Minnesota Pollution Control Agency

Air Individual Permit
Part 70 Reissuance
10300014-101

Permittee: **Alumacraft Boat Co**

Facility name: **Alumacraft Boat Co**
315 Saint Julien St W
St. Peter, MN 56082
Nicollet County

Expiration date: September 19, 2021
* All Title I Conditions do not expire

Part 70 Reissuance: September 19, 2016

Permit characteristics: Federal; Part 70/ Limits to avoid NSR

*The Permittee may continue to operate this facility after the expiration date of the permit, per the provision under Minn. R. 7007.0450, subp. 3.

The emission units, control equipment and emission stacks at the stationary source authorized in this permit reissue are as described in the Permit Applications Table.

This permit reissue supersedes Air Emission Permit No. 10300014-003 and authorizes the Permittee to operate the stationary source at the address listed above unless otherwise noted in the permit. The Permittee must comply with all the conditions of the permit. Any changes or modifications to the stationary source must be performed in compliance with Minn. R. 7007.1150 to 7007.1500. Terms used in the permit are as defined in the state air pollution control rules unless the term is explicitly defined in the permit.

Unless otherwise indicated, all the Minnesota rules cited as the origin of the permit terms are incorporated into the SIP under 40 CFR § 52.1220 and as such as are enforceable by EPA Administrator or citizens under the Clean Air Act.

Signature: Carolina Espejel-Schutt

This document has been electronically signed.

for the Minnesota Pollution Control Agency

for Don Smith, P.E., Manager
Air Quality Permits Section
Industrial Division

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1. Permit applications table

Subsequent permit applications:

Title description	Application receipt date	Action number
Part 70 Reissuance	12/15/2014, with supplemental information received on 7/7/2016	10300014-101

2. Where to send submittals

Send submittals that are required to be submitted to the U.S. EPA regional office to:

Chief Air Enforcement
Air and Radiation Branch
EPA Region V
77 West Jackson Boulevard
Chicago, Illinois 60604

Each submittal must be postmarked or received by the date specified in the applicable Table. Those submittals required by Minn. R. 7007.0100 to 7007.1850 must be certified by a responsible official, defined in Minn. R. 7007.0100, subp. 21. Other submittals shall be certified as appropriate if certification is required by an applicable rule or permit condition.

Send submittals that are required by the Acid Rain Program to:

U.S. Environmental Protection Agency
Clean Air Markets Division
1200 Pennsylvania Avenue NW (6204N)
Washington, D.C. 20460

Send any application for a permit or permit amendment to:

Fiscal Services – 6th Floor
Minnesota Pollution Control Agency
520 Lafayette Road North
St. Paul, Minnesota 55155-4194

Also, where required by an applicable rule or permit condition, send to the Permit Document Coordinator notices of:

a. Accumulated insignificant activities
b. Installation of control equipment
c. Replacement of an emissions unit, and
d. Changes that contravene a permit term

Unless another person is identified in the applicable Table, send all other submittals to:

AQ Compliance Tracking Coordinator
Industrial Division
Minnesota Pollution Control Agency
520 Lafayette Road North
St. Paul, Minnesota 55155-4194

3. Facility description

The Alumacraft Boat Co (Facility) is located at 315 Saint Julien St W in St. Peter, MN, Nicollet County, Minnesota.

The Facility manufactures aluminum recreational boats. The facility consists of the manufacturing plant, shipping building, and boat storage yard. The operations performed include stretching, shearing, sawing, punching, routing, bending, plasma-arc cutting, forming, notching, and piercing of aluminum sheet and coil. Some of the aluminum parts are cleaned, and then artificially age hardened in an oven before they are sent to the assembly areas. The parts are then assembled into boat/canoe hulls which are then solvent-cleaned, primed, and painted. Various aluminum and wood parts are covered with carpet at one of the several gluing stations. Various painted, carpeted, and purchased parts are installed in the final assembly areas.

The emission sources are three paint booths, gluing operations, solvent cleaning, natural gas oven, air make-up unit, sander for aluminum surface preparation, and routing equipment for wood and aluminum cutting. The Facility also has a number of small combustion units and an aluminum sander that qualify as insignificant activities. Pollution control equipment at the Facility includes panel filters on each of the paint booths, water curtain for the sander, and a baghouse for the routing equipment.

4. Summary of subject items

SI ID: Description	Relationship Type	Related SI ID: Description
ACTV3: All IA's		
COMG1: VOC and PM Limits	has members	EQUI1, EQUI2, EQUI3, EQUI4, EQUI5, EQUI7, EQUI8, EQUI9
COMG2: NESHAP Subp VVVV Requirements	has members	EQUI1, EQUI2, EQUI3, EQUI4, EQUI5, EQUI7, EQUI8, EQUI9
COMG5: Spray Booth Panel Filters	has members	TREA6, TREA7, TREA8
EQUI10: Air Makeup Unit 4	sends to	STRU3: Air Makeup Unit 4, Gluing, and Solvent Operations
EQUI12: Router 1	is controlled by	TREA11: Fabric Filter for Routers
EQUI13: Router 2	is controlled by	TREA11: Fabric Filter for Routers
EQUI14: Router 3	is controlled by	TREA11: Fabric Filter for Routers
EQUI15: Sander 1	is controlled by	TREA12: Water Curtain for Sander
EQUI16: Oven 4	sends to	STRU8: Oven 4
EQUI1: Spray Gun Cleaning	sends to	STRU3: Air Makeup Unit 4, Gluing, and Solvent Operations
EQUI2: Gluing Sub Assembly	sends to	STRU3: Air Makeup Unit 4, Gluing, and Solvent Operations
EQUI3: Gluing Floor Assembly	sends to	STRU3: Air Makeup Unit 4, Gluing, and Solvent Operations
EQUI4: Gluing Hull Prep	sends to	STRU3: Air Makeup Unit 4, Gluing, and Solvent Operations
EQUI5: Solvent Wipe Down		
EQUI7: Paint Booth 2	sends to	STRU5: Paint Booth 2
EQUI7: Paint Booth 2	is controlled by	TREA6: Split Paper + Polyester Paint Arrestor
EQUI8: Paint Booth 3	sends to	STRU6: Paint Booth 3
EQUI8: Paint Booth 3	is controlled by	TREA7: Split Paper + Polyester Paint Arrestor
EQUI9: Paint Booth 4	sends to	STRU7: Paint Booth 4
EQUI9: Paint Booth 4	is controlled by	TREA8: Split Paper + Polyester Paint Arrestor
STRU1: Main Production Area		
STRU2: Storage Building		
STRU3: Air Makeup Unit 4, Gluing, and Solvent Operations	receives from	EQUI5: Solvent Wipe Down
STRU5: Paint Booth 2		
STRU6: Paint Booth 3		
STRU7: Paint Booth 4		
STRU8: Oven 4		
STRU9: Router 1, 2, and 3	receives from	EQUI12: Router 1
STRU9: Router 1, 2, and 3	receives from	EQUI13: Router 2
STRU9: Router 1, 2, and 3	receives from	EQUI14: Router 3
TFAC1: Alumacraft Boat Co		
TREA11: Fabric Filter for Routers		
TREA12: Water		

SI ID: Description	Relationship Type	Related SI ID: Description
Curtain for Sander		
TREA6: Split Paper + Polyester Paint Arrestor		
TREA7: Split Paper + Polyester Paint		

SI ID: Description	Relationship Type	Related SI ID: Description
Arrestor		
TREA8: Split Paper + Polyester Paint Arrestor		

5. Limits and other requirements

Subject Item	Sec.SI.Reqt	SI des:SI desc	Requirement & Citation
TFAC 1	10300014	Alumacraft Boat Co	
	5.1.1		Permit Appendices: This permit contains appendices as listed in the permit Table of Contents. The Permittee shall comply with all requirements contained in Appendices A, B, and C of this permit. [Minn. R. 7007.0800, subp. 2]
	5.1.2		PERMIT SHIELD: Subject to the limitations in Minn. R. 7007.1800, compliance with the conditions of this permit shall be deemed compliance with the specific provision of the applicable requirement identified in the permit as the basis of each condition. Subject to the limitations of Minn. R. 7007.1800 and 7017.0100, subp. 2, notwithstanding the conditions of this permit specifying compliance practices for applicable requirements, any person (including the Permittee) may also use other credible evidence to establish compliance or noncompliance with applicable requirements. This permit shall not alter or affect the liability of the Permittee for any violation of applicable requirements prior to or at the time of permit issuance. [Minn. R. 7007.1800, (A)(2)]
	5.1.3		The Permittee shall comply with National Primary and Secondary Ambient Air Quality Standards, 40 CFR pt. 50, and the Minnesota Ambient Air Quality Standards, Minn. R. 7009.0010 to 7009.0080. Compliance shall be demonstrated upon written request by the MPCA. [Minn. R. 7007.0100, subp. 7(A), 7(L), & 7(M), Minn. R. 7007.0800, subp. 4, Minn. R. 7007.0800, subps. 1-2, Minn. Stat. 116.07, subd. 4a, Minn. Stat. 116.07, subd. 9]
	5.1.4		Circumvention: Do not install or use a device or means that conceals or dilutes emissions, which would otherwise violate a federal or state air pollution control rule, without reducing the total amount of pollutant emitted. [Minn. R. 7011.0020]
	5.1.5		Air Pollution Control Equipment: Operate all pollution control equipment whenever the corresponding process equipment and emission units are operated. [Minn. R. 7007.0800, subp. 16(J), Minn. R. 7007.0800, subp. 2]
	5.1.6		Operation and Maintenance Plan: Retain at the stationary source an operation and maintenance plan for all air pollution control equipment. At a minimum, the O & M plan shall identify all air pollution control equipment and control practices and shall include a preventative maintenance program for the equipment and practices, a description of (the minimum but not necessarily the only) corrective actions to be taken to restore the equipment and practices to proper operation to meet applicable permit conditions, a description of the employee training program for proper operation and maintenance of the control equipment and practices, and the records kept to demonstrate plan implementation. [Minn. R.

Subject Item	Sec.SI.Reqt	SI des:SI desc	Requirement & Citation
			7007.0800, subp. 14, Minn. R. 7007.0800, subp. 16(J)]
	5.1.7		Operation Changes: In any shutdown, breakdown, or deviation the Permittee shall immediately take all practical steps to modify operations to reduce the emission of any regulated air pollutant. The Commissioner may require feasible and practical modifications in the operation to reduce emissions of air pollutants. No emissions units that have an unreasonable shutdown or breakdown frequency of process or control equipment shall be permitted to operate. [Minn. R. 7019.1000, subp. 4]
	5.1.8		Fugitive Emissions: Do not cause or permit the handling, use, transporting, or storage of any material in a manner which may allow avoidable amounts of particulate matter to become airborne. Comply with all other requirements listed in Minn. R. 7011.0150. [Minn. R. 7011.0150]
	5.1.9		Noise: The Permittee shall comply with the noise standards set forth in Minn. R. 7030.0010 to 7030.0080 at all times during the operation of any emission units. This is a state only requirement and is not enforceable by the EPA Administrator or citizens under the Clean Air Act. [Minn. R. 7030.0010-7030.0080]
	5.1.10		Inspections: The Permittee shall comply with the inspection procedures and requirements as found in Minn. R. 7007.0800, subp. 9(A). [Minn. R. 7007.0800, subp. 9(A)]
	5.1.11		The Permittee shall comply with the General Conditions listed in Minn. R. 7007.0800, subp. 16. [Minn. R. 7007.0800, subp. 16]
	5.1.12		Monitoring Equipment Calibration - The Permittee shall either: 1. Calibrate or replace required monitoring equipment every 12 months; or 2. Calibrate at the frequency stated in the manufacturer's specifications. For each monitor, the Permittee shall maintain a record of all calibrations, including the date conducted, and any corrective action that resulted. The Permittee shall include the calibration frequencies, procedures, and manufacturer's specifications (if applicable) in the Operations and Maintenance Plan. Any requirements applying to continuous emission monitors are listed separately in this permit. [Minn. R. 7007.0800, subp. 4(D)]
	5.1.13		Operation of Monitoring Equipment: Unless noted elsewhere in this permit, monitoring a process or control equipment connected to that process is not necessary during periods when the process is shutdown, or during checks of the monitoring systems, such as calibration checks and zero and span adjustments. If monitoring records are required, they should reflect any such periods of process shutdown or checks of the monitoring system. [Minn. R. 7007.0800, subp. 4(D)]
	5.1.14		Recordkeeping: Retain all records at the stationary source,

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			unless otherwise specified within this permit, for a period of five (5) years from the date of monitoring, sample, measurement, or report. Records which must be retained at this location include all calibration and maintenance records, all original recordings for continuous monitoring instrumentation, and copies of all reports required by the permit. Records must conform to the requirements listed in Minn. R. 7007.0800, subp. 5(A). [Minn. R. 7007.0800, subp. 5(C)]
	5.1.15		Recordkeeping: Maintain records describing any insignificant modifications (as required by Minn. R. 7007.1250, subp. 3) or changes contravening permit terms (as required by Minn. R. 7007.1350, subp. 2), including records of the emissions resulting from those changes. [Minn. R. 7007.0800, subp. 5(B)]
	5.1.16		If the Permittee determines that no permit amendment or notification is required prior to making a change, the Permittee must retain records of all calculations required under Minn. R. 7007.1200. [For expiring permits, these records shall be kept for a period of five years from the date the change was made or until permit reissuance, whichever is longer.][For non-expiring permits, these records shall be kept for a period of five years from the date that the change was made.] The records shall be kept at the stationary source for the current calendar year of operation and may be kept at the stationary source or office of the stationary source for all other years. The records may be maintained in either electronic or paper format. [Minn. R. 7007.1200, subp. 4]
	5.1.17		Shutdown Notifications: Notify the Commissioner at least 24 hours in advance of a planned shutdown of any control equipment or process equipment if the shutdown would cause any increase in the emissions of any regulated air pollutant. If the owner or operator does not have advance knowledge of the shutdown, notification shall be made to the Commissioner as soon as possible after the shutdown. However, notification is not required in the circumstances outlined in Items A, B and C of Minn. R. 7019.1000, subp. 3. At the time of notification, the owner or operator shall inform the Commissioner of the cause of the shutdown and the estimated duration. The owner or operator shall notify the Commissioner when the shutdown is over. [Minn. R. 7019.1000, subp. 3]
	5.1.18		Breakdown Notifications: Notify the Commissioner within 24 hours of a breakdown of more than one hour duration of any control equipment or process equipment if the breakdown causes any increase in the emissions of any regulated air pollutant. The 24-hour time period starts when the breakdown was discovered or reasonably should have been discovered by the owner or operator. However, notification is not required in the circumstances outlined in Items A, B and C of Minn. R. 7019.1000, subp. 2.

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			At the time of notification or as soon as possible thereafter, the owner or operator shall inform the Commissioner of the cause of the breakdown and the estimated duration. The owner or operator shall notify the Commissioner when the breakdown is over. [Minn. R. 7019.1000, subp. 2]
	5.1.19		Notification of Deviations Endangering Human Health or the Environment: As soon as possible after discovery, notify the Commissioner or the state duty officer, either orally or by facsimile, of any deviation from permit conditions which could endanger human health or the environment. [Minn. R. 7019.1000, subp. 1]
	5.1.20		Notification of Deviations Endangering Human Health or the Environment Report: Within 2 working days of discovery, notify the Commissioner in writing of any deviation from permit conditions which could endanger human health or the environment. Include the following information in this written description: 1. the cause of the deviation; 2. the exact dates of the period of the deviation, if the deviation has been corrected; 3. whether or not the deviation has been corrected; 4. the anticipated time by which the deviation is expected to be corrected, if not yet corrected; and 5. steps taken or planned to reduce, eliminate, and prevent reoccurrence of the deviation. [Minn. R. 7019.1000, subp. 1]
	5.1.21		Application for Permit Amendment: If a permit amendment is needed, submit an application in accordance with the requirements of Minn. R. 7007.1150 through Minn. R. 7007.1500. Submittal dates vary, depending on the type of amendment needed. Upon adoption of a new or amended federal applicable requirement, and if there are more than 3 years remaining in the permit term, the Permittee shall file an application for an amendment within nine months of promulgation of the applicable requirement, pursuant to Minn. R. 7007.0400, subp. 3. [Minn. R. 7007.0400, subp. 3, Minn. R. 7007.1150 - 7007.1500]
	5.1.22		Extension Requests: The Permittee may apply for an Administrative Amendment to extend a deadline in a permit by no more than 120 days, provided the proposed deadline extension meets the requirements of Minn. R. 7007.1400, subp. 1(H). Performance testing deadlines from the General Provisions of 40 CFR pt. 60 and pt. 63 are examples of deadlines for which the MPCA does not have authority to grant extensions and therefore do not meet the requirements of Minn. R. 7007.1400, subp. 1(H). [Minn. R. 7007.1400, subp. 1(H)]
	5.1.23		Emission Inventory Report: due on or before April 1 of each calendar year following permit issuance, to be submitted on a form approved by the Commissioner. [Minn. R. 7019.3000-7019.3100]

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	5.1.24		Emission Fees: due 30 days after receipt of an MPCA bill. [Minn. R. 7002.0005-7002.0095]
	5.1.25		This permit establishes limits on the facility to keep it a minor source under New Source Review. The Permittee cannot make any change at the source that would make the source a major source under New Source Review until a permit amendment has been issued. This includes changes that might otherwise qualify as insignificant modifications and minor or moderate amendments. [Minn. R. 7007.3000, Title I Condition: Avoid major modification under 40 CFR 52.21(b)(2), Title I Condition: Avoid major source under 40 CFR 52.21(b)(1)]
	5.1.26		Equipment Labeling: The Permittee shall permanently affix a unique number to each emissions unit for tracking purposes. The numbers shall correlate the unit to the appropriate Subject Item numbers used in this permit. The number can be affixed by placard, stencil, or other means. The number shall be maintained so that it is readable and visible at all times from a safe distance. If equipment is added, it shall be given a new unique number; numbers from replaced or removed equipment shall not be reused. [Minn. R. 7007.0800, subp. 2]
	5.1.27		Equipment Inventory: The Permittee shall maintain a written list of all emissions units and control equipment on site. The Permittee shall update the list to include any replaced, modified, or new equipment prior to making the change. The list shall correlate the units to the Subject Item numbers used in this permit and shall include the data on GI-05A and GI-05B, whichever applies. The date of construction shall be the date the change was made for replaced, modified, or new equipment. [Minn. R. 7007.0800, subp. 2]
COMG 1	GP001	VOC and PM Limits	
	5.2.1		The Permittee shall limit emissions of Volatile Organic Compounds <= 95 tons per year 12-month rolling sum to be calculated by the 15th day of each month for the previous 12-month period as described later in this permit. All VOC-emitting equipment at the Facility except insignificant activities and combustion units are subject to this limit. If the Permittee replaces any existing VOC-emitting equipment, adds new VOC-emitting equipment, or modifies the existing equipment, such equipment is subject to this permit limit as well as all of the requirements COMG 1. Prior to making such a change, the Permittee shall apply for and obtain the appropriate permit amendment, as applicable. The Permittee is not required to complete VOC calculations described in Minn. R. 7007.1200, subp. 2. A permit amendment will still be needed regardless of the emissions increase if the change will be subject to a new applicable requirement or requires revisions to the limits or monitoring and recordkeeping in this permit.

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			VOC contents for each VOC-containing material shall be determined as described under the Material Content requirement in COMG 1. [Title I Condition: Avoid major modification under 40 CFR 52.21(b)(2) and Minn. R. 7007.3000, Title I Condition: Avoid major source under 40 CFR 52.21(b)(1)(i) and Minn. R. 7007.3000]
	5.2.2		The Permittee shall limit emissions of Total Particulate Matter <= 75 tons per year 12-month rolling sum to be calculated by the 15th day of each month for the previous 12-month period as described later in this permit. All PM-emitting coating equipment is subject to this limit. If the Permittee replaces any existing PM-emitting coating equipment, adds new PM-emitting coating equipment, or modifies the existing equipment, such equipment is subject to this permit limit as well as all of the requirements of COMG 1. Prior to making such a change, the Permittee shall apply for and obtain the appropriate permit amendment, as applicable. Solids contents for each material shall be determined as described under the Material Content requirement in COMG 1. [Title I Condition: Avoid major modification under 40 CFR 52.21(b)(2) and Minn. R. 7007.3000, Title I Condition: Avoid major source under 40 CFR 52.21(b)(1)(i) and Minn. R. 7007.3000]
	5.2.3		The Permittee shall limit emissions of PM < 10 micron <= 75 tons per year 12-month rolling sum to be calculated by the 15th day of each month for the previous 12-month period as described later in this permit. All PM10-emitting coating equipment is subject to this limit. If the Permittee replaces any existing PM10-emitting coating equipment, adds new PM10-emitting coating equipment, or modifies the existing equipment, such equipment is subject to this permit limit as well as all of the requirements of COMG 1. Prior to making such a change, the Permittee shall apply for and obtain the appropriate permit amendment, as applicable. Solids contents for each material shall be determined as described under the Material Content requirement in COMG 1. [Title I Condition: Avoid major modification under 40 CFR 52.21(b)(2) and Minn. R. 7007.3000, Title I Condition: Avoid major source under 40 CFR 52.21(b)(1)(i) and Minn. R. 7007.3000]
	5.2.4		The Permittee shall limit emissions of PM < 2.5 micron <= 75 tons per year 12-month rolling sum to be calculated by the 15th day of each month for the previous 12-month period as described later in this permit. All PM2.5-emitting coating equipment at the facility is subject to this limit. If the Permittee replaces any existing PM2.5-emitting coating equipment, adds new PM2.5-emitting coating

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			equipment, or modifies the existing equipment, such equipment is subject to this permit limit as well as all of the requirements of in COMG 1. Prior to making such a change, the Permittee shall apply for and obtain the appropriate permit amendment, as applicable. Solids contents for each material shall be determined as described under the Material Content requirement in COMG 1. [Title I Condition: Avoid major modification under 40 CFR 52.21(b)(2) and Minn. R. 7007.3000, Title I Condition: Avoid major source under 40 CFR 52.21(b)(1)(i) and Minn. R. 7007.3000]
	5.2.5		Weekly Recordkeeping. Once every seven days, the Permittee shall calculate, record, and maintain the total quantity of all coatings and other solids and VOC-containing materials used in all COMG 1 units for the previous week. This shall be based on purchase records. [Minn. R. 7007.0800, subps. 4-5, Title I Condition: Avoid major source under 40 CFR 52.21(b)(1)(i) and Minn. R. 7007.3000]
	5.2.6		Volatile Organic Compounds: Monthly Recordkeeping. By the 15th of the month, the Permittee shall calculate and record the following: 1) The total usage of VOC-containing materials for the previous calendar month using the weekly usage records. This record shall also include the VOC content of each material as determined by the Material Content requirement of this permit; 2) The VOC emissions for the previous month using the formulas specified in this permit; and 3) The 12-month rolling sum VOC emissions for the previous 12-month period by summing the monthly VOC emissions data for the previous 12 months. [Minn. R. 7007.0800, subps. 4-5]
	5.2.7		Volatile Organic Compounds: Monthly Calculations. The Permittee shall calculate VOC emissions using the following equation: VOC (tons/month) = (A1 x B1) + (A2 x B2) + (A3 x B3) + ... where: A# = amount of each VOC-containing material used, in tons/month; and B# = weight percent VOC in A#, as a fraction. [Minn. R. 7007.0800, subps. 4-5]
	5.2.8		Total Particulate Matter: Monthly Recordkeeping. By the 15th of the month, the Permittee shall calculate and record the following:

