and reissuance, or termination or of a notification of planned changes or anticipated noncompliance does not stay any permit condition.
 - (3) The permittee shall furnish to the reviewing authority, within a reasonable time, any information that the reviewing authority may request in writing to determine whether cause exists for revising, revoking and reissuing or terminating the permit or to determine compliance with the permit. For any such information claimed to be confidential, you must also submit a claim of confidentiality in accordance with 40 CFR Part 2, Public Information, Subpart B—Confidentiality of Business Information.
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