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			1) The total usage of each solids-containing material for the previous calendar month using the weekly usage records. This record shall also include solids contents of each material as determined by the Material Content requirement of this permit; 2) The Total Particulate emissions for the previous month using the formulas specified in this permit; and 3) The 12-month rolling sum Total Particulate emissions for the previous 12-month period by summing the monthly Total Particulate emissions data for the previous 12 months. [Minn. R. 7007.0800, subps. 4-5]
	5.2.9		Total Particulate Matter: Monthly Calculation. The Permittee shall calculate Total Particulate emissions from the spray booths using the following equation: Total Particulate (tons/month) = S(1-CE)(1-TE) S = (A1 x B1) + (A2 x B2) + (A3 x B3) + ... Where: S = total solids used, in tons/month; CE = overall control efficiency, as a fraction. This shall be 0.92; TE = transfer efficiency, as a fraction. Transfer efficiencies at the time of permit issuance are listed in Appendix B; A# = amount of each solids-containing material sprayed, in tons/month; and B# = weight percent solids in A#, as a fraction. [Minn. R. 7007.0800, subps. 4-5]
	5.2.10		PM < 10 micron: Monthly Recordkeeping. By the 15th of the month, the Permittee shall calculate and record the following: 1) The total usage of each solids-containing material for the previous calendar month using the weekly usage records. This record shall also include solids contents of each material as determined by the Material Content requirement of this permit; 2) The PM10 emissions for the previous month using the formulas specified in this permit; and 3) The 12-month rolling sum PM10 emissions for the previous 12-month period by summing the monthly PM10 emissions data for the previous 12 months. [Minn. R. 7007.0800, subps. 4-5]
	5.2.11		PM < 10 micron: Monthly Calculation. The Permittee shall calculate PM10 emissions from the spray booths using the following equation: PM < 10 micron (tons/month) = S(1-CE)(1-TE)

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			S = (A1 x B1) + (A2 x B2) + (A3 x B3) + ... Where: S = total solids used, in tons/month; CE = overall control efficiency, as a fraction. This shall be 0.92; TE = transfer efficiency, as a fraction. Transfer efficiencies at the time of permit issuance are listed in Appendix B; A# = amount of each solids-containing material sprayed, in tons/month; and B# = weight percent solids in A#, as a fraction. [Minn. R. 7007.0800, subps. 4-5]
	5.2.12		PM < 2.5 micron: Monthly Recordkeeping. By the 15th of the month, the Permittee shall calculate and record the following: 1) The total usage of each solids-containing material for the previous calendar month using the weekly usage records. This record shall also include solids contents of each material as determined by the Material Content requirement of this permit; 2) The PM2.5 emissions for the previous month using the formulas specified in this permit; and 3) The 12-month rolling sum PM2.5 emissions for the previous 12-month period by summing the monthly PM2.5 emissions data for the previous 12 months. [Minn. R. 7007.0800, subps. 4-5]
	5.2.13		PM < 2.5 micron: Monthly Calculation. The Permittee shall calculate PM2.5 emissions from the spray booths using the following equation: PM < 2.5 micron (tons/month) = S(1-CE)(1-TE) S = (A1 x B1) + (A2 x B2) + (A3 x B3) + ... Where: S = total solids used, in tons/month; CE = overall control efficiency, as a fraction. This shall be 0.92; TE = transfer efficiency, as a fraction. Transfer efficiencies at the time of permit issuance are listed in Appendix B; A# = amount of each solids-containing material sprayed, in tons/month; and B# = weight percent solids in A#, as a fraction. [Minn. R. 7007.0800, subps. 4-5]
	5.2.14		Maximum Contents of Materials: The Permittee assumed certain worst-case contents of materials when determining the short term potential to emit of units in COMG 1. These assumptions are listed in Appendix B of this permit. Changing to a material that has a higher content of any of the given pollutants is considered a change in method of operation that must be evaluated under Minn. R. 7007.1200, subp. 3 to

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			determine if a permit amendment or notification is required under Minn. R. 7007.1150. [Minn. R. 7005.0100, subp. 35a]
	5.2.15		Material Content. Solids (PM, PM<10 microns, and PM<2.5 microns) and VOC content in coating and other solids and VOC-containing materials shall be determined by the Safety Data Sheet (SDS) or the Material Safety Data Sheet (MSDS) provided by the supplier for each material used. If a material content range is given on the SDS or the MSDS, the highest number in the range shall be used in all compliance calculations. If information is provided in the Regulatory Section of the SDS, the highest number in the range of that section may be used. When using the MSDS as the basis of calculating particulate emissions, the conservative assumption is made that PM consists entirely of PM less than 10 microns or less than 2.5 microns. Other alternative methods approved by the MPCA may be used to determine solids and VOC content. The Commissioner reserves the right to require the Permittee to determine the solids and VOC content of any material, according to EPA or ASTM reference methods. If an EPA or ASTM reference method is used for material content determination, the data obtained shall supersede the SDS or the MSDS. [Minn. R. 7007.0800, subps. 4-5]
COMG 2	GP003	NESHAP Subp VVVV Requirements	
	5.3.1		HAPs - Organic <= 5.0 percent by weight for carpet and fabric adhesives. Demonstrate compliance with this limit by determining and recording the organic HAP content of the carpet and fabric adhesives using the methods in 40 CFR Section 63.5758. [40 CFR 63.5740(a), Minn. R. 7011.7370]
	5.3.2		HAPs - Organic <= 1.55 kilograms per liter of total coating solids applied from the combined aluminum surface coatings and aluminum wipedown solvents based on a 12-month rolling average to be calculated at the end of every month. This limit applies to the organic HAPs per liter of coating solids applied from aluminum surface coatings and aluminum wipedown solvents (aluminum primers, clear coats, and top coat(s) combined. [40 CFR 63.5743(a)(3), Minn. R. 7011.7370]
	5.3.3		When cleaning aluminum coating spray guns with solvents containing more than 5 percent organic HAP by weight, the Permittee shall disassemble the spray gun and manually clean the components in vat. The Permittee shall keep the vat closed when not in use. [40 CFR 63.5743(b)(2), Minn. R. 7011.7370]
	5.3.4		The Permittee shall visually inspect all solvent containers at least once per month to ensure that the containers have covers and the covers fit with no visible gaps. The Permittee shall keep monthly records of the inspections and any repairs that are made to the covers. [40 CFR 63.5755, Minn. R. 7011.7370]
	5.3.5		Organic HAP Content: The Permittee shall determine and

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			record the organic HAP content (kg of organic HAP per kg of material, or weight fraction) of each aluminum wipedown solvent and aluminum coating (including primers, topcoats, clear coats, thinners, and activators). The Permittee shall use the methods in 40 CFR Section 63.5758 to determine organic HAP content. The Permittee chooses to use information from the supplier or manufacturer (as listed below). [40 CFR 63.5758(a), Minn. R. 7011.7370]
	5.3.6		Organic HAP Content: To determine the organic HAP content for each material used in carpet and fabric adhesive operations or aluminum recreational boat surface coating operations, the Permittee may rely on information from the supplier or manufacturer of the material, according to 40 CFR Section 63.5758(a)(5)(i)-(iii): i) Include in the organic HAP total each organic HAP that is present at 0.1 percent by mass or more for OSHA-defined carcinogens as specified in 29 CFR 1910.1200(d)(4) and at 1.0 percent by mass or more for other compounds. ii) If the organic HAP content is provided by the material supplier or manufacturer as a range, the Permittee must use the upper limit of the range for determining compliance. If a separate measurement of the total organic HAP content using the methods specified in 40 CFR Section 63.5758(a)(1)-(4) exceeds the upper limit of the range of the total organic HAP content provided by the material supplier or manufacturer, the Permittee must use the measured organic HAP content to determine compliance. iii) If the organic HAP content is provided as a single value, the Permittee may assume the value is a manufacturing target value and actual organic HAP content may vary from the target value. If a separate measurement of the total organic HAP content using the methods specified in paragraphs (a)(1) through (4) of this section is less than 2 percentage points higher than the value for total organic HAP content provided by the material supplier or manufacturer, the Permittee may use the provided value to demonstrate compliance. If the measured total organic HAP content exceeds the provided value by 2 percentage points or more, the Permittee must use the measured organic HAP content to determine compliance. [40 CFR 63.5758(a)(5)(i)-(iii), Minn. R. 7011.7370]
	5.3.7		Organic HAP Content: Solvent blends may be listed as single components for some regulated materials in certifications provided by manufacturers or suppliers. Solvent blends may contain organic HAP which must be counted toward the total organic HAP content of the materials. When detailed organic HAP content data for solvent blends are not available, you may use the values for organic HAP content that are listed in Table 5 or 6 to this subpart. The Permittee may use Table 6 to this subpart only if the solvent blends in the materials used do not match any of the solvent blends in Table 5 to this subpart and the Permittee knows only whether the blend is either aliphatic or aromatic. However, if test results indicate higher values

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			than those listed in Table 5 or 6 to this subpart, then the test results must be used for determining compliance. [40 CFR 63.5758(a)(6), Minn. R. 7011.7370]
	5.3.8		Solids Content: The Permittee shall determine and keep records of the solids content (liters of solids per liter of coating volume fraction) of each aluminum surface coating, including primers, topcoats, and clear coats. The Permittee shall use the methods listed in 40 CFR Section 63.5758(b) to determine solids content. [40 CFR 63.5746(b), Minn. R. 7011.7370]
	5.3.9		Solids Content: The Permittee shall determine the volume fraction of coating solids for each aluminum recreation boat surface coating using one of the following methods: 1) Use ASTM Method D2697-86(1998) or D6093-97 to determine the volume fraction of coating solids for each coating. Divide the nonvolatile volume percent obtained with the methods by 100 to calculate volume fraction of coating solids; or 2) Use the volume fraction of coating solids for each coating from the supplier or manufacturer If the results obtained with method (2) does not agree with those obtained according to method (1), the Permittee shall use the results obtained with method (1) to determine compliance. [40 CFR 63.5758(b), Minn. R. 7011.7370]
	5.3.10		Density: The Permittee shall determine the density of each aluminum surface coating and wipedown solvent using the methods in 40 CFR Section 63.5758(c). [40 CFR 63.5746(c), Minn. R. 7011.7370]
	5.3.11		Density: The Permittee shall use test results from ASTM Method D1475-90, information from the supplier or manufacturer of the material, or reference sources providing density or specific gravity data for pure materials to determine the density of each aluminum recreational boat wipedown solvent, surface coating, thinner, and other additive. If there is disagreement between ASTM Method D1475-90 test results and other information sources, the Permittee shall use the test results to demonstrate compliance. [40 CFR 63.5758(c), Minn. R. 7011.7370]
	5.3.12		The Permittee shall calculate the organic HAP from aluminum wipedown solvents per liter of coating solids using Equation 1 of Appendix C and calculate the kilograms of organic HAP from aluminum coatings per liter of coating solids using Equation 2 of Appendix C. The Permittee shall keep records of the calculations used to determine compliance. [40 CFR 63.5746(e)&(f), Minn. R. 7011.7370]
	5.3.13		The Permittee shall calculate the combined weighted-average organic HAP content of aluminum wipedown solvents and aluminum recreational boat surface coatings using Equation 3 in Appendix C of the permit. The Permittee is in compliance with the emission limit if the 12-month rolling average combined organic HAP content does not exceed 1.55 kg of organic HAP per liter of total coating

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			solids. [40 CFR 63.5753(a)&(b), Minn. R. 7011.7370]
	5.3.14		The Permittee shall maintain the following records: 1) Copies of each notification and report submitted to comply with the subpart; 2) Documentation supporting any notification or report submitted; 3) Records of the total amount of each aluminum coating used per month (including primers, top coats, clear coats, thinners, and activators) and the weighted-average organic HAP content as determined in 40 CFR Section 63.5752 (Equation 2 of Appendix C); and 4) Records of the total amount of aluminum wipedown solvent used per month and the weighted-average organic HAP content as determined in 40 CFR Section 63.5749 (Equation 1 of Appendix C). [40 CFR 63.5767(a)-(c), Minn. R. 7011.7370]
	5.3.15		The Permittee must keep each record for 5 years following the date that each record is generated. The records must be kept on site for at least 2 years after the date that it is generated, and then may be kept offsite for the remaining 3 years. The records may be kept on paper or alternative formats such as microfilm, computer, computer disks, magnetic tapes, or on microfiche. Each record must be readily available and in a form that is easily inspected and reviewed. [40 CFR 63.5770, Minn. R. 7011.7370]
	5.3.16		The Permittee shall submit a semiannual compliance report : Due semiannually after 08/23/2005, by the 30th of January and July. The first semiannual compliance report shall cover the first calendar half-year in which the permit was issued. The first report of each calendar year covers January 1 - June 30. The second report of each calendar year covers July 1 - December 31. This report may be submitted with the Semiannual Deviations Report. See Section 5 for contents of semiannual compliance report. [40 CFR 63.5764, Minn. R. 7011.7370]
	5.3.17		Contents of Semiannual Compliance Report: 1) Company name and address; 2) A statement by a responsible official with that official's name, title, and signature, certifying the truth, accuracy, and completeness of the report; 3) The date of the report and the beginning and ending dates of the reporting period; 4) A description of any changes in the manufacturing process since the last compliance report; 5) A statement or table showing, for each regulated operation, the applicable organic HAP content limit, application equipment requirement, or MACT model point value averaging provision with which the Permittee complying. The statement or table must also show the actual weighted-average organic HAP content or weighted-average MACT model point value (if applicable) for each operation during each of the rolling 12-month averaging periods that end during the reporting period; 6) A statement as to whether or not the Permittee was in

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			compliance with the emissions limits and work practice standards during the reporting period; and 7) If the Permittee deviated from an emission limit or work practice standard during the reporting period, the Permittee must also include the information in (i)-(iv) below: (i) A description of the operation involved in the deviation; (ii) The quantity, organic HAP content, and application method (if relevant) of the materials involved in the deviation; (iii) A description of any corrective action the Permittee took to minimize the deviation and actions the Permittee have taken to prevent it from happening again; and (iv) A statement of whether or not the facility was in compliance for the 12-month averaging period that ended at the end of the reporting period. [40 CFR 63.5764(c), Minn. R. 7011.7370]
	5.3.18		The Permittee shall comply with the requirements of the General Provisions in 40 CFR part 63, subpart A, as specific in Table 8 to this subpart, with the exception of 40 CFR Sections 63.6(f)(1) and (h)(1). As of permit issuance, these sections are null and void. [Minn. R. 7011.7370,]
	5.3.19		Circumvention. The Permittee shall not build, erect, install, or use any article, machine, equipment, or process to conceal an emission that would otherwise constitute noncompliance with a relevant standard. Such concealment includes, but is not limited to: (1) The use of diluents to achieve compliance with a relevant standard based on the concentration of a pollutant in the effluent discharged to the atmosphere; or (2) The use of gaseous diluents to achieve compliance with a relevant standard for visible emissions. [40 CFR 63.4(b), Minn. R. 7011.7000]
	5.3.20		After the effective date of any relevant standard promulgated by the Administrator under 40 CFR pt. 63, equipment added (or a process change) to an affected source that is within the scope of the definition of affected source under the relevant standard must be considered part of the affected source and subject to all provisions of the relevant standard established for that affected source. [40 CFR 63.5(b), Minn. R. 7011.7000]
	5.3.21		Proper Operation and Maintenance: At all times, including periods of startup, shutdown and malfunction, the Permittee shall operate and maintain the emission unit subject to the MACT standard and its associated air pollution control and monitoring equipment in a manner consistent with safety and good air pollution control practices for minimizing emissions at least to the levels required by all relevant standards. [40 CFR 63.6(e)(1)(i) & Minn. R. 7011.7000]
	5.3.22		Malfunctions shall be corrected as soon as practicable after their occurrence. [40 CFR 63.6(e)(1)(ii) & Minn. R. 7011.7000]
	5.3.23		Recordkeeping: The Permittee shall maintain files of all information required by 40 CFR pt. 63 in a form suitable and

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			readily available for expeditious inspection and review. The files should be retained for at least 5 years following the date of each occurrence, measurement, maintenance, corrective action, report, or record. Only the most recent two years of information must be kept on site. [40 CFR 63.10(b)(1), Minn. R. 7019.0100, subp. 2(B)]
	5.3.24		Prior to construction or reconstruction of a major-emitting "affected source" under the promulgated MACT standards, the Permittee must apply for and obtain an air emission permit. [40 CFR 63.5(b)(3)& Minn. R. 7011.7000]
COMG 5		Spray Booth Panel Filters	
	5.4.1		The Permittee shall operate and maintain control equipment such that it achieves a control efficiency for Total Particulate Matter >= 92 percent control efficiency. [CAAA of 1990, Minn. R. 7007.0100, subps. 7(A) & (B), Minn. R. 7007.0800, subps.1&2, Minn. Stat. 116.07, subds.4a&9]
	5.4.2		The Permittee shall operate and maintain control equipment such that it achieves a control efficiency for PM < 10 micron >= 92 percent control efficiency. [CAAA of 1990, Minn. R. 7007.0100, subps. 7(A) & (B), Minn. R. 7007.0800, subps.1&2, Minn. Stat. 116.07, subds.4a&9]
	5.4.3		The Permittee shall operate and maintain control equipment such that it achieves a control efficiency for PM < 2.5 micron >= 92 percent control efficiency. [CAAA of 1990, Minn. R. 7007.0100, subps. 7(A) & (B), Minn. R. 7007.0800, subps. 1&2, Minn. Stat. 116.07, subds.4a&9]
	5.4.4		The Permittee shall vent emissions from all spray booths, including existing, modified, or new spray booths, to panel filters meeting the permit requirements for COMG 5. [Title I Condition: Avoid major modification under 40 CFR 52.21(b)(2) and Minn. R. 7007.3000, Title I Condition: Avoid major source under 40 CFR 52.21(b)(1)(i) and Minn. R. 7007.3000]
	5.4.5		If the Permittee replaces any existing panel filter, adds new panel filters, or modifies the panel filters listed in COMG 5, such equipment is subject to all of the requirements of COMG 5. Prior to making such a change, the Permittee shall apply for and obtain the appropriate permit amendment, as applicable. [Title I Condition: Avoid major modification under 40 CFR 52.21(b)(2) and Minn. R. 7007.3000, Title I Condition: Avoid major source under 40 CFR 52.21(b)(1)(i) and Minn. R. 7007.3000]
	5.4.6		Documentation of Need for Improved Monitoring: If the Permittee fails to achieve compliance with an emission limitation or standard for which the monitoring did not provide an indication of an excursion or exceedance while providing valid data, or the results of compliance or performance testing document a need to modify the existing pressure drop range, the Permittee shall promptly notify the

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			MPCA and, if necessary, submit a permit amendment application to address the necessary monitoring change. [40 CFR 64.7(e), Minn. R. 7017.0200]
	5.4.7		As required by 40 CFR Section 64.9(a)(2), for the Semi-Annual Deviations Report required by this permit and/or the Notification of Deviations Endangering Human Health and the Environment required by this permit, as applicable, the Permittee shall include the following related to the monitoring identified as required by 40 CFR pt. 64: 1) Summary information on the number, duration, and cause of excursions or exceedances, as applicable, and the corrective action taken; and 2) Summary information on the number, duration, and cause for monitor downtime incidents. [40 CFR 64.9(a)(2), Minn. R. 7017.0200]
	5.4.8		The Permittee shall maintain records of monitoring data, monitor performance data, corrective actions taken, and other supporting information required to be maintained. The Permittee may maintain records on alternative media, such as microfilm, computer files, magnetic tape disks, or microfiche, provided that the use of such alternative media allows for expeditious inspection and review, and does not conflict with other applicable recordkeeping requirements. [40 CFR 64.9(b), Minn. R. 7017.0200]
	5.4.9		The Permittee shall operate and maintain the panel filter in accordance with the Operation and Maintenance (O & M) Plan. The Permittee shall keep copies of the O & M Plan available onsite for use by staff and MPCA staff. [Minn. R. 7007.0800, subp. 14]
	5.4.10		Daily Inspections: At least once per 24-hour period, the Permittee shall visually inspect the condition of the panel filter with respect to alignment, saturation, tears, holes and any other matter that may affect the filter's performance. The Permittee shall record the time and date of each inspection and any actions resulting from the inspection. [40 CFR 64.3, Minn. R. 7017.0200, Title I Condition: Avoid major source under 40 CFR 52.21(b)(1)(i) and Minn. R. 7007.3000]
	5.4.11		Periodic Inspections: The Permittee shall inspect the control equipment components as required by the manufacturing specifications. The Permittee shall maintain a written record of these inspections. [40 CFR 64.3, Minn. R. 7017.0200]
	5.4.12		Corrective Actions: The Permittee shall take corrective action as soon as possible if the panel filter or any of its components are found during the inspections to need repair. Corrective actions shall include completion of necessary repairs identified during the inspection, as applicable. Corrective actions include, but are not limited to, those outlined in the O & M Plan for the panel filter. The Permittee shall keep a record of the type and date of any corrective action taken for the panel filter. [40 CFR 64.7(d)]

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EQUI 7	EU003	Paint Booth 2	
	5.5.1		The Permittee shall limit emissions of Volatile Organic Compounds <= 30 tons per year 12-month rolling sum to be calculated by the 15th day of each month for the previous 12-month period as described later in this permit. VOC contents for each VOC-containing material shall be determined as described under the Material Content requirement in COMG 1. [CAAA of 1990, Minn. R. 7007.0100, subps. 7(A) & (B), Minn. R. 7007.0800, subps.1&2, Minn. Stat. 116.07, subds.4a&9]
	5.5.2		Opacity <= 20 percent opacity. [Minn. R. 7011.0715, subp. 1(B)]
	5.5.3		Total Particulate Matter <= 0.30 grains per dry standard cubic foot of exhaust gas unless required to further reduce emissions to comply with the less stringent limit of either Minn. R. 7011.0730 or Minn. R. 7011.0735. [Minn. R. 7011.0715, subp. 1(A)]
	5.5.4		Paint Booth Total Enclosure: Paint booth doors must be closed during all spray painting and coating operations. [CAAA of 1990, Minn. R. 7007.0100, subps. 7(A) & (B), Minn. R. 7007.0800, subps. 1&2, Minn. Stat. 116.07, subds.4a&9]
	5.5.5		Transfer Efficiency: The Permittee shall use a coating application method with at least 75 percent transfer efficiency. [CAAA of 1990, Minn. R. 7007.0100, subps. 7(A) & (B), Minn. R. 7007.0800, subps. 1&2, Minn. Stat. 116.07, subds.4a&9]
	5.5.6		Recordkeeping: The Permittee shall maintain records documenting the transfer efficiency of each coating application method used in EQUI 7. [CAAA of 1990, Minn. R. 7007.0100, subps. 7(A) & (B), Minn. R. 7007.0800, subps. 1&2, Minn. Stat. 116.07, subds.4a&9]
	5.5.7		The Permittee shall vent emissions from all EQUI 7 to control equipment meeting the requirements of COMG 5. [Title I Condition: Avoid major source under 40 CFR 52.21(b)(1)(i) and Minn. R. 7007.3000]
	5.5.8		Weekly Recordkeeping. Once every seven days, the Permittee shall calculate, record, and maintain the total quantity of all coatings and other VOC-containing materials used in EQUI 7 for the previous week. This shall be based on purchase records. [CAAA of 1990, Minn. R. 7007.0100, subps. 7(A) & (B), Minn. R. 7007.0800, subps. 1&2, Minn. Stat. 116.07, subds.4a&9]
	5.5.9		Volatile Organic Compounds: Monthly Calculations. The Permittee shall calculate VOC emissions using the following equation: VOC (tons/month) = V V = (A1 x B1) + (A2 x B2) + (A3 x B3) + ... where: V = total VOC used in tons/month;

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			A# = amount of each VOC-containing material used, in tons/month; and B# = weight percent VOC in A#, as a fraction. [Minn. R. 7007.0800, subps. 4-5]
	5.5.10		Volatile Organic Compounds: Monthly Recordkeeping. By the 15th of the month, the Permittee shall calculate and record the following: 1) The total usage of VOC-containing materials for the previous calendar month using records obtained from weekly usage records. This record shall also include the VOC content of each material as determined by the Material Content requirement under COMG 1 of this permit; 2) The VOC emissions for the previous month using the formulas specified in this permit; and 3) The 12-month rolling sum VOC emissions for the previous 12-month period by summing the monthly VOC emissions data for the previous 12 months. [Minn. R. 7007.0800, subps. 4-5]
EQUI 8	EU004	Paint Booth 3	
	5.6.1		The Permittee shall limit emissions of Volatile Organic Compounds <= 30 tons per year 12-month rolling sum to be calculated by the 15th day of each month for the previous 12-month period as described later in this permit. VOC contents for each VOC-containing material shall be determined as described under the Material Content requirement in COMG 1. [CAAA of 1990, Minn. R. 7007.0100, subps. 7(A) & (B), Minn. R. 7007.0800, subps. 1&2, Minn. Stat. 116.07, subds.4a&9]
	5.6.2		Opacity <= 20 percent opacity. [Minn. R. 7011.0715, subp. 1(B)]
	5.6.3		Total Particulate Matter <= 0.30 grains per dry standard cubic foot of exhaust gas unless required to further reduce emissions to comply with the less stringent limit of either Minn. R. 7011.0730 or Minn. R. 7011.0735. [Minn. R. 7011.0715, subp. 1(A)]
	5.6.4		Paint Booth Total Enclosure: Paint booth doors must be closed during all spray painting and coating operations. [CAAA of 1990, Minn. R. 7007.0100, subps. 7(A) & (B), Minn. R. 7007.0800, subps. 1&2, Minn. Stat. 116.07, subds.4a&9]
	5.6.5		Transfer Efficiency: The Permittee shall use a coating application method with at least 75 percent transfer efficiency. [CAAA of 1990, Minn. R. 7007.0100, subps. 7(A) & (B), Minn. R. 7007.0800, subps. 1&2, Minn. Stat. 116.07, subds.4a&9]
	5.6.6		Recordkeeping: The Permittee shall maintain records documenting the transfer efficiency of each coating application method used in EQUI 8. [CAAA of 1990, Minn. R. 7007.0100, subps. 7(A) & (B), Minn. R. 7007.0800, subps. 1&2, Minn. Stat. 116.07, subds.4a&9]
	5.6.7		The Permittee shall vent emissions from EQUI 8 to control

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			equipment meeting the requirements of COMG 5. [Title I Condition: Avoid major source under 40 CFR 52.21(b)(1)(i) and Minn. R. 7007.3000]
	5.6.8		Weekly Recordkeeping. Once every seven days, the Permittee shall calculate, record, and maintain the total quantity of all coatings and other VOC-containing materials used in EQUI 8 for the previous week. This shall be based on purchase records. [CAAA of 1990, Minn. R. 7007.0100, subps. 7(A) & (B), Minn. R. 7007.0800, subps. 1&2, Minn. Stat. 116.07, subds.4a&9]
	5.6.9		Volatile Organic Compounds: Monthly Calculations. The Permittee shall calculate VOC emissions using the following equation: VOC (tons/month) = V V = (A1 x B1) + (A2 x B2) + (A3 x B3) + ... where: V = total VOC used in tons/month; A# = amount of each VOC-containing material used, in tons/month; and B# = weight percent VOC in A#, as a fraction; [Minn. R. 7007.0800, subps. 4-5]
	5.6.10		Volatile Organic Compounds: Monthly Recordkeeping. By the 15th of the month, the Permittee shall calculate and record the following: 1) The total usage of VOC-containing materials for the previous calendar month using records obtained from weekly usage records. This record shall also include the VOC content of each material as determined by the Material Content requirement under COMG 1 of this permit; 2) The VOC emissions for the previous month using the formulas specified in this permit; and 3) The 12-month rolling sum VOC emissions for the previous 12-month period by summing the monthly VOC emissions data for the previous 12 months. [Minn. R. 7007.0800, subps. 4-5]
EQUI 9	EU010	Paint Booth 4	
	5.7.1		The Permittee shall limit emissions of Volatile Organic Compounds <= 25 tons per year 12-month rolling sum to be calculated by the 15th day of each month for the previous 12-month period as described later in this permit. VOC contents for each VOC-containing material shall be determined as described under the Material Content requirement in COMG 1. [CAAA of 1990, Minn. R. 7007.0100, subps. 7(A) & (B), Minn. R. 7007.0800, subps. 1&2, Minn. Stat. 116.07, subds.4a&9]

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	5.7.2		Opacity <= 20 percent opacity. [Minn. R. 7011.0715, subp. 1(B)]
	5.7.3		Total Particulate Matter <= 0.30 grains per dry standard cubic foot of exhaust gas unless required to further reduce emissions to comply with the less stringent limit of either Minn. R. 7011.0730 or Minn. R. 7011.0735. [Minn. R. 7011.0715, subp. 1(A)]
	5.7.4		Paint Booth Total Enclosure: Paint booth doors must be closed during all spray painting and coating operations. [CAAA of 1990, Minn. R. 7007.0100, subps. 7(A) & (B), Minn. R. 7007.0800, subps. 1&2, Minn. Stat. 116.07, subds.4a&9]
	5.7.5		Transfer Efficiency: The Permittee shall use a coating application method with at least 75 percent transfer efficiency. [CAAA of 1990, Minn. R. 7007.0100, subps. 7(A) & (B), Minn. R. 7007.0800, subps. 1&2, Minn. Stat. 116.07, subds.4a&9]
	5.7.6		Recordkeeping: The Permittee shall maintain records documenting the transfer efficiency of each coating application method used in EQUI 9. [CAAA of 1990, Minn. R. 7007.0100, subps. 7(A) & (B), Minn. R. 7007.0800, subps. 1&2, Minn. Stat. 116.07, subds.4a&9]
	5.7.7		The Permittee shall vent emissions from EQUI 9 to control equipment meeting the requirements of COMG 5. [Title I Condition: Avoid major source under 40 CFR 52.21(b)(1)(i) and Minn. R. 7007.3000]
	5.7.8		Weekly Recordkeeping. Once every seven days, the Permittee shall calculate, record, and maintain the total quantity of all coatings and other VOC-containing materials used in EQUI 9 for the previous week. This shall be based on purchase records. [CAAA of 1990, Minn. R. 7007.0100, subps. 7(A) & (B), Minn. R. 7007.0800, subps. 1&2, Minn. Stat. 116.07, subds.4a&9]
	5.7.9		Volatile Organic Compounds: Monthly Calculations. The Permittee shall calculate VOC emissions using the following equation: VOC (tons/month) = V V = (A1 x B1) + (A2 x B2) + (A3 x B3) + ... where: V = total VOC used in tons/month; A# = amount of each VOC-containing material used, in tons/month; and B# = weight percent VOC in A#, as a fraction. [Minn. R. 7007.0800, subps. 4-5]
	5.7.10		Volatile Organic Compounds: Monthly Recordkeeping. By the 15th of the month, the Permittee shall calculate and record the following: 1) The total usage of VOC-containing materials for the previous

Subject Item	Sec.SI.Reqt	SI des:SI desc	Requirement & Citation
			calendar month using records obtained from weekly usage records. This record shall also include the VOC content of each material as determined by the Material Content requirement under COMG 1 of this permit; 2) The VOC emissions for the previous month using the formulas specified in this permit; and 3) The 12-month rolling sum VOC emissions for the previous 12-month period by summing the monthly VOC emissions data for the previous 12 months. [Minn. R. 7007.0800, subps. 4-5]
EQUI 10	EU001	Air Makeup Unit 4	
	5.8.1		Total Particulate Matter <= 0.4 pounds per million Btu heat input. The potential to emit from the unit is 0.007 lb/MMBtu due to equipment design and allowable fuels. [Minn. R. 7011.0515, subp. 1]
	5.8.2		Opacity <= 20 percent opacity except for one six-minute period per hour of not more than 60 percent opacity. [Minn. R. 7011.0515, subp. 2]
EQUI 12	EU012	Router 1	
	5.9.1		Opacity <= 20 percent opacity. [Minn. R. 7011.0715, subp. 1(B)]
	5.9.2		Total Particulate Matter <= 0.30 grains per dry standard cubic foot of exhaust gas unless required to further reduce emissions to comply with the less stringent limit of either Minn. R. 7011.0730 or Minn. R. 7011.0735. [Minn. R. 7011.0715, subp. 1(A)]
EQUI 13	EU013	Router 2	
	5.10.1		Opacity <= 20 percent opacity. [Minn. R. 7011.0715, subp. 1(B)]
	5.10.2		Total Particulate Matter <= 0.30 grains per dry standard cubic foot of exhaust gas unless required to further reduce emissions to comply with the less stringent limit of either Minn. R. 7011.0730 or Minn. R. 7011.0735. [Minn. R. 7011.0715, subp. 1(A)]
EQUI 14	EU014	Router 3	
	5.11.1		Opacity <= 20 percent opacity. [Minn. R. 7011.0715, subp. 1(B)]
	5.11.2		Total Particulate Matter <= 0.30 grains per dry standard cubic foot of exhaust gas unless required to further reduce emissions to comply with the less stringent limit of either Minn. R. 7011.0730 or Minn. R. 7011.0735. [Minn. R. 7011.0715, subp. 1(A)]
EQUI 15	EU015	Sander 1	
	5.12.1		Opacity <= 20 percent opacity. [Minn. R. 7011.0715, subp.

Subject Item	Sec.SI.Reqt	SI des:SI desc	Requirement & Citation
			1(B)]
	5.12.2		Total Particulate Matter <= 0.30 grains per dry standard cubic foot of exhaust gas unless required to further reduce emissions to comply with the less stringent limit of either Minn. R. 7011.0730 or Minn. R. 7011.0735. [Minn. R. 7011.0715, subp. 1(A)]
EQUI 16	EU011	Oven 4	
	5.13.1		Total Particulate Matter <= 0.4 pounds per million Btu heat input. The potential to emit from the unit is 0.007 lb/MMBtu due to equipment design and allowable fuels. [Minn. R. 7011.0515, subp. 1]
	5.13.2		Opacity <= 20 percent opacity except for one six-minute period per hour of not more than 60 percent opacity. [Minn. R. 7011.0515, subp. 2]
TREA 11	CE009	Fabric Filter for Routers	
	5.14.1		The Permittee shall operate and maintain control equipment such that it achieves a control efficiency for Total Particulate Matter >= 74 percent control efficiency. [Title I Condition: Avoid major source under 40 CFR 52.21(b)(1)(i) and Minn. R. 7007.3000]
	5.14.2		The Permittee shall operate and maintain control equipment such that it achieves a control efficiency for PM < 10 micron >= 74 percent control efficiency. [Title I Condition: Avoid major source under 40 CFR 52.21(b)(1)(i) and Minn. R. 7007.3000]
	5.14.3		The Permittee shall operate and maintain control equipment such that it achieves a control efficiency for PM < 2.5 micron >= 74 percent control efficiency. [Title I Condition: Avoid major source under 40 CFR 52.21(b)(1)(i) and Minn. R. 7007.3000]
	5.14.4		Pressure Drop >= 1.0 and <= 4.0 inches of water, unless a new range is set pursuant to Minn. R. 7017.2025, subp. 3 based on the values recorded during the most recent MPCA-approved performance test where compliance was demonstrated. The new range shall be implemented upon receipt of the Notice of Compliance letter granting preliminary approval. The range is final upon issuance of a permit amendment incorporating the change. The Permittee shall record the pressure drop at least once each day of operation. [Title I Condition: Avoid major source under 40 CFR 52.21(b)(1)(i) and Minn. R. 7007.3000]
	5.14.5		The Permittee shall vent emissions from EQUI 12, EQUI 13, and EQUI 14 to TREA 11 whenever EQUI 12, EQUI 13, and EQUI 14 operate, and operate and maintain TREA 11 at all times that any emissions are vented to TREA 11. The Permittee shall document periods of non-operation of the control equipment TREA 11 whenever EQUI 12, EQUI 13 and EQUI 14 are operating. [Title I Condition: Avoid major source under 40 CFR 52.21(b)(1)(i) and Minn. R. 7007.3000]
	5.14.6		If the Permittee replaces TREA 11, the replacement control must meet or exceed the control efficiency requirements of

Subject Item	Sec.SI.Reqt	SI des:SI desc	Requirement & Citation
			TREA 11 as well as comply with all other requirements of TREA 11. Prior to making such a change, the Permittee shall apply for and obtain the appropriate permit amendment, as applicable. If no amendment is needed for the replacement, the Permittee shall submit an electronic notice to the Agency using Form CR-05. The notice must be received by the Agency seven working days prior to the commencement/start of replacement. [Title I Condition: Avoid major source under 40 CFR 52.21(b)(1)(i) and Minn. R. 7007.3000]
	5.14.7		The Permittee shall operate and maintain the fabric filter in accordance with the Operation and Maintenance (O & M) Plan. The Permittee shall keep copies of the O & M Plan available onsite for use by staff and MPCA staff. [Minn. R. 7007.0800, subp. 14]
	5.14.8		Pressure Drop: Recordkeeping. The Permittee shall record the time and date of each pressure drop reading and whether or not the recorded pressure drop was within the range specified in this permit. [Minn. R. 7007.0800, subps. 4-5, Title I Condition: Avoid major source under 40 CFR 52.21(b)(1)(i) and Minn. R. 7007.3000]
	5.14.9		Corrective Actions: The Permittee shall take corrective action as soon as possible if any of the following occur: - the recorded pressure drop is outside the required operating range; or - the fabric filter or any of its components are found during the inspections to need repair. Corrective actions shall return the pressure drop to within the permitted range and/or include completion of necessary repairs identified during the inspection, as applicable. Corrective actions include, but are not limited to, those outlined in the O & M Plan for the fabric filter. The Permittee shall keep a record of the type and date of any corrective action taken for each filter. [Minn. R. 7007.0800, subp. 14, Minn. R. 7007.0800, subp. 4, Minn. R. 7007.0800, subp. 5]
	5.14.10		Monitoring Equipment: The Permittee shall install and maintain the necessary monitoring equipment for measuring and recording pressure drop as required by this permit. The monitoring equipment must be installed, in use, and properly maintained when the monitored fabric filter is in operation. [Minn. R. 7007.0800, subp. 4]
	5.14.11		Periodic Inspections: At least once per calendar quarter, or more frequently as required by the manufacturing specifications, the Permittee shall inspect the control equipment components. The Permittee shall maintain a written record of these inspections. [Minn. R. 7007.0800, subp. 14, Minn. R. 7007.0800, subp. 4, Minn. R. 7007.0800, subp. 5]
	5.14.12		Hood Certification and Evaluation: The Permittee shall

Subject Item	Sec.SI.Reqt	SI des:SI desc	Requirement & Citation
			maintain the most current record of the hood evaluation and certification on site. The control device hood must be evaluated by a testing company as specified in Minn. R. 7011.0072, subp. 2(A) and must conform to the design and operating requirements listed in Minn. R. 7011.0072, subps. 2(B) and 3. The hood certification must address how cross-drafts are accommodated in the design (e.g., higher face velocity, oversized hood, etc.) and the Permittee shall certify this as specified in Minn. R. 7011.0072, subps. 2 and 3. [Minn. R. 7007.0800, subp. 2, Title I Condition: Avoid major source under 40 CFR 52.21(b)(1)(i) and Minn. R. 7007.3000]
	5.14.13		Annual Hood Evaluation: The Permittee shall measure and record at least once every 12 months the fan rotation speed, fan power draw, or face velocity of each hood, or other comparable air flow parameter that was measured during the most recent hood certification to verify the hood design and operation parameters meet or exceed the parameters measured during the most recent hood evaluation conducted according to Minn. R. 7011.0072, subps. 2 & 3 as required by Minn. R. 7011.0072, subp. 4. The Permittee shall maintain a copy of the annual evaluations on site for 5 years. [Minn. R. 7007.0800, subp. 2, Title I Condition: Avoid major source under 40 CFR 52.21(b)(1)(i) and Minn. R. 7007.3000]
TREA 12	CE010	Water Curtain for Sander	
	5.15.1		The Permittee shall operate and maintain control equipment such that it achieves a control efficiency for Total Particulate Matter >= 85 percent control efficiency. [Title I Condition: Avoid major source under 40 CFR 52.21(b)(1)(i) and Minn. R. 7007.3000]
	5.15.2		The Permittee shall operate and maintain control equipment such that it achieves a control efficiency for PM < 10 micron >= 85 percent control efficiency. [Title I Condition: Avoid major source under 40 CFR 52.21(b)(1)(i) and Minn. R. 7007.3000]
	5.15.3		The Permittee shall operate and maintain control equipment such that it achieves a control efficiency for PM < 2.5 micron >= 85 percent control efficiency. [Title I Condition: Avoid major source under 40 CFR 52.21(b)(1)(i) and Minn. R. 7007.3000]
	5.15.4		The Permittee shall vent emissions from EQUI 15 to TREA 12 whenever EQUI 15 operates, and operate and maintain TREA 12 at all times that any emissions are vented to TREA 12. The Permittee shall document periods of non-operation of the control equipment TREA 12 whenever EQUI 15 is operating. [Title I Condition: Avoid major source under 40 CFR 52.21(b)(1)(i) and Minn. R. 7007.3000]
	5.15.5		If the Permittee replaces TREA 12, the replacement control must meet or exceed the control efficiency requirements of TREA 12 as well as comply with all other requirements of TREA 12. Prior to making such a change, the Permittee shall apply for and obtain the appropriate permit amendment, as

Subject Item	Sec.SI.Reqt	SI des:SI desc	Requirement & Citation
			applicable. If no amendment is needed for the replacement, the Permittee shall submit an electronic notice to the Agency using Form CR-05. The notice must be received by the Agency seven working days prior to the commencement/start of replacement. [Title I Condition: Avoid major source under 40 CFR 52.21(b)(1)(i) and Minn. R. 7007.3000]
	5.15.6		The Permittee shall operate and maintain the water curtain in accordance with the Operation and Maintenance (O & M) Plan. The Permittee shall keep copies of the O & M Plan available onsite for use by staff and MPCA staff. [Minn. R. 7007.0800, subp. 14]
	5.15.7		Daily Inspections: Once each operating day, the Permittee shall visually inspect the water curtain as follows: 1) Spray nozzles for proper operation (i.e., no clogging); 2) Whether the correct water level is maintained to adequately filter exhaust air according to manufacturer's specifications; and 3) Whether the water is re-circulating according to manufacturer's specifications. The Permittee shall maintain a written record of these inspections. [Title I Condition: Avoid major source under 40 CFR 52.21(b)(1)(i) and Minn. R. 7007.3000]
	5.15.8		Periodic Inspections: At least once per calendar quarter, or more frequently as required by the manufacturer's specifications, the Permittee shall inspect the control equipment components. The Permittee shall maintain a written record of these inspections. [Minn. R. 7007.0800, subp. 14, Minn. R. 7007.0800, subp. 4, Minn. R. 7007.0800, subp. 5]
	5.15.9		Corrective Actions: If any components of the water curtain are found during the inspections to need repair, the Permittee shall take corrective action as soon as possible. Corrective actions shall include completion of necessary repairs identified during the inspection, as applicable. Corrective actions include, but are not limited to, those outlined in the O & M Plan for the water curtain. The Permittee shall keep a record of the type and date of any corrective action taken. [Minn. R. 7007.0800, subp. 14, Minn. R. 7007.0800, subp. 4, Minn. R. 7007.0800, subp. 5]

6. Submittal/action requirements

This section lists most of the submittals required by this permit. Please note that some submittal requirements may appear in the Limits and Other Requirements section, or, if applicable, within a Compliance Schedule section.

Subject Item	Sec.SI.Reqt	SI des:SI desc	Requirement & Citation
TFAC 1	10300014	Alumacraft Boat Co	
	6.1.1		The Permittee shall submit an application for permit reissuance : Due 180 calendar days before Permit Expiration Date. [Minn. R. 7007.0400, subp. 2]
	6.1.2		The Permittee shall submit a semiannual deviations report : Due semiannually, by the 30th of January and July The first semiannual report submitted by the Permittee shall cover the calendar half-year in which the permit is issued. The first report of each calendar year covers January 1 - June 30. The second report of each calendar year covers July 1 - December 31. If no deviations have occurred, the Permittee shall submit the report stating no deviations. [Minn. R. 7007.0800, subp. 6(A)(2)]
	6.1.3		The Permittee shall submit a compliance certification : Due annually, by the 31st of January (for the previous calendar year). The Permittee shall submit this to the Commissioner on a form approved by the Commissioner. This report covers all deviations experienced during the calendar year. [Minn. R. 7007.0800, subp. 6(C)]
	6.1.4		The Permittee shall submit an annual report : Due annually, by the 31st of January The report shall describe the changes made at the Facility during the previous calendar year using the latest MPCA application forms. The report shall include information for any new or replaced Subject Items. The report shall document the VOC, PM, PM10, and PM2.5 12-month rolling sum calculations for the previous calendar year. The report shall be submitted with the annual Compliance Certification required by this permit. As part of the Annual Report, the Permittee shall verify and certify that the Facility has maintained minor source status for New Source Review. [Minn. R. 7007.0800, subp. 2]

7. Appendices

Appendix A. Insignificant Activities and General Applicable Requirements

The table below lists the insignificant activities that are currently at the Facility and their associated general applicable requirements.

Minn. R.	Rule description of the activity	General applicable requirement
Minn. R. 7007.1300, subp. 3(I)	Individual emission units at a stationary source, each of which have a potential to emit the following pollutants in amounts less than: (1) 4,000 pounds per year of carbon monoxide; (2) 2,000 pounds per year each of nitrogen oxide, sulfur dioxide, particulate matter, particulate matter less than ten microns, VOCs (including hazardous air pollutant-containing VOCs), and ozone; and (3) 1,000 tons per year of CO2e. The facility has 37 infrared gas heaters, 15 gas heaters, nine furnaces, two make-up air units and three ovens. Each unit has a rated capacity of less than or equal to 1.8 MMBtu/hr.	PM <=0.4 pounds per million BTU heat input Opacity <= 20 percent opacity [Minn. R. 7011.0510]

Appendix B. Maximum Material Content and Application Rates

The table below gives the maximum application rates of materials and the maximum VOC and solids content of materials (at the time of permit issuance) used in calculating potential to emit for each COMG 1 emission unit at the facility. The values listed in the table are not limits; however, changing to a material that has a higher VOC or solids content, or increasing the application rate, is considered a change in the method of operation that must be evaluated under Minn. R. 7007.1200 subp. 3 to determine if a permit amendment or notification is required under Minn. R. 7007.1150-7007.1500.

Process/Emission Unit	Max Solids Content (lb/gal)	Max VOC Content (lb/gal)	Max Application Rate (gal/min)	Transfer Efficiency (%)
Spray Gun Cleaning (EQUI 1)	0	6.76	0.004	N/A
Gluing Sub-Assembly (EQUI 2)	2.63	3.34	0.24	100
Gluing Floor Assembly (EQUI 3)	2.63	3.34	0.24	100
Gluing Hull Prep (EQUI 4)	2.63	3.34	0.24	100
Solvent Wipe-Down (EQUI 5)	0	7.06	0.026	N/A
Paint Booth #2 (EQUI 7)	9.10	7.29	0.328	75
Paint Booth #3 (EQUI 8)	9.10	7.29	0.328	75
Paint Booth #4 (EQUI 9)	9.10	7.29	0.375	75

N/A – Not Applicable

Appendix C. NESHAP Subpart VVVV Compliance Equations

Note: Equation numbers in Appendix C do not necessarily correspond to equation numbers found in 40 CFR pt. 63, Subpart VVVV.

Organic HAP content of aluminum wipe-down solvents

$$HAP_{WD} = \frac{\sum_{j=1}^{n}(Vol_j)(D_j)(W_i)}{\sum_{i=1}^{m}(Vol_i)(Solids_i)}$$ Eq. 1 [40 CFR §63.5749(a)]

Where:

HAP_{WD} = weighted-average organic HAP content of aluminum wipe-down solvents, kilograms of HAP per liter of total coating solids from aluminum primers, top coats, and clear coats;

n = number of different wipe-down solvents used in the past 12 months;

Vol_j = volume of aluminum wipe-down solvent j used in the past 12 months, liters;

D_j = density of aluminum wipe-down solvent j, kilograms per liter;

W_j = mass fraction of organic HAP in aluminum wipe-down solvent j;

m = number of different aluminum surface coatings (primers, top coats, and clear coats) used in the past 12 months;

Vol_i = volume of aluminum primer, top coat, or clear coat i used in the past 12 months, liters; and

$Solids_i$ = solids content aluminum primer, top coat, or clear coat i, liter solids per liter of coating.

Organic HAP content of aluminum recreational boat surface coatings

$$HAP_{SC} = \frac{\sum_{i=1}^{m}(Vol_i)(D_i)(W_i)+\sum_{k=1}^{D}(Vol_k)(D_k)(W_k)}{\sum_{i=1}^{m}(Vol_i)(Solids_i)}$$ Eq. 2 [40 CFR §63.5752(a)]

Where:

HAP_{sc} = weighted-average organic HAP content for all aluminum coating materials, kilograms of organic HAP per liter of coating solids;

m = number of different aluminum primers, top coats, and clear coats used in the past 12 months;

Vol_i = volume of aluminum primer, top coat, or clear coat i used in the past 12 months, liters;

D_i = density of coating i, kilograms per liter;

W_i = mass fraction of organic HAP in coating i, kilograms of organic HAP per kilogram of coating;

Vol_k = total volume of thinner, activator, or additive k used in the past 12 months, liters;

D_k = density of thinner, activator, or additive k, kilograms per liter;

W_k = mass fraction of organic HAP in thinner, activator, or additive k, kilograms of organic HAP per kilogram of thinner or activator; and

$Solids_i$ = solids content of aluminum primer, top coat, or clear coat i, liter solids per liter of coating.

Combined organic HAP content of aluminum wipe-down solvents and aluminum recreational boat surface coatings

$$HAP_{Combined} = HAP_{WD} + HAP_{SC} \quad \text{Eq. 3 [40 CFR §63.5753(a)]}$$

Where:

HAP_{WD} = the weighted-average organic HAP content of aluminum wipe-down solvents used in the past 12 months, calculated using equation 1 in this appendix; and

HAP_{SC} = the weighted average organic HAP content of aluminum recreational boat surface coatings used in the past 12 months, calculated using equation 2 of this appendix.

Technical Support Document
For
Air Emission Permit No. 10300014-101

This technical support document (TSD) is intended for all parties interested in the permit and to meet the requirements that have been set forth by the federal and state regulations (40 CFR § 70.7(a)(5) and Minn. R. 7007.0850, subp. 1). The purpose of this document is to provide the legal and factual justification for each applicable requirement or policy decision considered in the determination to issue the permit.

1. General information

1.1 Applicant and stationary source location

Table 1. Applicant and source address

Applicant/Address	**Stationary source/Address** (SIC Code: 3732 – Boat Building and Repairing)
Alumacraft Boat Co 315 Saint Julien St W St. Peter, Minnesota 56082	Alumacraft Boat Co 315 Saint Julien St W St. Peter MN 56082
Contact: Tom Beckius Phone: 507-931-1050	

1.2 Facility description

The facility manufactures aluminum recreational boats. The facility consists of the manufacturing plant, shipping building, and boat storage yard. The operations performed include stretching, shearing, sawing, punching, routing, bending, plasma-arc cutting, forming, notching, and piercing of aluminum sheet and coil. Some of the aluminum parts are cleaned, and then artificially age hardened in an oven before they are sent to the assembly areas. The parts are then assembled into boat/canoe hulls which are then solvent-cleaned, primed, and painted. Various aluminum and wood parts are covered with carpet at one of the several gluing stations. Various painted, carpeted, and purchased parts are installed in the final assembly areas.

The emission sources are three paint booths, gluing operations, solvent cleaning, natural gas oven, air make-up unit, sander for aluminum surface preparation, and routing equipment for wood and aluminum cutting. The facility also has a number of small combustion units and an aluminum sander that qualify as insignificant activities. Pollution control equipment at the facility includes panel filters on each of the paint booths, water curtain for the sander, and a baghouse for the routing equipment.

1.3 Description of the activities allowed by this permit action

This permit action is Part 70 Reissuance.

1.4 Description of notifications and applications included in this action

Table 2. Notifications and applications included in this action

Date received	**Application/Notification type and description**
12/15/2014	Part 70 Permit Reissuance

1.5 Facility emissions

Table 3. Total facility potential to emit summary

	PM tpy	**PM_{10}** tpy	**$PM_{2.5}$** tpy	**SO_2** tpy	**NO_x** tpy	**CO** tpy	**CO_2e** tpy	**VOC** tpy	**Single HAP** tpy	**All HAPs** tpy
Total facility limited potential emissions	90.9	90.9	90.9	0.015	1.69	1.42	2063	95.1	167	220
Total facility actual emissions (2013)	1.18	1.18	0.979	0	0	0	*	44.8	*	

*Not reported in Minnesota emission inventory.

Table 4. Facility classification

Classification	**Major**	**Synthetic minor/area**	**Minor/Area**
New Source Review		X	
Part 70	X		
Part 63	X		

1.6 Changes to permit

- The permit has been updated to reflect current MPCA templates and standard citation formatting;
- Completed requirements and the requirements for equipment that has been removed have been deleted;
- Emission units were renamed according to current MPCA database (i.e. EU003 is EQUI 7, CE005 is TREA 6, SV001 is STRU 3, etc.);
- Some requirements have been reordered to help with clarity (i.e., similar requirements are grouped);
- CAM for paint booth panel filters has been added as discussed in Section 2.6 of this TSD;
- Paint booth #1 was dismantled and removed from the facility on November 5, 2015. This emission unit along with the associated stack/vent and panel filter has been removed from the permit;
- Spray gun transfer efficiency was increased to 75% due to exclusive use of HPLV guns;
- PreCap language was added to COMG 1 and COMG 5 to allow operational flexibility as described in Section 3.2 of this TSD;
- Added routing equipment (EQUI 12, EQUI 13, and EQUI 14), sander (EQUI 15), Makeup Air Unit 4 (EQUI 10), and Oven 4 (EQUI 16) as emission units;
- Added baghouse as control equipment (TREA 11) for routing equipment and associated monitoring requirements;
- Added water curtain as control equipment (TREA 12) for sander and associated monitoring requirements;
- Facility $PM/PM_{10}/PM_{2.5}$ limit was reduced to 75 tons per year to accommodate the emissions from routing and sanding equipment;
- Material use recordkeeping frequency was changed from daily to weekly as described in Section 3.5.

2. Regulatory and/or statutory basis

2.1 New source review (NSR)

The permit carries forward limits on the facility such that it is a minor source under New Source Review regulations. No changes are authorized by this permit.

2.2 Part 70 permit program

The facility is a major source under the Part 70 permit program.

2.3 New source performance standards (NSPS)

The Permittee has stated that no New Source Performance Standards apply to the operations at this facility.

2.4 National emission standards for hazardous air pollutants (NESHAP)

Each paint booth, solvent, and gluing operation at the facility is subject to 40 CFR pt. 63, subp. VVVV, National Emission Standards for Hazardous Air Pollutants for Boat Manufacturing based on the following:

- The facility manufactures aluminum recreational boats; and
- The facility is a major source of HAPs.

2.5 Compliance assurance monitoring (CAM)

The table below lists the sources which are subject to CAM, whether the source is a large pollutant specific emission unit (PSEU), and the monitoring for the applicable pollutants.

Table 5. CAM summary

Unit	Control	CAM applicability	Pollutant
EQUI 7	TREA 6 Panel Filter	Other	PM/PM_{10}/$PM_{2.5}$
EQUI 8	TREA 7 Panel Filter	Other	PM/PM_{10}/$PM_{2.5}$
EQUI 9	TREA 8 Panel Filter	Other	PM/PM_{10}/$PM_{2.5}$

For other PSEUs (not large), records must be made at a minimum of once per 24 hours. See Attachment 3 to this document for the CAM Plan submitted by the applicant.

The paint booths each have the potential to emit PM/PM_{10}/$PM_{2.5}$ above the Part 70 major source thresholds. Each paint booth is a total enclosure and has a panel filter to control PM/PM_{10}/$PM_{2.5}$ emissions with a minimum 92% efficiency that is subject to CAM (see Attachment 3). The routing (EQUI 12, 13, and 14) and sanding equipment (EQUI 15) are not subject to CAM because uncontrolled emissions are below 100 tons per year.

2.6 Minnesota State Rules

Portions of the facility are subject to the following Minnesota Standards of Performance:

- Minn. R. 7011.5010 Standards of Performance for Existing Indirect Heating Equipment
- Minn. R. 7011.0715 Standards of Performance for Post-1969 Industrial Process Equipment

Table 6. Regulatory overview of facility

Subject item*	Applicable regulations	Rationale
COMG 1 (PM and VOC Limits)	40 CFR §52.21	Prevention of Significant Deterioration. Limits set on PM, PM_{10}, $PM_{2.5}$ and VOC emissions to less than major source levels under PSD.
COMG 2 (NESHAP VVVV)	40 CFR pt. 63, subp. VVVV	National Emission Standards for Hazardous Air Pollutants for Boat Manufacturing. Determination of applicable requirements from the rule: · The facility manufactures aluminum recreation boats that includes carpet adhesive and non-gel coating operations; and · The facility is a major source of HAPs.

Subject item*	Applicable regulations	Rationale
COMG 5 (Panel Filters)	40 CFR § 64.2	Compliance Assurance Monitoring. Determination of applicable requirements from the rule: · The emission unit is subject to an emission limit or standard (95 tons per year VOC and 75 tons per year PM, PM_{10}, and $PM_{2.5}$; · Compliance with the PM limit or standard is achieved through the use of add-on control equipment; and · The emission unit has pre-controlled potential emissions of PM that are equal to or greater than 100 percent of the Part 70 major source level for that pollutant (in tons per year).
	40 CFR §52.21	Prevention of Significant Deterioration. Panel filter control efficiencies to limit PM, PM_{10} and $PM_{2.5}$ emissions to less than major source levels under PSD.
EQUI 7-9 (Paint Booths)	CAAA of 1990	Prevention of Significant Deterioration. BACT-equivalent limits on VOC emissions and emission unit requirements related to particulate matter emissions as a result of injunctive relief.
	40 CFR §52.21	Prevention of Significant Deterioration. Requirement to vent all emissions to panel filters meeting the requirement of COMG 5 in order to maintain particulate emissions below PSD thresholds.
	Minn. R. 7011.0715	Minnesota Standards of Performance for Industrial Process Equipment.
EQUI 10 & 16 (Indirect Heating Equipment)	Minn. R. 7011.0510	Minnesota standards of Performance for Indirect Heating Equipment
EQUI 12-14 (Routing Equipment)	Minn. R. 7011.0715	Minnesota Standards of Performance for Industrial Process Equipment.
EQUI 15 (Sanding Equipment)	Minn. R. 7011.0715	Minnesota Standards of Performance for Industrial Process Equipment.

*Location of the requirement in the permit (e.g., EQUI 1, COMG 1, etc.).

3. Technical information

3.1 Calculations of potential to emit (PTE)

Spray Booth Coating

The paint booths are each sources of $PM/PM_{10}/PM_{2.5}$, VOC and HAPs. Emissions are calculated using a mass balance from highest pollutant content coatings as applied and maximum application rates found in Appendix B. The hourly emissions are conservative because they assume three guns operating simultaneously at all times using the coating with the highest pollutant content.

Gluing and Solvent Operations

VOC and HAP emissions from gluing and solvent operations are calculated using mass balance based on maximum VOC and HAP content of the materials and maximum application rate. All VOC and HAP used is considered to be emitted. No particulate matter emissions are anticipated from these operations since materials used in solvent operations do not contain solids and adhesives are applied using a spray-less application method. If the adhesive application method is changed to a spray application, the emissions for the gluing operations should be re-evaluated to include particulate emissions since the adhesive does contain solids.

Combustion

The facility has several makeup air units, ovens, space heaters, and furnaces, many of which qualify as insignificant activities (see Section 3.7 of this TSD.). In the previous permit action, all of Alumacraft's indirect heating equipment qualified as insignificant activities; however, Makeup Air Unit #5 and Oven #4 have heat ratings such that they are over the carbon dioxide equivalent (CO_2e) limit specified in Minn. R. 7007.1300 subp. 3(I) using emission factors from AP-42, Chapter 1.4. Since no other parts of Minn. R. 7007.1300 apply, they have been added to the permit as emission units EQUI 10 and EQUI 11. Emission calculations for the unit with the third-highest heat rating (1.8 MMBtu/hr) were conducted using natural gas emission factors (AP-42) and determined to be in compliance with Minn. R 7007.1300 subp. 3(I). Thus, any individual unit with a heat rating less than or equal to 1.8 MMBtu per hour will qualify as an insignificant activity.

Aluminum Routing Equipment

No specific emission factors are currently available for metal cutting. Emission factors for metal scarfing (AP-42, Chapter 12.10) were considered for these operations but produced figures that were too low to be deemed a worst-case scenario. Testing for a site-specific emission factors is an option; however, the actual particulate emissions from the facility are low enough such that a study would be considered burdensome and an estimate would suffice. Woodworking emission factors previously available from AP-42, Chapter 10.4 were deemed appropriate because they provide conservative estimates that are in-line with a worst-case scenario. Given the density difference between wood and aluminum, the amount of aluminum material emitted as $PM/PM_{10}PM_{2.5}$ would likely be less than that of wood. Because there is some uncertainty related to using these emission factors for metal routing, emissions from these units should be reevaluated and adjusted in the future should emission factors more specific to his type of metal working become available.

Wood Routing Equipment

Emission factors previously available from AP-42, Chapter 10.4 have been used recently in similar wood cutting applications and were deemed appropriate for this situation. Since emission factors used here are no longer published in AP-42, emissions from this operation should be reevaluated should emission factors be published in the future.

Sanding Equipment

No specific emission factors are currently available for metal sanding. Emission factors for metal scarfing (AP-42, Chapter 12.10) were considered for these operations but produced figures that were too low to be deemed a worst-case scenario. Testing for a site-specific emission factors was an option, however, the actual particulate emissions from the facility are low enough such that a study would be considered burdensome where an estimate would suffice. Woodworking emission factors previously available from AP-42, Chapter 10.4 were deemed appropriate because they provide conservative estimates that are in-line with a worst-case scenario. Given the density difference between wood and aluminum, the amount of aluminum material emitted as $PM/PM_{10}PM_{2.5}$ would likely be less than that of wood. Because there is some uncertainty related to these emission factors for metal routing, emissions from these units should be reevaluated and adjusted in the future should emission factors more specific to his type of metal working become available.

Attachment 1 to this TSD contains detailed spreadsheets and supporting information prepared by the MPCA and the Permittee.

3.2 PreCap Limits

This permit action contains PreCap limits for $PM/PM_{10}/PM_{2.5}$ and VOC emissions from spray booths and gluing/solvent operations at COMG 1. As part of the PreCap, Alumacraft may elect to make equipment and material changes without a permit amendment as long as they meet all applicable requirements of the permit. However, an amendment may still be needed to make the change based on an hourly emissions increase or the non-emissions increase amendment triggers (e.g., Title I modification, etc.).

In addition, a control equipment PreCap has been added for the spray booth panel filters in COMG 5. The Permittee may replace, add, or modify these controls without obtaining a permit amendment as long as they meet all applicable requirements of the permit.

3.3 Injunctive Relief

The paint booths were subject to injunctive relief because they were installed without obtaining the proper pre-construction permits and their PTE was above PSD major source thresholds for PM, PM_{10}, and VOC. BACT-equivalent limits on VOC emissions (30 tons per year for EQUI 7 and 8, and 25 tons per year for EQUI 9) were developed under Permit Number 10300014-001 and are permanent limits on this equipment. Compliance is demonstrated through material usage requirements, monthly calculations, and recordkeeping.

The TSD for Permit Number 10300014-001 describes the BACT-equivalent determination for EQUI 7, 8, and 9 (EU 003, 004, and 010). As stated in the TSD, the BACT analyses submitted by the Permittee's consultant "determined that BACT constitutes use of High Volume Low Pressure (HVLP) spray guns (transfer efficiency of 65% to 75%)." However, the TSD also indicates that, at the time, "according to Alumacraft, some of the coatings (mainly primer) cannot be properly applied using HPLV and must be applied with air-assisted airless sprayers (30% transfer efficiency)." The TSD further states that the Permittee was "only required to use the spray application method that is both feasible and yields the highest transfer efficiency". However, the resultant permit requirement was not written such that it is enforceable. The permit states "The Permittee shall use the spray gun technology with the highest transfer efficiency possible during spraying operations." Additionally, there was no monitoring to support this BACT-equivalent limit.

In order to include an enforceable limit for the transfer efficiency in the permit, the BACT-equivalent discussion in the TSD for Permit Number 10300014-001 was used. The TSD indicates that BACT was proposed as 65 percent to 75 percent control efficiency based on HVLP transfer efficiencies at the time, therefore, it is assumed that 65 percent is the minimum BACT-equivalent transfer efficiency. The permit will include a requirement to track the transfer efficiency of the spray booths. At the time of this permit action, the Permittee uses only HVLP spray guns with a transfer efficiency of 75 percent.

3.4 Material Usage Recordkeeping

Alumacraft's material usage recordkeeping frequency has been adjusted from daily to weekly because the Permittee uses small amounts of materials on a daily basis, making daily measurements both messy and imprecise. The Permittee will use purchase records to ensure compliance with VOC, PM, PM_{10}, and $PM_{2.5}$ limits at COMG 1, EQUI 7, EQUI 8, and EQUI 9. Reducing the frequency to weekly will provide greater accuracy and a more conservative estimate of material use at each affected source.

3.5 Maximum Material Contents and Application Rates

Appendix B contains maximum material contents and application rates including transfer efficiencies for each emission unit. The solvent and gluing operations have 100 transfer efficiencies since they use a spray-less application method, providing no PM emissions from these units. If the facility elects to use spray technology, the Permittee shall apply for and obtain the appropriate permit amendment, as applicable.

3.6 Monitoring

In accordance with the Clean Air Act, it is the responsibility of the owner or operator of a facility to have sufficient knowledge of the facility to certify that the facility is in compliance with all applicable requirements.

The Permittee submitted a CAM proposal as required by 40 CFR § 64.3. It can be found in Attachment 3 to this TSD. Further discussion of decisions about CAM can be found in Table 5.

In evaluating the monitoring included in the permit, the MPCA considered the following:

- the likelihood of the facility violating the applicable requirements;
- whether add-on controls are necessary to meet the emission limits;
- the variability of emissions over time;
- the type of monitoring, process, maintenance, or control equipment data already available for the emission unit;
- the technical and economic feasibility of possible periodic monitoring methods; and
- the kind of monitoring found on similar units elsewhere.

Table 7 summarizes the monitoring requirements.

Table 7. Monitoring

Subject Item*	Requirement (basis)	Monitoring	Discussion
COMG 1 (VOC and PM Limits)	Total Particulate Matter <= 75 tons per year 12-month rolling sum. If the Permittee replaces any existing PM-emitting coating equipment, adds new PM-emitting coating equipment, or modifies the existing equipment, such equipment is subject to this permit limit as well as all of the requirements of COMG 1. [Title I Condition: Avoid major modification under 40 CFR 52.21(b)(2) and Minn. R. 7007.3000, Title I Condition: Avoid major source under 40 CFR 52.21(b)(1)(i) and Minn. R. 7007.3000]	Recordkeeping: weekly coating usage; ongoing SDS records of coating contents, monthly emissions calculations	Recording and calculating material usage will ensure compliance. The Permittee can maintain purchase records to support calculations that demonstrate compliance. Solids contents for each material shall be determined as described under the Material Content requirement in COMG 1.
	PM < 10 micron <= 75 tons per year 12-month rolling sum. If the Permittee replaces any existing PM10-emitting coating equipment, adds new PM10-emitting coating equipment, or modifies the existing equipment, such equipment is subject to this permit limit as well as all of the requirements of COMG 1. [Title I Condition: Avoid major modification under 40 CFR 52.21(b)(2) and Minn. R. 7007.3000, Title I Condition: Avoid major source under 40 CFR 52.21(b)(1)(i) and Minn. R. 7007.3000]	Recordkeeping: weekly coating usage; ongoing SDS records of coating contents, monthly emissions calculations	Recording and calculating material usage will ensure compliance. The Permittee can maintain purchase records to support calculations that demonstrate compliance. Solids contents for each material shall be determined as described under the Material Content requirement in COMG 1.

	PM < 2.5 micron <= 75 tons per year 12-month rolling sum. If the Permittee replaces any existing PM2.5-emitting coating equipment, adds new PM2.5-emitting coating equipment, or modifies the existing equipment, such equipment is subject to this permit limit as well as all of the requirements of in COMG 1. [Title I Condition: Avoid major modification under 40 CFR 52.21(b)(2) and Minn. R. 7007.3000, Title I Condition: Avoid major source under 40 CFR 52.21(b)(1)(i) and Minn. R. 7007.3000]	Recordkeeping: weekly coating usage; ongoing SDS records of coating contents, monthly emissions calculations	Recording and calculating material usage will ensure compliance. The Permittee can maintain purchase records to support calculations that demonstrate compliance. Solids contents for each material shall be determined as described under the Material Content requirement in COMG 1.
	Volatile Organic Compounds <= 95 tons per year 12-month rolling sum If the Permittee replaces any existing VOC-emitting equipment, adds new VOC-emitting equipment, or modifies the existing equipment, such equipment is subject to this permit limit as well as all of the requirements COMG 3. [Title I Condition: Avoid major modification under 40 CFR 52.21(b)(2) and Minn. R. 7007.3000, Title I Condition: Avoid major source under 40 CFR 52.21(b)(1)(i) and Minn. R. 7007.3000]	Recordkeeping: weekly coating and solvent usage; ongoing SDS records of coating contents, monthly emissions calculations	Recording and calculating material usage will ensure compliance. The Permittee can maintain purchase records to support calculations that demonstrate compliance. Solids contents for each material shall be determined as described under the Material Content requirement in COMG 1.
COMG 2 (NESHAP VVVV)	HAPs - Organic <= 5.0 percent by weight for carpet and fabric adhesives. [40 CFR 63.5740(a), Minn. R. 7011.7370]	Recordkeeping: Determine organic HAP content of the carpet and fabric adhesives using the methods in 40 CFR Section 63.5758.	Monitoring required by the NESHAP is adequate to provide assurance of compliance.
	HAPs - Organic <= 1.55 kilograms per liter of total coating solids applied from the combined aluminum surface coatings and aluminum wipe-down solvents. [40 CFR 63.5743(a)(3), Minn. R. 7011.7370]	Recordkeeping: Determine organic HAP content of the carpet and fabric adhesives using the methods in 40 CFR Section 63.5758.	Monitoring required by the NESHAP is adequate to provide assurance of compliance.

COMG 5 (Panel Filters)	Control efficiency for Total Particulate Matter >= 92 percent control efficiency. Control efficiency for PM < 10 micron >= 92 percent control efficiency. Control efficiency for PM < 2.5 micron >= 92 percent control efficiency. If the Permittee replaces any existing panel filter, adds new panel filters, or modifies the panel filters listed in COMG 5, such equipment is subject to all of the requirements of COMG 5. [Title I Condition: Avoid major source under 40 CFR 52.21(b)(1)(i) and Minn. R. 7007.3000]	Inspections, O&M Plan, Recordkeeping, corrective actions	Monitoring based on the Minnesota Performance Standard for Control Equipment and the CAM Plan is adequate to have a reasonable assurance of compliance (daily and periodic inspections, corrective actions, and O&M).
EQUI 7 (Paint Booth #2)	Volatile Organic Compounds <= 30 tons per year 12-month rolling sum. [CAAA of 1990; Minn. Stat. 116.07, subds. 4a & 9; Minn. R. 7007.0100, subps. 7(A) & (B); Minn. R. 7007.0800, subps. 1 and 2]	Recordkeeping: weekly coating usage; ongoing SDS records of coating contents, monthly emissions calculations	Recording and calculating material usage will ensure compliance. The Permittee can maintain purchase records to support calculations that demonstrate compliance. Solids contents for each material shall be determined as described under the Material Content requirement in COMG 1.
EQUI 8 (Paint Booth #3)	Volatile Organic Compounds <= 30 tons per year 12-month rolling sum. [CAAA of 1990; Minn. Stat. 116.07, subds. 4a & 9; Minn. R. 7007.0100, subps. 7(A) & (B); Minn. R. 7007.0800, subps. 1 and 2]	Recordkeeping: weekly coating usage; ongoing SDS records of coating contents, monthly emissions calculations	Recording and calculating material usage will ensure compliance. The Permittee can maintain purchase records to support calculations that demonstrate compliance. Solids contents for each material shall be determined as described under the Material Content requirement in COMG 1.
EQUI 9 (Paint Booth #4)	Volatile Organic Compounds <= 25 tons per year 12-month rolling sum. [CAAA of 1990; Minn. Stat. 116.07, subds. 4a & 9; Minn. R. 7007.0100, subps. 7(A) & (B); Minn. R. 7007.0800, subps. 1 and 2]	Recordkeeping: weekly coating usage; ongoing SDS records of coating contents, monthly emissions calculations	Recording and calculating material usage will ensure compliance. The Permittee can maintain purchase records to support calculations that demonstrate compliance. Solids contents for each material shall be determined as described under the Material Content requirement in COMG 1.

EQUI 10 & 16 (Air Makeup Unit 4 and Oven 4)	Total Particulate Matter <= 0.4 pounds per million Btu heat input. Opacity <= 20 percent opacity. [Minn. R. 7011.0515, subp. 1, Minn. R. 7011.0515, subp. 2]	These units are only allowed natural gas by design. Adherence to this design parameter gives reasonable assurance of compliance.	The potential to emit from the unit is 0.007 lb/MMBtu due to equipment design and allowable fuels (natural gas).
EQUI 12-15 (Routing and Sanding Equipment)	Total Particulate Matter <= 0.30 grains per dry standard cubic foot of exhaust gas. Opacity <= 20 percent opacity. [Minn. R. 7011.0715, subp. 1(A), Minn. R. 7011.0715, subp. 1(B)]	None.	Venting of emissions to control equipment ensures compliance with this limit. Other requirements at TREA 11 and 12 and associated monitoring ensure that this applicable requirement is being met.
TREA 11 (Baghouse for Routing Equipment)	Total Particulate Matter >= 74 percent control efficiency. PM < 10 micron >= 74 percent control efficiency. PM < 2.5 micron >= 74 percent control efficiency. Pressure Drop >= 1.0 and <= 4.0 inches of water. [Title I Condition: Avoid major source under 40 CFR 52.21(b)(1)(i) and Minn. R. 7007.3000]	Monitoring: Monitor pressure drop daily to ensure it is operating within the acceptable range. Recordkeeping: Daily pressure drop record and results; Inspections, O&M Plan, Corrective actions	Demonstration of proper operation through pressure drop monitoring and compliance with O&M Plan provides reasonable assurance that the equipment is operating properly and required control efficiency is being met.

TREA 12 (Water Curtain for Sander)	Total Particulate Matter >= 85 percent control efficiency. PM < 10 micron >= 85 percent control efficiency. PM < 2.5 micron >= 85 percent control efficiency. [Title I Condition: Avoid major source under 40 CFR 52.21(b)(1)(i) and Minn. R. 7007.3000]	Inspect the following water curtain components: -Spray nozzles for proper operation (i.e., no clogging); -Whether the correct water level is maintained to adequately filter exhaust air according to manufacturer's specifications; -Whether the water is re-circulating according to manufacturer's specifications. Recordkeeping: Daily record of inspections and results; O&M plan, corrective actions	Minimum overall control efficiency is based on 100 capture (total enclosure) and 85 percent water curtain control efficiency. Demonstration of proper operation through daily inspection provides reasonable assurance that the required control efficiency is being met.

*Location of the requirement in the permit (e.g., EQUI 1, COMG 1, etc.).

3.7 Insignificant activities

Alumacraft Boat Company has several operations which are classified as insignificant activities under the MPCA's permitting rules. These are listed in Appendix A of the permit.

The permit is required to include periodic monitoring for all emissions units, including insignificant activities, per EPA guidance. The insignificant activities at this facility are only subject to general applicable requirements. Using the criteria outlined earlier in this TSD, the following table documents the justification why no additional periodic monitoring is necessary for the current insignificant activities. See Attachment 1 of this TSD for insignificant activity PTE information.

Table 8. Insignificant activities

Insignificant activity	General applicable emission limit	Discussion
Individual units with potential emissions less than 2000 lb/year of certain pollutants	PM <=0.4 pounds per million BTU heat input Opacity <= 20 percent opacity [Minn. R. 7011.0510(A)&(B)]	The facility has 37 infrared gas heaters, 15 gas heaters, nine furnaces, and five make-up air/ oven units. Each unit has a rated capacity of less than or equal to 1.8 MMBtu/hr. These units can only use natural gas by design. Based on allowable fuels and EPA published emission factors, it is highly unlikely the applicable requirement would be violated.

3.8 Permit organization

In general, the permit meets the MPCA Tempo Guidance for ordering and grouping of requirements. One area where this permit deviates slightly from Tempo guidance is in the use of appendices. While appendices are fully enforceable parts of the permit, in general, any requirement that the MPCA thinks should be electronically tracked (e.g., limits, submittals, etc.), should be in the Requirements table in Tempo. The main reason is that the appendices are word processing sections and are not part of the electronic tracking system. Violation of the appendices can be enforced, but the computer system will not automatically generate the necessary enforcement notices or documents. Staff must generate these.

3.9 Comments received

Public Notice Period: July 29, 2016 – August 29, 2016
No comments were received by the MPCA during the public notice period.

EPA Review Period: August 30, 2016 – September 14, 2016
No comments were received by the MPCA during the EPA review period. The shortened EPA review period (15-day) was used in accordance with our Title V implementation agreement.

4. Conclusion

Based on the information provided by Alumacraft Boat Co the MPCA has reasonable assurance that the operation of the emission facility, as described in the Air Emission Permit No. 10300014-101 and this TSD, will not cause or contribute to a violation of applicable federal regulations and Minnesota Rules.

Staff members on permit team: Jacobe Timler (permit engineer)
Kelsey Suddard (peer reviewer)
Cory Boeck (enforcement)
Beckie Olson (permit writing assistant)
Laurie O'Brien (administrative support)

TEMPO360 Activities: Part 70 Permit Reissuance

Attachments:
1. PTE calculation spreadsheets
2. Subject item inventory list
3. CAM plan
4. Requirements development list

ATTACHMENT 1
PTE CALCULATION SPREADSHEETS
(Available Electronically in Tempo Central File)

Facility Name: **Alumacraft Boat Company**
Facility AQ ID: **10300014**

EQUI 1 - Equipment Cleaning

		Units	Information Source
Maximum Application Rate	0.23	gal/hr	Calculated using Maximum Quantity Per Flush Per Minute
VOC Content	6.76	lb/gal	MEK SDS
VOC Thoughput	1.55	lb/hr	

VOC PTE EMISSION CALCULATIONS	(lb/hr)	(tons/year)
Total VOC (Application Rate * VOC Content)	1.55	6.75

No particulate matter emissions are anticipated from this activity. The material used does not contain solids.

Facility Name: **Alumacraft Boat Company**
Facility AQ ID: **10300014**

EQUI 2 - Gluing Sub-Assembly

		Units	Information Source
Maximum Application Rate	14.4	gal/hr	In-House Test for Maximum Capacity
VOC Content	3.34	lb/gal	Helmiprene SDS
VOC Thoughput	48.1	lb/hr	
VOC PTE EMISSION CALCULATIONS		**(lb/hr)**	**(tons/year)**
Total VOC (Application Rate * VOC Content)		48.1	211

No particulate matter emissions are anticipated from this activity. The materials are applied as a bead that do not result in materials being airborne.

Facility Name: **Alumacraft Boat Company**
Facility AQ ID: **10300014**

EQUI 3 - Gluing Floor Assembly			
		Units	**Information Source**
Maximum Application Rate	14.4	gal/hr	In-House Test for Maximum Capacity
VOC Content	3.34	lb/gal	Helmiprene SDS
VOC Thoughput	48.1	lb/hr	

VOC PTE EMISSION CALCULATIONS	**(lb/hr)**	**(tons/year)**
Total VOC (Application Rate * VOC Content)	48.1	211

No particulate matter emissions are anticipated from this activity. The materials are applied as a bead that do not result in materials being airborne.

Facility Name: **Alumacraft Boat Company**
Facility AQ ID: **10300014**

EQUI 4 - Gluing Hull Prep

		Units	Information Source
Maximum Application Rate	14.4	gal/hr	In-House Test for Maximum Capacity
Density of Product with Highest VOC	3.34	lb/gal	Helmiprene SDS
Density of Product with HAP	9.44	lb/gal*	Vulkem 116 SDS
VOC Thoughput	48.10	lb/hr	
Hazardous Air Polluant (HAP)	Emssion Factor		
4,4'-Methylene bis(phenylisocyanate)	1.5%	w/w	Vulkem 116 SDS

VOC/HAP PTE EMISSION CALCULATIONS	(lb/hr)	(tons/year)
4,4'-Methylene bis(phenylisocyanate) = VOC Throughput* 4,4'-Methylene bis(phenylisocyanate) EF	2.04	8.93
Total HAP	2.04	8.93
Total VOC (Application Rate * VOC Content)	48.10	211

* Based on specific gravity of 1.1334 from SDS and water density of 8.3290 lb/gal at 70°F

No particulate matter emissions are anticipated from this activity. The materials are applied as a bead that do not result in materials being airborne.

Facility Name: **Alumacraft Boat Company**
Facility AQ ID: **10300014**

EQUI 5 - Solvent Wipe Down

		Units	Information Source
Maximum Application Rate	1.55	gal/hr	In-House Test for Maximum Capacity
Density of Product with Highest VOC	7.06	lb/gal	OTO Quick Degreaser SDS
VOC Thoughput	10.9	lb/hr	In-House Test for Maximum Capacity
Hazardous Air Polluant (HAP)	Emssion Factor		
Toulene	1%	w/w	OTO Quick Degreaser SDS
Xylene	65%	w/w	OTO Quick Degreaser SDS
Ethylbenzene	20%	w/w	OTO Quick Degreaser SDS

VOC/HAP PTE EMISSION CALCULATIONS		(lb/hr)	(tons/year)
Xylene = VOC Throughput* Xylene EF		7.11	31.2
Toluene = VOC Throughput*Toluene EF		0.11	0.5
Ethyl Benzene = VOC Throughput* Ethyl Benzene EF		2.19	9.6
Total HAP		9.41	41.2
Total VOC (Application Rate * Density of Highest VOC Product)		10.9	47.9

No particulate matter emissions are anticipated from this activity. The material used does not contain solids.

Facility Name: **Alumacraft Boat Company**
Facility AQ ID: **10300014**

EQUI 7 - Paint Booth#2

		Units	Information Source
Number of Guns in booth	3		
Gun Rate per gun:	0.1093	gal/min	Manufacturer Specs
Gun Rate for 3 guns:	0.3279	gal/min	
Highest PM Content:	85.00%	w/w	TOPCOAT HARDENER LV650 SDS
Highest VOC Content	59.06%	w/w	AUTOCOAT BT LV 650 CLEAR
Max Hours of Operation:	8760	hr/yr	
Transfer Efficiency (TE):	75%		HVLP Gun: MPCA Guidance
Capture Efficiency:	100%		
Control Efficiency:	92%		MPCA Guidance for Panel Filters
Combined Capture & Control (CE):	92.0%		
Density of Product with Highest PM	9.10	lb/gal	TOPCOAT HARDENER LV650 SDS
Density of Product with Highest VOC	3.42	lb/gal	AUTOCOAT BT LV 650 CLEAR SDS
Density of Product with Highest HAP	9.39	lb/gal	LV650 TOPCOAT NUCLEAR SUNSET ORG SDS
VOC Throughput	39.74	lb/hr	
$PM/PM_{10}/PM_{2.5}$ Throughput	152.18	lb/hr	
Hazardous Air Polluant (HAP)	Emission Factor		
Xylene	5%	w/w	LV650 TOPCOAT NUCLEAR SUNSET ORG SDS
MIBK	5%	w/w	AUTOCOAT BT LV 650 CLEAR
Hexamethylene-di-isocyanate	1%	w/w	TOPCOAT HARDENER LV650 SDS
Methyl Methacrylate	1%	w/w	AUTOCOAT BT LV 650 CLEAR

$PM/PM_{10}/PM_{2.5}$ EMISSION CALCULATIONS		**(lb/hr)**	**(tons/year)**
Uncontrolled PM = PM Throughput * PM Content * (1-TE)		38.04	167
Uncontrolled $PM_{10}/PM_{2.5}$ = PM10/PM2.5 Throughput * PM Content * (1-TE)		38.04	167
Controlled PM/Booth = PM Throughput * PM Content * (1-TE) * (1-CE)		3.04	13.33
Controlled $PM_{10}/PM_{2.5}$ = PM10/PM2.5Throughput * PM Content * (1-TE) * (1-CE)		3.04	13.33

VOC/HAP PTE EMISSION CALCULATIONS	**(lb/hr)**	**(tons/year)**
Xylene = Density of Product with Highest HAP * Gun Rate for 3 Guns * 60 * Xylene EF	9.24	40.5
MIBK = VOC Throughput * MIBK EF	1.99	8.70
Methyl Methacrylate = VOC Throughput * Methy Methacrylate EF	0.67	2.95
Hexamethylene-di-isocyanate = VOC Throughput* Hexamethylene-di-isocyanate EF	0.40	1.74
Total HAP	12.3	54
Total VOC	39.7	174

Facility Name: **Alumacraft Boat Company**
Facility AQ ID: **10300014**

EQUI 8 - Paint Booth#3

		Units	Information Source
Number of Guns in booth	3		
Gun Rate per gun:	0.1093	gal/min	Manufacturer Specs
Gun Rate for 3 guns:	0.3279	gal/min	
Highest PM Content:	85.00%	w/w	TOPCOAT HARDENER LV650 SDS
Highest VOC Content	59.06%	w/w	AUTOCOAT BT LV650 CLEAR SDS
Max Hours of Operation:	8760	hr/yr	
Transfer Efficiency (TE):	75%		HVLP Gun: MPCA Guidance
Capture Efficiency:	100%		
Control Efficiency:	85%		MPCA Guidance for Panel Filters
Combined Capture & Control (CE):	92.0%		
Density of Product with Highest PM	9.10	lb/gal	TOPCOAT HARDENER LV650 SDS
Density of Product with Highest VOC	3.42	lb/gal	AUTOCOAT BT LV650 CLEAR SDS
Density of Product with Highest HAP	9.39	lb/gal	LV650 TOPCOAT NUCLEAR SUNSET ORG SDS
VOC Throughput	39.74	lb/hr	
$PM/PM_{10}/PM_{2.5}$ Throughput	152.18	lb/hr	
Hazardous Air Polluant (HAP)	Emission Factor		
Xylene	5%	w/w	LV650 TOPCOAT NUCLEAR SUNSET ORG SDS
MIBK	5%	w/w	AUTOCOAT BT LV 650 CLEAR
Hexamethylene-di-isocyanate	1%	w/w	TOPCOAT HARDENER LV650 SDS
Methyl Methacrylate	1%	w/w	AUTOCOAT BT LV 650 CLEAR

$PM/PM_{10}/PM_{2.5}$ EMISSION CALCULATIONS	**(lb/hr)**	**(tons/year)**
Uncontrolled PM = PM Throughput * PM Content * (1-TE)	38.0	167
Uncontrolled $PM_{10}/PM_{2.5}$ = PM10/PM2.5 Throughput * PM Content * (1-TE)	38.0	167
Controlled PM/Booth = PM Throughput * PM Content * (1-TE) * (1-CE)	3.04	13.3
Controlled $PM_{10}/PM_{2.5}$ = PM10/PM2.5Throughput * PM Content * (1-TE) * (1-CE)	3.04	13.3

VOC/HAP PTE EMISSION CALCULATIONS	**(lb/hr)**	**(tons/year)**
Xylene = Density of Product with Highest HAP * Gun Rate for 3 Guns * 60 * Xylene EF	9.24	40.5
MIBK = VOC Throughput * MIBK EF	1.99	8.70
Methyl Methacrylate = VOC Throughput * Methy Methacrylate EF	0.67	2.95
Hexamethylene-di-isocyanate = VOC Throughput* Hexamethylene-di-isocyanate EF	0.40	1.74
Total HAP	12.3	54
Total VOC	39.7	174

Facility Name: **Alumacraft Boat Company**
Facility AQ ID: **10300014**

EQUI 9 - Paint Booth#4

		Units	Information Source
Number of Guns in booth	3		
Gun Rate per gun:	0.1250	gal/min	Manufacturer Specs
Gun Rate for 3 guns:	0.375	gal/min	
Highest PM Content:	85.00%	w/w	TOPCOAT HARDENER LV650 SDS
Highest VOC Paint	59.06%	w/w	AUTOCOAT BT LV 650 CLEAR SDS
Max Hours of Operation:	8760	hr/yr	
Transfer Efficiency (TE):	75%		HVLP Gun: MPCA Guidance
Capture Efficiency:	100%		
Control Efficiency:	92%		MPCA Guidance for Panel Filters
Combined Capture & Control (CE):	92.0%		
Density of Product with Highest PM	9.10	lb/gal	TOPCOAT HARDENER LV650 SDS
Density of Product with Highest VOC	3.42	lb/gal	AUTOCOAT BT LV 650 CLEAR SDS
Density of Product with Highest HAP	9.39	lb/gal	LV650 TOPCOAT NUCLEAR SUNSET ORG SDS
VOC Throughput	45.45	lb/hr	
$PM/PM_{10}/PM_{2.5}$ Throughput	174.04	lb/hr	
Hazardous Air Polluant (HAP)	Emission Factor		
Xylene	5%	w/w	LV650 TOPCOAT NUCLEAR SUNSET ORG SDS
MIBK	5%	w/w	AUTOCOAT BT LV 650 CLEAR SDS
Hexamethylene-di-isocyanate	1%	w/w	TOPCOAT HARDENER LV650 SDS
Methyl Methacrylate	1%	w/w	AUTOCOAT BT LV 650 CLEAR SDS

$PM/PM_{10}/PM_{2.5}$ EMISSION CALCULATIONS	**(lb/hr)**	**(tons/year)**
Uncontrolled PM = PM Throughput * PM Content * (1-TE)	43.5	191
Uncontrolled $PM_{10}/PM_{2.5}$ = PM10/PM2.5 Throughput * PM Content * (1-TE)	43.5	191
Controlled PM/Booth = PM Throughput * PM Content * (1-TE) * (1-CE)	3.48	15.2
Controlled $PM_{10}/PM_{2.5}$ = PM10/PM2.5Throughput * PM Content * (1-TE) * (1-CE)	3.48	15.2

VOC/HAP PTE EMISSION CALCULATIONS	**(lb/hr)**	**(tons/year)**
Xylene = Density of Product with Highest HAP * Gun Rate for 3 Guns * 60 * Xylene EF	10.6	46.3
MIBK = VOC Throughput * MIBK EF	2.27	10.0
Methyl Methacrylate = VOC Throughput * Methy Methacrylate EF	0.77	3.37
Hexamethylene-di-isocyanate = VOC Throughput* Hexamethylene-di-isocyanate EF	0.45	1.99
Total HAP	14.1	61.6
Total VOC	45.4	199

Facility Name: **Alumacraft Boat Company**
Facility AQ ID: **10300014**

Air Emissions from Air Make Up Unit #4

(Natural Gas Boiler <100 MMBtu/hr)

Maximum Heat Input	**2,000,000**	BTU/hour
Total Hours Operated	**8,760**	hours/year
Total cubic feet of natural gas burned	**17,176,471**	cubic feet/year

Emissions

Source: EPA AP-42 Chapter 1.4

Pollutant	a Boiler hourly natural gas usage[1] (cu ft/hr)	b Hours in a Year (hr/yr)	c Emission Factor (lbs/cu ft)	d Actual natural gas burned (cu ft/yr)	Unrestricted Potential Emissions (lb/yr) (c * d)	Unrestricted Potential Emissions (ton/yr) (c * d) / 2000
PM	1961	8760	7.60E-06	17,176,471	**130.54**	**0.07**
PM10	1961	8760	7.60E-06	17,176,471	**130.54**	**0.07**
VOC	1961	8760	5.50E-06	17,176,471	**94.47**	**0.05**
SOx	1961	8760	6.00E-07	17,176,471	**10.31**	**0.01**
NOx	1961	8760	1.00E-04	17,176,471	**1717.65**	**0.86**
CO	1961	8760	8.40E-05	17,176,471	**1442.82**	**0.72**
Lead	1961	8760	5.00E-10	17,176,471	**0.01**	**4.29E-06**
GHG Total (CO_2e)	*see calculations below*					**1032**

Green House Gas (GHG) Emissions (CO_2e)

Sources: EPA AP-42 Chapter 1.4
74 FR 209 (30 Oct 2009), pages 56409-56410

Pollutant	a Global Warming Potential[2]	b Boiler hourly natural gas usage[1] (cu ft/hr)	c Hours in a Year (hr/yr)	d Emission Factor (lbs/cu ft)	e Annual actual natural gas burned cu ft/yr)	Unrestricted Potential Emissions (ton/yr) (a * c * d) / 2000
CO_2	1	1961	8760	0.120	17,176,471	**1030.59**
CH_4	25	1961	8760	2.31E-06	17,176,471	**0.50**
N_2O	298	1961	8760	2.31E-07	17,176,471	**0.59**
					Green House Gas Total (CO_2e)	**1031.68**

[1]Heat value of natural gas is 1020 BTU/cubic foot according to EPA AP-42 Chapter 1.4
[2]Global Warming Potential from 40 CFR Part 98, as revised in the Federal Register, Vol. 78, No. 230, p. 71909, November 29, 2013.
CO_2e = carbon dioxide equivalents

HAP Name	CAS number	Emission Factor (lb/MMscf)	Emission Factor (lb/scf)	PTE (Tons/year)
2-Methylnaphthalene	91-57-6	0.000024	2.4E-11	2.06E-07
3-Methylchloranthrene	56-49-5	0.0000018	1.8E-12	1.55E-08
7,12-Dimethylbenz(a)anthracene		0.000016	1.6E-11	1.37E-07
Acenaphthene	83-32-9	0.0000018	1.8E-12	1.55E-08
Acenaphthylene	203-96-8	0.0000018	1.8E-12	1.55E-08
Anthracene	120-12-7	0.0000024	2.4E-12	2.06E-08
Benz(a)anthracene	56-55-3	0.0000018	1.8E-12	1.55E-08
Benzene	71-43-2	0.0021	2.1E-09	1.80E-05
Benzo(a)pyrene	50-32-8	0.0000012	1.2E-12	1.03E-08
Benzo(b)fluoranthene	205-99-2	0.0000018	1.8E-12	1.55E-08
Benzo(g,h,i)perylene	191-24-2	0.0000012	1.2E-12	1.03E-08
Benzo(k)fluoranthene	207-08-9	0.0000018	1.8E-12	1.55E-08
Chrysene	218-01-9	0.0000018	1.8E-12	1.55E-08
Dibenzo(a,h)anthracene	53-70-3	0.0000012	1.2E-12	1.03E-08
Dichlorobenzene	25321-22- 6	0.0012	1.2E-09	1.03E-05
Fluoranthene	206-44-0	0.000003	3E-12	2.58E-08
Fluorene	86-73-7	0.0000028	2.8E-12	2.40E-08
Formaldehyde	50-00-0	0.075	7.50E-08	6.44E-04
Hexane	110-54-3	1.8	1.80E-06	1.55E-02
Indeno(1,2,3-cd)pyrene	193-39-5	0.0000018	1.8E-12	1.55E-08
Naphthalene	91-20-3	0.00061	6.1E-10	5.24E-06
Phenanathrene	85-01-8	0.000017	1.7E-11	1.46E-07
Pyrene	129-00-0	0.000005	5E-12	4.29E-08
Toluene	108-88-3	0.0034	3.4E-09	2.92E-05
Arsenic	7440-38-2	0.0002	2E-10	1.72E-06
Beryllium	7440-41-7	0.000012	1.2E-11	1.03E-07
Cadmium	7440-43-9	0.0011	1.1E-09	9.45E-06
Chromium	7440-47-3	0.0014	1.4E-09	1.20E-05
Cobalt	7440-48-4	0.000084	8.4E-11	7.21E-07
Manganese	7439-96-5	0.00038	3.8E-10	3.26E-06
Mercury	7439-97-6	0.00026	2.6E-10	2.23E-06
Nickel	7440-02-0	0.0021	2.1E-09	1.80E-05
Selenium	7782-49-2	0.000024	2.4E-11	2.06E-07
Total				1.62E-02

Source of Data - AP-42, table 1.4-3 dated 7/98

Facility Name: **Alumacraft Boat Company**
Facility AQ ID: **10300014**

Wood Routing Operations

Description	Air Flow	Adjusted AP-42 Emission Factor*	Conversion (gr to lb)	Overall Control Efficiency**	Emission Factor	Uncontrolled Emissions PM		Uncontrolled Emissions PM10/PM2.5		Controlled PM PTE		Controlled $PM_{10}/PM_{2.5}$ PTE	
	scfm	gr/dscf	gr/lb	Fabric Filter	lb/dscf	lb/hr	tons/yr	lb/hr	tons/yr	lb/hr	tons/yr	lb/hr	tons/yr
EQUI 12	7000	0.06	7000	74	8.57E-06	3.60	15.8	3.60	15.8	0.94	4.10	0.94	4.10
Total						**3.60**	**15.8**	**3.60**	**15.8**	**0.94**	**4.10**	**0.94**	**4.10**

Justification

The emission factors were taken from AP-42 Chapter 10.4 for wood operations, which has been retracted. This factor has been used recently to estimate wood working particulate emissions recently in spite of its retraction.

*The emission factor From AP-42, Chapter 10.4 assumes the use of a cyclone. The cyclone is assumed to provide 50% control efficiency based on average efficiencies for conventional cyclones given by the EPA CICA Fact Sheet. Therefore, the emission factor is adjusted in the column called 'Adjusted AP-42 Emission Factor' to reflect the uncontrolled emission factor.

**74% overall control efficiency represents 80% capture efficiency and 93% control efficiency.

Facility Name: **Alumacraft Boat Company**
Facility AQ ID: **10300014**

Aluminum Routing Operations

Description	Air Flow	Adjusted AP-42 Emission Factor*	Conversion (gr to lb)	Overall Control Efficiency**	Emission Factor	Uncontrolled Emissions PM		Uncontrolled Emissions PM10/PM2.5		Controlled PM PTE		Controlled $PM_{10}/PM_{2.5}$ PTE	
	scfm	gr/dscf	gr/lb	Fabric Filter	lb/dscf	lb/hr	tons/yr	lb/hr	tons/yr	lb/hr	tons/yr	lb/hr	tons/yr
EQUI 13	7000	0.06	7000	74	8.57E-06	3.60	15.8	3.60	15.8	0.94	4.10	0.94	4.10
Total						**3.60**	**15.8**	**3.60**	**15.8**	**0.94**	**4.1**	**0.94**	**4.1**

Justification
The emission factors were taken from AP-42 Chapter 10.4 for wood operations, which has been retracted. The above calculations are considered to be highly conservative since it is difficult to project the behavior of particulates in wood operations onto aluminum operations. It is assumed that woodworking operations from which the AP-42 emission factor was originally obtained produces more particulate matter as the operation in general removes more material than metal cutting. The AP-42 document does not specify what type of wood (hard or soft) was used to obtain the emission factor but, conservatively, aluminum is more than 5 times denser than softwood. Therefore, it is more likely that less volume will be emitted as particulate matter.

*The emission factor From AP-42, Chapter 10.4 assumes the use of a cyclone. The cyclone is assumed to provide 50% control efficiency based on average efficiencies for conventional cyclones given by the EPA CICA Fact Sheet. Therefore, the emission factor is adjusted in the column called 'Adjusted AP-42 Emission Factor' to reflect the uncontrolled emission factor.
**74% overall control efficiency represents 80% capture efficiency and 93% control efficiency.

Basic Assumptions
Woodworking takes off more material than metal surface preparation/finishing
Aluminum denser than wood so less is emitted as particulate matter

Facility Name: **Alumacraft Boat Company**
Facility AQ ID: **10300014**

Aluminum Routing Operations

Description	Air Flow	Adjusted AP-42 Emission Factor*	Conversion (gr to lb)	Overall Control Efficiency**	Emission Factor	Uncontrolled Emissions PM		Uncontrolled Emissions PM10/PM2.5		Controlled PM PTE		Controlled $PM_{10}/PM_{2.5}$ PTE	
	scfm	gr/dscf	gr/lb	Fabric Filter	lb/dscf	lb/hr	tons/yr	lb/hr	tons/yr	lb/hr	tons/yr	lb/hr	tons/yr
EQUI 14	7000	0.06	7000	74	8.57E-06	3.60	15.8	3.60	15.8	0.94	4.10	0.94	4.10
Total						**3.60**	**15.8**	**3.60**	**15.8**	**0.94**	**4.1**	**0.94**	**4.1**

Justification

The emission factors were taken from AP-42 Chapter 10.4 for wood operations, which has been retracted. The above calculations are considered to be highly conservative since it is difficult to project the behavior of particulates in wood operations onto aluminum operations. It is assumed that woodworking operations from which the AP-42 emission factor was originally obtained produces more particulate matter as the operation in general removes more material than metal cutting. The AP-42 document does not specify what type of wood (hard or soft) was used to obtain the emission factor but, conservatively, aluminum is more than 5 times denser than softwood. Therefore, it is more likely that less volume will be emitted as particulate matter.

*The emission factor From AP-42, Chapter 10.4 assumes the use of a cyclone. The cyclone is assumed to provide 50% control efficiency based on average efficiencies for conventional cyclones given by the EPA CICA Fact Sheet. Therefore, the emission factor is adjusted in the column called 'Adjusted AP-42 Emission Factor' to reflect the uncontrolled emission factor.

**74% overall control efficiency represents 80% capture efficiency and 93% control efficiency.

Basic Assumptions

Woodworking takes off more material than metal surface preparation/finishing
Aluminum denser than wood so less is emitted as particulate matter

Facility Name: **Alumacraft Boat Company**
Facility AQ ID: **10300014**

Aluminum Sanding Operations

Description	Air Flow	Adjusted AP-42 Emission Factor*	Conversion (gr to lb)	Overall Control Efficiency**	Emission Factor	Uncontrolled Emissions PM		Uncontrolled Emissions PM10/PM2.5		Controlled PM PTE		Controlled $PM_{10}/PM_{2.5}$ PTE	
	scfm	gr/dscf	gr/lb	Water Curtain	lb/dscf	lb/hr	tons/yr	lb/hr	tons/yr	lb/hr	tons/yr	lb/hr	tons/yr
EQUI 15	11000	0.055	7000	85	7.86E-06	5.19	22.7	5.19	22.7	0.78	3.41	0.78	3.41
Total						**5.19**	**22.7**	**5.19**	**22.7**	**0.78**	**3.41**	**0.78**	**3.41**

Justification

The emission factors were taken from AP-42 Chapter 10.4 for wood operations, which has been retracted. The above calculations are considered to be highly conservative since it is difficult to project the behavior of particulates in wood operations onto aluminum operations. It is assumed that woodworking operations from which the AP-42 emission factor was originally obtained produces more particulate matter as the operation in general removes more material than metal cutting. The AP-42 document does not specify what type of wood (hard or soft) was used to obtain the emission factor but, conservatively, aluminum is more than 5 times denser than softwood. Therefore, it is more likely that less volume will be emitted as particulate matter.

*The emission factor From AP-42, Chapter 10.4 assumes the use of a cyclone. The cyclone is assumed to provide 50% control efficiency based on average efficiencies for conventional cyclones given by the EPA CICA Fact Sheet. Therefore, the emission factor is adjusted in the column called 'Adjusted AP-42 Emission Factor' to reflect the uncontrolled emission factor.

**85% overall control efficiency represents 100% capture efficiency and 85% control efficiency.

Basic Assumptions

Woodworking takes off more material than metal surface preparation/finishing
Aluminum denser than wood so less is emitted as particulate matter

Facility Name: **Alumacraft Boat Company**
Facility AQ ID: **10300014**

Air Emissions from Oven #4
(Natural Gas Boiler <100 MMBtu/hr)

Maximum Heat Input	**1,940,000**	BTU/hour
Total Hours Operated	**8,760**	hours/year
Total cubic feet of natural gas burned	**16,661,176**	cubic feet/year

Emissions

Source: EPA AP-42 Chapter 1.4

Pollutant	a **Boiler hourly natural gas usage**[1] (cu ft/hr)	b **Hours in a Year** (hr/yr)	c **Emission Factor** (lbs/cu ft)	d **Actual natural gas burned** (cu ft/yr)	**Potential Emissions** (ton/yr) (c * d) / 2000
PM	1902	8760	7.60E-06	16,661,176	**0.06**
PM10	1902	8760	7.60E-06	16,661,176	**0.06**
VOC	1902	8760	5.50E-06	16,661,176	**0.05**
SOx	1902	8760	6.00E-07	16,661,176	**0.00**
NOx	1902	8760	1.00E-04	16,661,176	**0.83**
CO	1902	8760	8.40E-05	16,661,176	**0.70**
Lead	1902	8760	5.00E-10	16,661,176	**4.17E-06**
GHG Total (CO_2e)	*see calculations below*				**1001**

Green House Gas (GHG) Emissions (CO_2e)

Sources: EPA AP-42 Chapter 1.4
74 FR 209 (30 Oct 2009), pages 56409-56410

Pollutant	a **Global Warming Potential**[2]	b **Boiler hourly natural gas usage**[1] (cu ft/hr) (BTU/hr) / (1020 BTU/cu ft)	c **Hours in a Year** (hr/yr) 24 hrs/day * 365 days/yr	d **Emission Factor** (lbs/cu ft)	e **Annual actual natural gas burned** cu ft/yr)	**Potential Emissions** (ton/yr) (a * c * d) / 2000
CO_2	1	1902	8760	0.120	16,661,176	**999.67**
CH_4	25	1902	8760	2.31E-06	16,661,176	**0.48**
N_2O	298	1902	8760	2.31E-07	16,661,176	**0.57**
					Green House Gas Total (CO_2e)	**1000.73**

[1]Heat value of natural gas is 1020 BTU/cubic foot according to EPA AP-42 Chapter 1.4
[2]Global Warming Potential from 40 CFR Part 98, as revised in the Federal Register, Vol. 78, No. 230, p. 71909, November 29, 2013.
CO_2e = carbon dioxide equivalents

HAP Name	CAS number	Emission Factor (lb/MMscf)	Emission Factor (lb/scf)	PTE (Tons/year)
2-Methylnaphthalene	91-57-6	0.000024	2.4E-11	2.00E-07
3-Methylchloranthrene	56-49-5	0.0000018	1.8E-12	1.50E-08
7,12-Dimethylbenz(a)anthracene		0.000016	1.6E-11	1.33E-07
Acenaphthene	83-32-9	0.0000018	1.8E-12	1.50E-08
Acenaphthylene	203-96-8	0.0000018	1.8E-12	1.50E-08
Anthracene	120-12-7	0.0000024	2.4E-12	2.00E-08
Benz(a)anthracene	56-55-3	0.0000018	1.8E-12	1.50E-08
Benzene	71-43-2	0.0021	2.1E-09	1.75E-05
Benzo(a)pyrene	50-32-8	0.0000012	1.2E-12	1.00E-08
Benzo(b)fluoranthene	205-99-2	0.0000018	1.8E-12	1.50E-08
Benzo(g,h,i)perylene	191-24-2	0.0000012	1.2E-12	1.00E-08
Benzo(k)fluoranthene	207-08-9	0.0000018	1.8E-12	1.50E-08
Chrysene	218-01-9	0.0000018	1.8E-12	1.50E-08
Dibenzo(a,h)anthracene	53-70-3	0.0000012	1.2E-12	1.00E-08
Dichlorobenzene	25321-22- 6	0.0012	1.2E-09	1.00E-05
Fluoranthene	206-44-0	0.000003	3E-12	2.50E-08
Fluorene	86-73-7	0.0000028	2.8E-12	2.33E-08
Formaldehyde	50-00-0	0.075	7.50E-08	6.25E-04
Hexane	110-54-3	1.8	1.80E-06	1.50E-02
Indeno(1,2,3-cd)pyrene	193-39-5	0.0000018	1.8E-12	1.50E-08
Naphthalene	91-20-3	0.00061	6.1E-10	5.08E-06
Phenanathrene	85-01-8	0.000017	1.7E-11	1.42E-07
Pyrene	129-00-0	0.000005	5E-12	4.17E-08
Toluene	108-88-3	0.0034	3.4E-09	2.83E-05
Arsenic	7440-38-2	0.0002	2E-10	1.67E-06
Beryllium	7440-41-7	0.000012	1.2E-11	1.00E-07
Cadmium	7440-43-9	0.0011	1.1E-09	9.16E-06
Chromium	7440-47-3	0.0014	1.4E-09	1.17E-05
Cobalt	7440-48-4	0.000084	8.4E-11	7.00E-07
Manganese	7439-96-5	0.00038	3.8E-10	3.17E-06
Mercury	7439-97-6	0.00026	2.6E-10	2.17E-06
Nickel	7440-02-0	0.0021	2.1E-09	1.75E-05
Selenium	7782-49-2	0.000024	2.4E-11	2.00E-07
Total				1.57E-02

Source of Data - AP-42, table 1.4-3 dated 7/98

Facility Name: **Alumacraft Boat Company**
Facility AQ ID: **10300014**

INDUSTRIAL PROCESS EQUIPMENT SPREADSHEET

This spreadsheet calculates allowable particulate emission rates based on Minnesota Rules parts 7011.0730 (Table 1) and 7011.0735 (Table 2).

Flow rate in standard cubic feet per minute (scfm) is calculated using the ideal gas law and the assumptions of 68 deg. F for standard temperature and 14.78 psia for standard pressure.

Table 1

Emission Point: STRU 5

Process Weight Rate
(lbs/hour)
152.18

Emission Rate
(lbs/hour)
0.727

Emission Rate
(grams/sec)
0.092

Emission Rate
(tons/year)
3.184

Table 2

Emission Point: STRU 5

Source Gas Volume (acfm)
8000.000

Percent Moisture
0.000

Outlet Temperature (deg. F)
70.000

Outlet Gauge Pressure (psig)
0.000

Source Gas Volume
(dscf/min)
7969.793

Emission Rate
(grams/sec)
0.825

Emission Rate
(tons/year)
28.688

Emission Rate
(gr/dscf)
0.096

Emission Rate
(lbs/hour)
6.550

Controlled Emission Rate
(lbs/hour)
3.0435678

Meet IPER? yes

Emission Limit
(based on Minn. R. 7011.0715, subp. 1(A)): 0.096 gr/dscf

Facility Name: **Alumacraft Boat Company**
Facility AQ ID: **10300014**

INDUSTRIAL PROCESS EQUIPMENT SPREADSHEET

This spreadsheet calculates allowable particulate emission rates based on Minnesota Rules parts 7011.0730 (Table 1) and 7011.0735 (Table 2).

Flow rate in standard cubic feet per minute (scfm) is calculated using the ideal gas law and the assumptions of 68 deg. F for standard temperature and 14.78 psia for standard pressure.

Table 1

Emission Point: STRU 6

Process Weight Rate (lbs/hour)	**Emission Rate** (grams/sec)
152.18	0.092
Emission Rate (lbs/hour)	**Emission Rate** (tons/year)
0.727	3.184

Table 2

Emission Point: STRU 6

Source Gas Volume (acfm)
10000.000

Percent Moisture
0.000

Outlet Temperature (deg. F)
70.000

Outlet Gauge Pressure (psig)
0.000

Source Gas Volume (dscf/min)
9962.241

Emission Rate (gr/dscf)
0.089

Emission Rate (grams/sec)
0.960

Emission Rate (tons/year)
33.358

Emission Rate (lbs/hour)
7.616

Controlled Emission Rate (lbs/hour)
3.0435678

Meet IPER? yes

Emission Limit (based on Minn. R. 7011.0715, subp. 1(A)): 0.089 gr/dscf

Facility Name: **Alumacraft Boat Company**
Facility AQ ID: **10300014**

INDUSTRIAL PROCESS EQUIPMENT SPREADSHEET

This spreadsheet calculates allowable particulate emission rates based on Minnesota Rules parts 7011.0730 (Table 1) and 7011.0735 (Table 2).

Flow rate in standard cubic feet per minute (scfm) is calculated using the ideal gas law and the assumptions of 68 deg. F for standard temperature and 14.78 psia for standard pressure.

Table 1

Emission Point: STRU 7

Process Weight Rate (lbs/hour)
174.04

Emission Rate (lbs/hour)
0.790

Emission Rate (grams/sec)
0.100

Emission Rate (tons/year)
3.460

Table 2

Emission Point: STRU 7

Source Gas Volume (acfm)
16000.000

Percent Moisture
0.000

Outlet Temperature (deg. F)
70.000

Outlet Gauge Pressure (psig)
0.000

Source Gas Volume (dscf/min)
15939.585

Emission Rate (gr/dscf)
0.077

Emission Rate (grams/sec)
1.318

Emission Rate (tons/year)
45.831

Emission Rate (lbs/hour)
10.464

Controlled Emission Rate (lbs/hour)
3.48075

Meet IPER? yes

Emission Limit (based on Minn. R. 7011.0715, subp. 1(A)): 0.077 gr/dscf

Facility Name: **Alumacraft Boat Company**
Facility AQ ID: **10300014**

INDUSTRIAL PROCESS EQUIPMENT SPREADSHEET

This spreadsheet calculates allowable particulate emission rates based on Minnesota Rules parts 7011.0730 (Table 1) and 7011.0735 (Table 2).

Flow rate in standard cubic feet per minute (scfm) is calculated using the ideal gas law and the assumptions of 68 deg. F for standard temperature and 14.78 psia for standard pressure.

Table 1

Emission Point: STRU 7

Process Weight Rate (lbs/hour)
3.60

Emission Rate (lbs/hour)
0.071

Emission Rate (grams/sec)
0.009

Emission Rate (tons/year)
0.312

Table 2

Emission Point: STRU 7

Source Gas Volume (acfm)
7000.000

Percent Moisture
0.000

Outlet Temperature (deg. F)
70.000

Outlet Gauge Pressure (psig)
0.000

Source Gas Volume (dscf/min)
6973.568

Emission Rate (gr/dscf)
0.100

Emission Rate (grams/sec)
0.753

Emission Rate (tons/year)
26.181

Emission Rate (lbs/hour)
5.977

Uncontrolled Emission Rate (lbs/hour)
3.60

Meet IPER? yes

Emission Limit (based on Minn. R. 7011.0715, subp. 1(A)): 0.100 gr/dscf

Facility Name: **Alumacraft Boat Company**
Facility AQ ID: **10300014**

INDUSTRIAL PROCESS EQUIPMENT SPREADSHEET

This spreadsheet calculates allowable particulate emission rates based on Minnesota Rules parts 7011.0730 (Table 1) and 7011.0735 (Table 2).

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Emission Limit (based on Minn. R. 7011.0715, subp. 1(A)): 0.100 gr/dscf

Facility Name: **Alumacraft Boat Company**
Facility AQ ID: **10300014**

INDUSTRIAL PROCESS EQUIPMENT SPREADSHEET

This spreadsheet calculates allowable particulate emission rates based on Minnesota Rules parts 7011.0730 (Table 1) and 7011.0735 (Table 2).

Flow rate in standard cubic feet per minute (scfm) is calculated using the ideal gas law and the assumptions of 68 deg. F for standard temperature and 14.78 psia for standard pressure.

Table 1

Emission Point: STRU 7

Process Weight Rate (lbs/hour)
5.19

Emission Rate (lbs/hour)
0.089

Emission Rate (grams/sec)
0.011

Emission Rate (tons/year)
0.392

Table 2

Emission Point: STRU 7

Source Gas Volume (acfm)
7000.000

Percent Moisture
0.000

Outlet Temperature (deg. F)
70.000

Outlet Gauge Pressure (psig)
0.000

Source Gas Volume (dscf/min)
6973.568

Emission Rate (gr/dscf)
0.100

Emission Rate (grams/sec)
0.753

Emission Rate (tons/year)
26.181

Emission Rate (lbs/hour)
5.977

Uncontrolled Emission Rate (lbs/hour)
5.19

Meet IPER? yes

Emission Limit (based on Minn. R. 7011.0715, subp. 1(A)): 0.100 gr/dscf

Facility Name: **Alumacraft Boat Company**
Facility AQ ID: **10300014**

Emission Unit

Pollutant	EQUI 1	EQUI 2	EQUI 3	EQUI 4	EQUI 5	EQUI 7	EQUI 8	EQUI 9	EQUI 10	EQUI 12	EQUI 13	EQUI 14	EQUI 15	EQUI 16	Total IAs	Total Controlled PTE (tpy)
PM						13.3	13.3	15.2	0.07	4.10	4.10	4.10	3.41	0.06	0.36	58.1
PM10						13.3	13.3	15.2	0.07	4.10	4.10	4.10	3.41	0.06	0.36	58.1
PM2.5						13.3	13.3	15.2	0.05	4.10	4.10	4.10	3.41	0.06	0.36	58.1
VOC	6.75	211	211	211	47.9	174	174	199	0.05					0.05	0.26	1234
SOx									0.01					0.00	0.03	0.04
NOx									0.86					0.83	4.76	6.45
CO									0.72					0.70	4.00	5.42
Lead									4.29E-06					4.17E-06	2.38E-05	3.23E-05
CO_2									1030.59					1000	5712	7742
CH_4									0.50					0.48	2.75	3.73
N_2O									0.59					0.57	3.28	4.44
GHG Total (CO_2e)									1031.68					1001	5718	7750
4,4'-Methylene bis(phenylisocyanate)				8.93												8.93
Xylene					31.2	40.5	40.5	46.3								158
Ethyl Benzene					9.59											9.59
Methyl Methacrylate						2.95	2.95	3.37								9.26
Methyl Isobutyl Ketone						8.70	8.70	9.95								27.4
Hexamethylene-di-isocyanate						1.74	1.74	1.99								5.47
2-Methylnaphthalene									2.06E-07					2.00E-07	1.14E-06	1.55E-06
3-Methylchloranthrene									1.55E-08					1.50E-08	8.57E-08	1.16E-07
7,12-Dimethylbenz(a)anthracene									1.37E-07					1.33E-07	7.62E-07	1.03E-06
Acenaphthene									1.55E-08					1.50E-08	8.57E-08	1.16E-07
Acenaphthylene									1.55E-08					1.50E-08	8.57E-08	1.16E-07
Anthracene									2.06E-08					2.00E-08	1.14E-07	1.55E-07
Benz(a)anthracene									1.55E-08					1.50E-08	8.57E-08	1.16E-07
Benzene									1.80E-05					1.75E-05	1.00E-04	1.35E-04
Benzo(a)pyrene									1.03E-08					1.00E-08	5.71E-08	7.74E-08
Benzo(b)fluoranthene									1.55E-08					1.50E-08	8.57E-08	1.16E-07
Benzo(g,h,i)perylene									1.03E-08					1.00E-08	5.71E-08	7.74E-08
Benzo(k)fluoranthene									1.55E-08					1.50E-08	8.57E-08	1.16E-07
Chrysene									1.55E-08					1.50E-08	8.57E-08	1.16E-07
Dibenzo(a,h)anthracene									1.03E-08					1.00E-08	5.71E-08	7.74E-08
Dichlorobenzene									1.03E-05					1.00E-05	5.71E-05	7.74E-05
Fluoranthene									2.58E-08					2.50E-08	1.43E-07	1.94E-07
Fluorene									2.40E-08					2.33E-08	1.33E-07	1.81E-07
Formaldehyde									6.44E-04					6.25E-04	3.57E-03	4.84E-03
Hexane									1.55E-02					1.50E-02	8.57E-02	0.116
Indeno(1,2,3-cd)pyrene									1.55E-08					1.50E-08	8.57E-08	1.16E-07
Naphthalene									5.24E-06					5.08E-06	2.90E-05	3.94E-05
Phenanathrene									1.46E-07					1.42E-07	8.09E-07	1.10E-06
Pyrene									4.29E-08					4.17E-08	2.38E-07	3.23E-07
Toluene					0.479				2.92E-05					2.83E-05	1.62E-04	0.480
Arsenic									1.72E-06					1.67E-06	9.52E-06	1.29E-05
Beryllium									1.03E-07					1.00E-07	5.71E-07	7.74E-07
Cadmium									9.45E-06					9.16E-06	5.24E-05	7.10E-05
Chromium									1.20E-05					1.17E-05	6.66E-05	9.03E-05
Cobalt									7.21E-07					7.00E-07	4.00E-06	5.42E-06
Manganese									3.26E-06					3.17E-06	1.81E-05	2.45E-05
Mercury									2.23E-06					2.17E-06	1.24E-05	1.68E-05
Nickel									1.80E-05					1.75E-05	1.00E-04	1.35E-04
Selenium									2.06E-07					2.00E-07	1.14E-06	1.55E-06

*** Limits on EQUI 7, 8, and 9 for PM/PM10/PM2.5 of 75 tons per year and on EQUI 1, 2, 3, 4, 5, 7, 8, and 9 for VOCs of 95 tons per year apply to avoid Title I condition**

**** Blank cells indicate zero emissions of that pollutant**

Facility Name: **Alumacraft Boat Company**
Facility AQ ID: **10300014**

Facility Total Insignificant Activities (Natural Gas Combustion)

Each activity in this tab is at below the 1.8 MMBtu/hr threshold. Therefore, each unit qualifies as an insignificant activity under Minn. R. 7011.1300 subp. 3(I)

Total Heat Input	**11,085,000**	BTU/hour
Total Hours Operated	**8,760**	hours/year
Total cubic feet of natural gas burned	**95,200,588**	cubic feet/year

Emissions

Source: EPA AP-42 Chapter 1.4

Pollutant	a Boiler hourly natural gas usage[1] (cu ft/hr)	b Hours in a Year (hr/yr)	c Emission Factor (lbs/cu ft)	d Actual natural gas (cu ft/yr)	Unrestricted (ton/yr) (c * d) / 2000
PM	1.09E+04	8760	7.60E-06	95,200,588	**3.62E-01**
PM10	1.09E+04	8760	7.60E-06	95,200,588	**3.62E-01**
VOC	1.09E+04	8760	5.50E-06	95,200,588	**2.62E-01**
SOx	1.09E+04	8760	6.00E-07	95,200,588	**2.86E-02**
NOx	1.09E+04	8760	1.00E-04	95,200,588	**4.76E+00**
CO	1.09E+04	8760	8.40E-05	95,200,588	**4.00E+00**
Lead	1.09E+04	8760	5.00E-10	95,200,588	**2.38E-05**
GHG Total (CO_2e)*	*see calculations below*				**5718**

Green House Gas (GHG) Emissions (CO_2e)

Source: EPA AP-42 Chapter 1.4

Pollutant	a Global Warming Potential[2]	b Hourly Natural Gas usage[1] (cu ft/hr)	c Hours in a Year (hr/yr)	d Emission Factor (lbs/cu ft)	e Annual natural gas burned cu ft/yr)	Unrestricted Potential Emissions (ton/yr) (a * c * d) / 2000
CO_2	1	1.09E+04	8760	0.120	95,200,588	**5.71E+03**
CH_4	25	1.09E+04	8760	2.31E-06	95,200,588	**2.75E+00**
N_2O	298	1.09E+04	8760	2.31E-07	95,200,588	**3.28E+00**
					Green House Gas Total (CO_2e)*	**5718.06**

[1]Heat value of natural gas is 1020 BTU/cubic foot according to EPA AP-42 Chapter 1.4

[2]Global Warming Potential from 40 CFR Part 98, as revised in the Federal Register, Vol. 78, No. 230, p. 71909, November 29, 2013.

CO_2e = carbon dioxide equivalents

HAP Name	CAS number	Emission Factor (lb/MMscf)	Emission Factor (lb/scf)	PTE (Tons/year)
2-Methylnaphthalene	91-57-6	0.000024	2.4E-11	1.14E-06
3-Methylchloranthrene	56-49-5	0.0000018	1.8E-12	8.57E-08
7,12-Dimethylbenz(a)anthracene		0.000016	1.6E-11	7.62E-07
Acenaphthene	83-32-9	0.0000018	1.8E-12	8.57E-08
Acenaphthylene	203-96-8	0.0000018	1.8E-12	8.57E-08
Anthracene	120-12-7	0.0000024	2.4E-12	1.14E-07
Benz(a)anthracene	56-55-3	0.0000018	1.8E-12	8.57E-08
Benzene	71-43-2	0.0021	2.1E-09	1.00E-04
Benzo(a)pyrene	50-32-8	0.0000012	1.2E-12	5.71E-08
Benzo(b)fluoranthene	205-99-2	0.0000018	1.8E-12	8.57E-08
Benzo(g,h,i)perylene	191-24-2	0.0000012	1.2E-12	5.71E-08
Benzo(k)fluoranthene	207-08-9	0.0000018	1.8E-12	8.57E-08
Chrysene	218-01-9	0.0000018	1.8E-12	8.57E-08
Dibenzo(a,h)anthracen	53-70-3	0.0000012	1.2E-12	5.71E-08
Dichlorobenzene	25321-22- 6	0.0012	1.2E-09	5.71E-05
Fluoranthene	206-44-0	0.000003	3E-12	1.43E-07
Fluorene	86-73-7	0.0000028	2.8E-12	1.33E-07
Formaldehyde	50-00-0	0.075	7.50E-08	3.57E-03
Hexane	110-54-3	1.8	1.80E-06	8.57E-02
Indeno(1,2,3-cd)pyren	193-39-5	0.0000018	1.8E-12	8.57E-08
Naphthalene	91-20-3	0.00061	6.1E-10	2.90E-05
Phenanathrene	85-01-8	0.000017	1.7E-11	8.09E-07
Pyrene	129-00-0	0.000005	5E-12	2.38E-07
Toluene	108-88-3	0.0034	3.4E-09	1.62E-04
Arsenic	7440-38-2	0.0002	2E-10	9.52E-06
Beryllium	7440-41-7	0.000012	1.2E-11	5.71E-07
Cadmium	7440-43-9	0.0011	1.1E-09	5.24E-05
Chromium	7440-47-3	0.0014	1.4E-09	6.66E-05
Cobalt	7440-48-4	0.000084	8.4E-11	4.00E-06
Manganese	7439-96-5	0.00038	3.8E-10	1.81E-05
Mercury	7439-97-6	0.00026	2.6E-10	1.24E-05
Nickel	7440-02-0	0.0021	2.1E-09	1.00E-04
Selenium	7782-49-2	0.000024	2.4E-11	1.14E-06
Total				8.99E-02

Source of Data - AP-42, table 1.4-3 dated 7/98

Insignificant Activity List

Number	Unit Description	Heat Rating (kBtu/hr)
1	Infrared Gas Heater	100
2	Infrared Gas Heater	100
3	Infrared Gas Heater	100
4	Infrared Gas Heater	100
5	Infrared Gas Heater	40
6	Infrared Gas Heater	40
7	Infrared Gas Heater	40
8	Infrared Gas Heater	60
9	Infrared Gas Heater	60
10	Infrared Gas Heater	75
11	Infrared Gas Heater	75
12	Infrared Gas Heater	75
13	Infrared Gas Heater	75
14	Infrared Gas Heater	125
15	Infrared Gas Heater	75
16	Infrared Gas Heater	75
17	Infrared Gas Heater	125
18	Infrared Gas Heater	175
19	Infrared Gas Heater	175
20	Infrared Gas Heater	175
21	Infrared Gas Heater	175
22	Infrared Gas Heater	175
23	Infrared Gas Heater	175
24	Infrared Gas Heater	50
25	Infrared Gas Heater	50
26	Infrared Gas Heater	50
27	Infrared Gas Heater	50
28	Infrared Gas Heater	50
29	Infrared Gas Heater	50
30	Infrared Gas Heater	50
31	Infrared Gas Heater	50
32	Infrared Gas Heater	50
33	Infrared Gas Heater	100
34	Infrared Gas Heater	100
35	Infrared Gas Heater	100
36	Infrared Gas Heater	100
37	Infrared Gas Heater	100
1	Gas Unit Heater	150
2	Gas Unit Heater	150
3	Gas Unit Heater	150
4	Gas Unit Heater	165
5	Gas Unit Heater	165
6	Gas Unit Heater	100
7	Gas Unit Heater	100
8	Gas Unit Heater	100
9	Gas Unit Heater	100
10	Gas Unit Heater	100
11	Gas Unit Heater	100
12	Gas Unit Heater	77
13	Gas Unit Heater	77
14	Gas Unit Heater	30
16	Gas Unit Heater	100
1	Gas Furnace	80
3	Gas Furnace	100
4	Gas Furnace	80
5	Gas Furnace	125
6	Gas Furnace	50
7	Gas Furnace	80
8	Gas Furnace	100
9	Gas Furnace	100
10	Gas Furnace	66
3	Makeup Air	1100
5	Makeup Air	1800
1	Oven	800
2	Oven	800
3	Oven	800
Total		**11085**

ATTACHMENT 2
SUBJECT ITEM INVENTORY LIST
(Available Electronically in Tempo Central File)

Category	Type	ID	Designation	Description	Groups
Activity	Insignificant Air Emissions Activity	ACTV 3		All IAs	None
Equipment	Cleaning Equipment	EQUI 1	EU009	Spray Gun Cleaning	COMG 1, COMG 2
Equipment	Cutting Equipment	EQUI 12	EU012	Router 1	None
Equipment	Cutting Equipment	EQUI 13	EU013	Router 2	None
Equipment	Cutting Equipment	EQUI 14	EU014	Router 3	None
Equipment	Dryer/Oven, unknown firing method	EQUI 16	EU011	Oven 4	None
Equipment	Gluing Equipment	EQUI 2	EU006	Gluing Sub Assembly	COMG 1, COMG 2
Equipment	Gluing Equipment	EQUI 3	EU007	Gluing Floor Assembly	COMG 1, COMG 2
Equipment	Gluing Equipment	EQUI 4	EU008	Gluing Hull Prep	COMG 1, COMG 2
Equipment	Other Combustion	EQUI 10	EU001	Air Makeup Unit 4	None
Equipment	Sanding Equipment	EQUI 15	EU015	Sander 1	None
Equipment	Solvent Equipment	EQUI 5	EU005	Solvent Wipe Down	COMG 1, COMG 2
Equipment	Spray Booth/Coating Line	EQUI 7	EU003	Paint Booth 2	COMG 1, COMG 2
Equipment	Spray Booth/Coating Line	EQUI 8	EU004	Paint Booth 3	COMG 1, COMG 2
Equipment	Spray Booth/Coating Line	EQUI 9	EU010	Paint Booth 4	COMG 1, COMG 2
Structure	Building	STRU 1	BG001	Main Production Area	None
Structure	Building	STRU 2	BG002	Storage Building	None
Structure	Stack/Vent	STRU 3	SV001	Air Makeup Unit 4, Gluing, and Solvent Operations	None
Structure	Stack/Vent	STRU 5	SV003	Paint Booth 2	None
Structure	Stack/Vent	STRU 6	SV004	Paint Booth 3	None
Structure	Stack/Vent	STRU 7	SV005	Paint Booth 4	None
Structure	Stack/Vent	STRU 8	SV006	Oven 4	None
Structure	Stack/Vent	STRU 9	SV007	Router 1, 2, and 3	None
Total Facility	Air Quality Total Facility	TFAC 1	10300014	Alumacraft Boat Co	None
Treatment	018-Fabric Filter - Low Temp, T	TREA 11	CE009	Fabric Filter	None
Treatment	086-Water Curtain (Use for Water Wash Paint Booth)	TREA 12	CE010	Water Curtain	None
Treatment	910-Split Paper + Polyester Paint Arrestor	TREA 6	CE005	Split Paper + Polyester Paint Arrestor	COMG 5
Treatment	910-Split Paper + Polyester Paint Arrestor	TREA 7	CE006	Split Paper + Polyester Paint Arrestor	COMG 5
Treatment	910-Split Paper + Polyester Paint Arrestor	TREA 8	CE007	Split Paper + Polyester Paint Arrestor	COMG 5

ATTACHMENT 3
COMPLIANCE ASSURANCE MONITORING PLAN
(Available Electronically in Tempo Central File)

Compliance Assurance Monitoring

(40 CFR Part 64)

Alumacraft Boat Company

1. Control Equipment (CE):

1.1 Process/Emissions Unit CE: CE005 (Expanded Paper Filter with Frame)

2. Associated Emissions Unit(s)

2.1 Process/Emissions Unit(s): EU003 (Paint Booth #2)

2.2 Pollutants: PM, PM_{10} & $PM_{2.5}$

2.3 Emissions Control Technique: Effectively utilize, monitor, maintain and replace expanded paper filter panels in the applicable EUs as directed.

3. Applicable Requirements

Emissions limits:

Particulate Matter ($PM=PM_{10}=PM_{2.5}$): Maintain booth filters such that they perform at or above a combined 85% efficiency level to ensure total facility emission levels remain at or below 95 tons/year using 12-month Rolling Sum

Total Particulate Matter (PM=PM10=PM2.5): less than or equal to 0.30 grains/dry standard cubic foot of exhaust gas unless required to further reduce emissions to comply with the less stringent limit of either Minn. R. 7011.0730 or Minn. R. 7011.0735. (The potential to emit of this unit is 0.029 grains/dry standard cubic meter)

Opacity: less than or equal to 20 percent opacity

The Permittee shall operate and maintain the control equipment such that it achieves an overall control efficiency, for Total Particulate Matter ($PM=PM_{10}=PM_{2.5}$): greater than or equal to 85 percent control efficiency

4. Monitoring Approach

Applicable Requirement	• Main booth filter efficiency of 85% or greater. • Maintain total facility emissions of PM, PM_{10} and $PM_{2.5}$ at level less than, or equal to, 95 tpy using a 12-month rolling sum.
General Monitoring Approach	• Inspect all EU & CE equipment for proper installation of filters, filter condition and functionality. • Regular calibration of monitoring equipment
Monitoring Methods	• EU and EC equipment are routinely inspected for the following: • Proper filter installation (i.e. fully seated – no gaps) • Filter defects

	• Filter damage (e.g. rips, tears, folds, etc.) • Booth damage (dents, etc.) • Booth functionality: • Regular manometer readings
Data Collection Frequency	• Manometer readings: • Daily • General booth and filter inspections and maintenance: • Daily • Manometer calibrations: • Annually
Monitoring Range(s)	• Daily manometer reading ranges are as follows: • EU003: 0.1 – 0.43
Averaging Period	• None
Recordkeeping	• Daily manometer readings will be documented immediately • Daily visual inspection of wall/panel filters • Documentation of annual monitoring equipment calibrations will be maintained. • Total PM, PM10 and PM2.5 usage for each month
QA/QC	• Maintain and operate any all instrumentation all filters and booth equipment in accordance with the manufacturer's recommendations.

5. Basis

The facility routinely operates well below the permitted PM, PM_{10} and $PM_{2.5}$ limits. The facility, like many other facilities in similar industries, has historically been successfully in using paint booths and emission filter systems to control particulate emission from painting/coating operations. All control equipment is being inspected, calibrated and maintained in accordance with any/all manufactures specifications. Therefore, an equipment monitoring and recordkeeping approach provides a reasonable assurance of compliance overall operating conditions.

Compliance Assurance Monitoring

(40 CFR Part 64)

Alumacraft Boat Company

1. Control Equipment (CE):

1.1 Process/Emissions Unit CE: CE006 (Fiberglass Pre-filter Mat)

2. Associated Emissions Unit(s)

2.1 Process/Emissions Unit(s): EU004 (Paint Booth #3)

2.2 Pollutants: PM, PM_{10} & $PM_{2.5}$

2.3 Emissions Control Technique: Effectively utilize, monitor, maintain and replace expanded paper filter panels in the applicable EUs as directed.

3. Applicable Requirements

Emissions limits:

Particulate Matter ($PM=PM_{10}=PM_{2.5}$): Maintain booth filters such that they perform at or above a combined 85% efficiency level to ensure total facility emission levels remain at or below 95 tons/year using 12-month Rolling Sum

Total Particulate Matter (PM=PM10=PM2.5): less than or equal to 0.30 grains/dry standard cubic foot of exhaust gas unless required to further reduce emissions to comply with the less stringent limit of either Minn. R. 7011.0730 or Minn. R. 7011.0735. (The potential to emit of this unit is 0.029 grains/dry standard cubic meter)

Opacity: less than or equal to 20 percent opacity

The Permittee shall operate and maintain the control equipment such that it achieves an overall control efficiency, for Total Particulate Matter ($PM=PM_{10}=PM_{2.5}$): greater than or equal to 85 percent control efficiency

4. Monitoring Approach

Applicable Requirement	• Main booth filter efficiency of 85% or greater. • Maintain total facility emissions of PM, PM10 and PM2.5 at level less than, or equal to, 95 tpy using a 12-month rolling sum.
General Monitoring Approach	• Inspect all EU & CE equipment for proper installation of filters, filter condition and functionality. • Regular calibration of monitoring equipment
Monitoring Methods	• EU and EC equipment are routinely inspected for the following: • Proper filter installation (i.e. fully seated – no gaps) • Filter defects • Filter damage (e.g. rips, tears, folds, etc.) • Booth damage (dents, etc.)

	• Booth functionality: • Regular manometer readings
Data Collection Frequency	• 1. Manometer readings: • Daily • General booth and filter inspections and maintenance: • Daily • Manometer calibrations: • Annually
Monitoring Range(s)	• Daily manometer reading ranges are as follows: • EU004: 0.1 – 0.43
Averaging Period	• None
Recordkeeping	• Daily manometer readings will be documented immediately • Daily visual inspection of wall/panel filters • Documentation of annual monitoring equipment calibrations will be maintained. • Total PM, PM10 and PM2.5 usage for each month
QA/QC	• Maintain and operate any all instrumentation all filters and booth equipment in accordance with the manufacturer's recommendations.

5. Basis

The facility routinely operates well below the permitted PM, PM_{10} and $PM_{2.5}$ limits. The facility, like many other facilities in similar industries, has historically been successfully in using paint booths and emission filter systems to control particulate emission from painting/coating operations. All control equipment is being inspected, calibrated and maintained in accordance with any/all manufactures specifications. Therefore, an equipment monitoring and recordkeeping approach provides a reasonable assurance of compliance overall operating conditions.

Compliance Assurance Monitoring

(40 CFR Part 64)

Alumacraft Boat Company

1. Control Equipment (CE):

1.1 Process/Emissions Unit CE: CE007 (Expanded paper with polyester roll)

2. Associated Emissions Unit(s)

2.1 Process/Emissions Unit(s): EU010 (Paint Booth #4)

2.2 Pollutants: PM, PM_{10} & $PM_{2.5}$

2.3 Emissions Control Technique: Effectively utilize, monitor, maintain and replace expanded paper filter panels in the applicable EUs as directed.

3. Applicable Requirements

Emissions limits:

Particulate Matter ($PM=PM_{10}=PM_{2.5}$): Maintain booth filters such that they perform at or above a combined 85% efficiency level to ensure total facility emission levels remain at or below 95 tons/year using 12-month Rolling Sum

Total Particulate Matter (PM=PM10=PM2.5): less than or equal to 0.30 grains/dry standard cubic foot of exhaust gas unless required to further reduce emissions to comply with the less stringent limit of either Minn. R. 7011.0730 or Minn. R. 7011.0735. (The potential to emit of this unit is 0.029 grains/dry standard cubic meter)

Opacity: less than or equal to 20 percent opacity

The Permittee shall operate and maintain the control equipment such that it achieves an overall control efficiency, for Total Particulate Matter ($PM=PM_{10}=PM_{2.5}$): greater than or equal to 85 percent control efficiency

4. Monitoring Approach

Applicable Requirement	• Main booth filter efficiency of 85% or greater. • Maintain total facility emissions of PM, PM10 and PM2.5 at level less than, or equal to, 95 tpy using a 12-month rolling sum.
General Monitoring Approach	• Inspect all EU & CE equipment for proper installation of filters, filter condition and functionality. • Regular calibration of monitoring equipment
Monitoring Methods	• EU and EC equipment are routinely inspected for the following: • Proper filter installation (i.e. fully seated – no gaps) • Filter defects • Filter damage (e.g. rips, tears, folds, etc.) • Booth damage (dents, etc.)

	• Booth functionality: • Regular manometer readings
Data Collection Frequency	• Manometer readings: • Daily • General booth and filter inspections and maintenance: • Daily • Manometer calibrations: • Annually
Monitoring Range(s)	• Daily manometer reading ranges are as follows: • EU010: 0.1 – 0.43
Averaging Period	• None
Recordkeeping	• Daily manometer readings will be documented immediately • Daily visual inspection of wall/panel filters • Documentation of annual monitoring equipment calibrations will be maintained. • Total PM, PM10 and PM2.5 usage for each month
QA/QC	• Maintain and operate any all instrumentation all filters and booth equipment in accordance with the manufacturer's recommendations.

5. Basis

The facility routinely operates well below the permitted PM, PM_{10} and $PM_{2.5}$ limits. The facility, like many other facilities in similar industries, has historically been successfully in using paint booths and emission filter systems to control particulate emission from painting/coating operations. All control equipment is being inspected, calibrated and maintained in accordance with any/all manufactures specifications. Therefore, an equipment monitoring and recordkeeping approach provides a reasonable assurance of compliance overall operating conditions.

ATTACHMENT 4
REQUIREMENTS DEVELOPMENT LIST
(Available Electronically in Tempo Central File)

Subject Item	Sequence #	Description
COMG 1 (PM and VOC Limits)	1	The Permittee shall limit emissions of Volatile Organic Compounds <= 95 tons per year 12-month rolling sum to be calculated by the 15th day of each month for the previous 12-month period as described later in this permit. All VOC-emitting equipment at the Facility except insignificant activities and combustion units are subject to this limit. If the Permittee replaces any existing VOC-emitting equipment, adds new VOC-emitting equipment, or modifies the existing equipment, such equipment is subject to this permit limit as well as all of the requirements COMG 1. Prior to making such a change, the Permittee shall apply for and obtain the appropriate permit amendment, as applicable. The Permittee is not required to complete VOC calculations described in Minn. R. 7007.1200, subp. 2. A permit amendment will still be needed regardless of the emissions increase if the change will be subject to a new applicable requirement or requires revisions to the limits or monitoring and recordkeeping in this permit. VOC contents for each VOC-containing material shall be determined as described under the Material Content requirement in COMG 1. [Title I Condition: Avoid major modification under 40 CFR 52.21(b)(2) and Minn. R. 7007.3000, Title I Condition: Avoid major source under 40 CFR 52.21(b)(1)(i) and Minn. R. 7007.3000]
COMG 1 (PM and VOC Limits)	2	The Permittee shall limit emissions of Total Particulate Matter <= 75 tons per year 12-month rolling sum to be calculated by the 15th day of each month for the previous 12-month period as described later in this permit. All PM-emitting coating equipment is subject to this limit. If the Permittee replaces any existing PM-emitting coating equipment, adds new PM-emitting coating equipment, or modifies the existing equipment, such equipment is subject to this permit limit as well as all of the requirements of COMG 1. Prior to making such a change, the Permittee shall apply for and obtain the appropriate permit amendment, as applicable. Solids contents for each material shall be determined as described under the Material Content requirement in COMG 1. [Title I Condition: Avoid major modification under 40 CFR 52.21(b)(2) and Minn. R. 7007.3000, Title I Condition: Avoid major source under 40 CFR 52.21(b)(1)(i) and Minn. R. 7007.3000]

COMG 1 (PM and VOC Limits)	3	The Permittee shall limit emissions of PM < 10 micron <= 75 tons per year 12-month rolling sum to be calculated by the 15th day of each month for the previous 12-month period as described later in this permit. All PM10-emitting coating equipment is subject to this limit. If the Permittee replaces any existing PM10-emitting coating equipment, adds new PM10-emitting coating equipment, or modifies the existing equipment, such equipment is subject to this permit limit as well as all of the requirements of COMG 1. Prior to making such a change, the Permittee shall apply for and obtain the appropriate permit amendment, as applicable. Solids contents for each material shall be determined as described under the Material Content requirement in COMG 1. [Title I Condition: Avoid major modification under 40 CFR 52.21(b)(2) and Minn. R. 7007.3000, Title I Condition: Avoid major source under 40 CFR 52.21(b)(1)(i) and Minn. R. 7007.3000]
COMG 1 (PM and VOC Limits)	4	The Permittee shall limit emissions of PM < 2.5 micron <= 75 tons per year 12-month rolling sum to be calculated by the 15th day of each month for the previous 12-month period as described later in this permit. All PM2.5-emitting coating equipment at the facility is subject to this limit. If the Permittee replaces any existing PM2.5-emitting coating equipment, adds new PM2.5-emitting coating equipment, or modifies the existing equipment, such equipment is subject to this permit limit as well as all of the requirements of in COMG 1. Prior to making such a change, the Permittee shall apply for and obtain the appropriate permit amendment, as applicable. Solids contents for each material shall be determined as described under the Material Content requirement in COMG 1. [Title I Condition: Avoid major modification under 40 CFR 52.21(b)(2) and Minn. R. 7007.3000, Title I Condition: Avoid major source under 40 CFR 52.21(b)(1)(i) and Minn. R. 7007.3000]
COMG 1 (PM and VOC Limits)	5	Weekly Recordkeeping. Once every seven days, the Permittee shall calculate, record, and maintain the total quantity of all coatings and other solids and VOC-containing materials used in all COMG 1 units for the previous week. This shall be based on purchase records. [Minn. R. 7007.0800, subps. 4-5, Title I Condition: Avoid major source under 40 CFR 52.21(b)(1)(i) and Minn. R. 7007.3000]

COMG 1 (PM and VOC Limits)	6	Volatile Organic Compounds: Monthly Recordkeeping. By the 15th of the month, the Permittee shall calculate and record the following: 1) The total usage of VOC-containing materials for the previous calendar month using the weekly usage records. This record shall also include the VOC content of each material as determined by the Material Content requirement of this permit; 2) The VOC emissions for the previous month using the formulas specified in this permit; and 3) The 12-month rolling sum VOC emissions for the previous 12-month period by summing the monthly VOC emissions data for the previous 12 months. [Minn. R. 7007.0800, subps. 4-5]
COMG 1 (PM and VOC Limits)	7	Volatile Organic Compounds: Monthly Calculations. The Permittee shall calculate VOC emissions using the following equation: VOC (tons/month) = (A1 x B1) + (A2 x B2) + (A3 x B3) + ... where: A# = amount of each VOC-containing material used, in tons/month; and B# = weight percent VOC in A#, as a fraction. [Minn. R. 7007.0800, subps. 4-5]
COMG 1 (PM and VOC Limits)	8	Total Particulate Matter: Monthly Recordkeeping. By the 15th of the month, the Permittee shall calculate and record the following: 1) The total usage of each solids-containing material for the previous calendar month using the weekly usage records. This record shall also include solids contents of each material as determined by the Material Content requirement of this permit; 2) The Total Particulate emissions for the previous month using the formulas specified in this permit; and 3) The 12-month rolling sum Total Particulate emissions for the previous 12-month period by summing the monthly Total Particulate emissions data for the previous 12 months. [Minn. R. 7007.0800, subps. 4-5]
COMG 1 (PM and VOC Limits)	9	Total Particulate Matter: Monthly Calculation. The Permittee shall calculate Total Particulate emissions from the spray booths using the following equation: Total Particulate (tons/month) = S(1-CE)(1-TE) S = (A1 x B1) + (A2 x B2) + (A3 x B3) + ... Where: S = total solids used, in tons/month; CE = overall control efficiency, as a fraction. This shall be 0.92; TE = transfer efficiency, as a fraction. Transfer efficiencies at the time of permit issuance are listed in Appendix B; A# = amount of each solids-containing material sprayed, in tons/month; and B# = weight percent solids in A#, as a fraction. [Minn. R. 7007.0800, subps. 4-5]

COMG 1 (PM and VOC Limits)	10	PM < 10 micron: Monthly Recordkeeping. By the 15th of the month, the Permittee shall calculate and record the following: 1) The total usage of each solids-containing material for the previous calendar month using the weekly usage records. This record shall also include solids contents of each material as determined by the Material Content requirement of this permit; 2) The PM10 emissions for the previous month using the formulas specified in this permit; and 3) The 12-month rolling sum PM10 emissions for the previous 12-month period by summing the monthly PM10 emissions data for the previous 12 months. [Minn. R. 7007.0800, subps. 4-5]
COMG 1 (PM and VOC Limits)	11	PM < 10 micron: Monthly Calculation. The Permittee shall calculate PM10 emissions from the spray booths using the following equation: PM < 10 micron (tons/month) = S(1-CE)(1-TE) S = (A1 x B1) + (A2 x B2) + (A3 x B3) + ... Where: S = total solids used, in tons/month; CE = overall control efficiency, as a fraction. This shall be 0.92; TE = transfer efficiency, as a fraction. Transfer efficiencies at the time of permit issuance are listed in Appendix B; A# = amount of each solids-containing material sprayed, in tons/month; and B# = weight percent solids in A#, as a fraction. [Minn. R. 7007.0800, subps. 4-5]
COMG 1 (PM and VOC Limits)	12	PM < 2.5 micron: Monthly Recordkeeping. By the 15th of the month, the Permittee shall calculate and record the following: 1) The total usage of each solids-containing material for the previous calendar month using the weekly usage records. This record shall also include solids contents of each material as determined by the Material Content requirement of this permit; 2) The PM2.5 emissions for the previous month using the formulas specified in this permit; and 3) The 12-month rolling sum PM2.5 emissions for the previous 12-month period by summing the monthly PM2.5 emissions data for the previous 12 months. [Minn. R. 7007.0800, subps. 4-5]

COMG 1 (PM and VOC Limits)	13	PM < 2.5 micron: Monthly Calculation. The Permittee shall calculate PM2.5 emissions from the spray booths using the following equation: PM < 2.5 micron (tons/month) = S(1-CE)(1-TE) S = (A1 x B1) + (A2 x B2) + (A3 x B3) + ... Where: S = total solids used, in tons/month; CE = overall control efficiency, as a fraction. This shall be 0.92; TE = transfer efficiency, as a fraction. Transfer efficiencies at the time of permit issuance are listed in Appendix B; A# = amount of each solids-containing material sprayed, in tons/month; and B# = weight percent solids in A#, as a fraction. [Minn. R. 7007.0800, subps. 4-5]
COMG 1 (PM and VOC Limits)	14	Maximum Contents of Materials: The Permittee assumed certain worst-case contents of materials when determining the short term potential to emit of units in COMG 1. These assumptions are listed in Appendix B of this permit. Changing to a material that has a higher content of any of the given pollutants is considered a change in method of operation that must be evaluated under Minn. R. 7007.1200, subp. 3 to determine if a permit amendment or notification is required under Minn. R. 7007.1150. [Minn. R. 7005.0100, subp. 35a]
COMG 1 (PM and VOC Limits)	15	Material Content. Solids (PM, PM<10 microns, and PM<2.5 microns) and VOC content in coating and other solids and VOC-containing materials shall be determined by the Safety Data Sheet (SDS) or the Material Safety Data Sheet (MSDS) provided by the supplier for each material used. If a material content range is given on the SDS or the MSDS, the highest number in the range shall be used in all compliance calculations. If information is provided in the Regulatory Section of the SDS, the highest number in the range of that section may be used. When using the MSDS as the basis of calculating particulate emissions, the conservative assumption is made that PM consists entirely of PM less than 10 microns or less than 2.5 microns. Other alternative methods approved by the MPCA may be used to determine solids and VOC content. The Commissioner reserves the right to require the Permittee to determine the solids and VOC content of any material, according to EPA or ASTM reference methods. If an EPA or ASTM reference method is used for material content determination, the data obtained shall supersede the SDS or the MSDS. [Minn. R. 7007.0800, subps. 4-5]

COMG 2 (NESHAP Subpart VVVV)	1	HAPs - Organic <= 5.0 percent by weight for carpet and fabric adhesives. Demonstrate compliance with this limit by determining and recording the organic HAP content of the carpet and fabric adhesives using the methods in 40 CFR Section 63.5758. [40 CFR 63.5740(a), Minn. R. 7011.7370]
COMG 2 (NESHAP Subpart VVVV)	2	HAPs - Organic <= 1.55 kilograms per liter of total coating solids applied from the combined aluminum surface coatings and aluminum wipedown solvents based on a 12-month rolling average to be calculated at the end of every month. This limit applies to the organic HAPs per liter of coating solids applied from aluminum surface coatings and aluminum wipedown solvents (aluminum primers, clear coats, and top coat(s) combined. [40 CFR 63.5743(a)(3), Minn. R. 7011.7370]
COMG 2 (NESHAP Subpart VVVV)	3	When cleaning aluminum coating spray guns with solvents containing more than 5 percent organic HAP by weight, the Permittee shall disassemble the spray gun and manually clean the components in vat. The Permittee shall keep the vat closed when not in use. [40 CFR 63.5743(b)(2), Minn. R. 7011.7370]
COMG 2 (NESHAP Subpart VVVV)	4	The Permittee shall visually inspect all solvent containers at least once per month to ensure that the containers have covers and the covers fit with no visible gaps. The Permittee shall keep monthly records of the inspections and any repairs that are made to the covers. [40 CFR 63.5755, Minn. R. 7011.7370]
COMG 2 (NESHAP Subpart VVVV)	5	Organic HAP Content: The Permittee shall determine and record the organic HAP content (kg of organic HAP per kg of material, or weight fraction) of each aluminum wipedown solvent and aluminum coating (including primers, topcoats, clear coats, thinners, and activators). The Permittee shall use the methods in 40 CFR Section 63.5758 to determine organic HAP content. The Permittee chooses to use information from the supplier or manufacturer (as listed below). [40 CFR 63.5758(a), Minn. R. 7011.7370]

COMG 2 (NESHAP Subpart VVVV)	6	Organic HAP Content: To determine the organic HAP content for each material used in carpet and fabric adhesive operations or aluminum recreational boat surface coating operations, the Permittee may rely on information from the supplier or manufacturer of the material, according to 40 CFR Section 63.5758(a)(5)(i)-(iii): i) Include in the organic HAP total each organic HAP that is present at 0.1 percent by mass or more for OSHA-defined carcinogens as specified in 29 CFR 1910.1200(d)(4) and at 1.0 percent by mass or more for other compounds. ii) If the organic HAP content is provided by the material supplier or manufacturer as a range, the Permittee must use the upper limit of the range for determining compliance. If a separate measurement of the total organic HAP content using the methods specified in 40 CFR Section 63.5758(a)(1)-(4) exceeds the upper limit of the range of the total organic HAP content provided by the material supplier or manufacturer, the Permittee must use the measured organic HAP content to determine compliance. iii) If the organic HAP content is provided as a single value, the Permittee may assume the value is a manufacturing target value and actual organic HAP content may vary from the target value. If a separate measurement of the total organic HAP content using the methods specified in paragraphs (a)(1) through (4) of this section is less than 2 percentage points higher than the value for total organic HAP content provided by the material supplier or manufacturer, the Permittee may use the provided value to demonstrate compliance. If the measured total organic HAP content exceeds the provided value by 2 percentage points or more, the Permittee must use the measured organic HAP content to determine compliance. [40 CFR 63.5758(a)(5)(i)-(iii), Minn. R. 7011.7370]
COMG 2 (NESHAP Subpart VVVV)	7	Organic HAP Content: Solvent blends may be listed as single components for some regulated materials in certifications provided by manufacturers or suppliers. Solvent blends may contain organic HAP which must be counted toward the total organic HAP content of the materials. When detailed organic HAP content data for solvent blends are not available, you may use the values for organic HAP content that are listed in Table 5 or 6 to this subpart. The Permittee may use Table 6 to this subpart only if the solvent blends in the materials used do not match any of the solvent blends in Table 5 to this subpart and the Permittee knows only whether the blend is either aliphatic or aromatic. However, if test results indicate higher values than those listed in Table 5 or 6 to this subpart, then the test results must be used for determining compliance. [40 CFR 63.5758(a)(6), Minn. R. 7011.7370]

COMG 2 (NESHAP Subpart VVVV)	8	Solids Content: The Permittee shall determine and keep records of the solids content (liters of solids per liter of coating volume fraction) of each aluminum surface coating, including primers, topcoats, and clear coats. The Permittee shall use the methods listed in 40 CFR Section 63.5758(b) to determine solids content. [40 CFR 63.5746(b), Minn. R. 7011.7370]
COMG 2 (NESHAP Subpart VVVV)	9	Solids Content: The Permittee shall determine the volume fraction of coating solids for each aluminum recreation boat surface coating using one of the following methods: 1) Use ASTM Method D2697-86(1998) or D6093-97 to determine the volume fraction of coating solids for each coating. Divide the nonvolatile volume percent obtained with the methods by 100 to calculate volume fraction of coating solids; or 2) Use the volume fraction of coating solids for each coating from the supplier or manufacturer If the results obtained with method (2) does not agree with those obtained according to method (1), the Permittee shall use the results obtained with method (1) to determine compliance. [40 CFR 63.5758(b), Minn. R. 7011.7370]
COMG 2 (NESHAP Subpart VVVV)	10	Density: The Permittee shall determine the density of each aluminum surface coating and wipedown solvent using the methods in 40 CFR Section 63.5758(c). [40 CFR 63.5746(c), Minn. R. 7011.7370]
COMG 2 (NESHAP Subpart VVVV)	11	Density: The Permittee shall use test results from ASTM Method D1475-90, information from the supplier or manufacturer of the material, or reference sources providing density or specific gravity data for pure materials to determine the density of each aluminum recreational boat wipedown solvent, surface coating, thinner, and other additive. If there is disagreement between ASTM Method D1475-90 test results and other information sources, the Permittee shall use the test results to demonstrate compliance. [40 CFR 63.5758(c), Minn. R. 7011.7370]
COMG 2 (NESHAP Subpart VVVV)	12	The Permittee shall calculate the organic HAP from aluminum wipedown solvents per liter of coating solids using Equation 1 of Appendix C and calculate the kilograms of organic HAP from aluminum coatings per liter of coating solids using Equation 2 of Appendix C. The Permittee shall keep records of the calculations used to determine compliance. [40 CFR 63.5746(e)&(f), Minn. R. 7011.7370]

COMG 2 (NESHAP Subpart VVVV)	13	The Permittee shall calculate the combined weighted-average organic HAP content of aluminum wipedown solvents and aluminum recreational boat surface coatings using Equation 3 in Appendix C of the permit. The Permittee is in compliance with the emission limit if the 12-month rolling average combined organic HAP content does not exceed 1.55 kg of organic HAP per liter of total coating solids. [40 CFR 63.5753(a)&(b), Minn. R. 7011.7370]
COMG 2 (NESHAP Subpart VVVV)	14	The Permittee shall maintain the following records: 1) Copies of each notification and report submitted to comply with the subpart; 2) Documentation supporting any notification or report submitted; 3) Records of the total amount of each aluminum coating used per month (including primers, top coats, clear coats, thinners, and activators) and the weighted-average organic HAP content as determined in 40 CFR Section 63.5752 (Equation 2 of Appendix C); and 4) Records of the total amount of aluminum wipedown solvent used per month and the weighted-average organic HAP content as determined in 40 CFR Section 63.5749 (Equation 1 of Appendix C). [40 CFR 63.5767(a)-(c), Minn. R. 7011.7370]
COMG 2 (NESHAP Subpart VVVV)	15	The Permittee must keep each record for 5 years following the date that each record is generated. The records must be kept on site for at least 2 years after the date that it is generated, and then may be kept offsite for the remaining 3 years. The records may be kept on paper or alternative formats such as microfilm, computer, computer disks, magnetic tapes, or on microfiche. Each record must be readily available and in a form that is easily inspected and reviewed. [40 CFR 63.5770, Minn. R. 7011.7370]
COMG 2 (NESHAP Subpart VVVV)	16	The Permittee shall submit a semiannual compliance report : Due semiannually after 08/23/2005, by the 30th of January and July. The first semiannual compliance report shall cover the first calendar half-year in which the permit was issued. The first report of each calendar year covers January 1 - June 30. The second report of each calendar year covers July 1 - December 31. This report may be submitted with the Semiannual Deviations Report. See Section 5 for contents of semiannual compliance report. [40 CFR 63.5764, Minn. R. 7011.7370]

COMG 2 (NESHAP Subpart VVVV)	17	Contents of Semiannual Compliance Report: 1) Company name and address; 2) A statement by a responsible official with that official's name, title, and signature, certifying the truth, accuracy, and completeness of the report; 3) The date of the report and the beginning and ending dates of the reporting period; 4) A description of any changes in the manufacturing process since the last compliance report; 5) A statement or table showing, for each regulated operation, the applicable organic HAP content limit, application equipment requirement, or MACT model point value averaging provision with which the Permittee complying. The statement or table must also show the actual weighted-average organic HAP content or weighted-average MACT model point value (if applicable) for each operation during each of the rolling 12-month averaging periods that end during the reporting period; 6) A statement as to whether or not the Permittee was in compliance with the emissions limits and work practice standards during the reporting period; and 7) If the Permittee deviated from an emission limit or work practice standard during the reporting period, the Permittee must also include the information in (i)-(iv) below: (i) A description of the operation involved in the deviation; (ii) The quantity, organic HAP content, and application method (if relevant) of the materials involved in the deviation; (iii) A description of any corrective action the Permittee took to minimize the deviation and actions the Permittee have taken to prevent it from happening again; and (iv) A statement of whether or not the facility was in compliance for the 12-month averaging period that ended at the end of the reporting period. [40 CFR 63.5764(c), Minn. R. 7011.7370]
COMG 2 (NESHAP Subpart VVVV)	18	The Permittee shall comply with the requirements of the General Provisions in 40 CFR part 63, subpart A, as specific in Table 8 to this subpart, with the exception of 40 CFR Sections 63.6(f)(1) and (h)(1). As of permit issuance, these sections are null and void. [Minn. R. 7011.7370,]
COMG 2 (NESHAP Subpart VVVV)	19	Circumvention. The Permittee shall not build, erect, install, or use any article, machine, equipment, or process to conceal an emission that would otherwise constitute noncompliance with a relevant standard. Such concealment includes, but is not limited to: (1) The use of diluents to achieve compliance with a relevant standard based on the concentration of a pollutant in the effluent discharged to the atmosphere; or (2) The use of gaseous diluents to achieve compliance with a relevant standard for visible emissions. [40 CFR 63.4(b), Minn. R. 7011.7000]

COMG 2 (NESHAP Subpart VVVV)	20	After the effective date of any relevant standard promulgated by the Administrator under 40 CFR pt. 63, equipment added (or a process change) to an affected source that is within the scope of the definition of affected source under the relevant standard must be considered part of the affected source and subject to all provisions of the relevant standard established for that affected source. [40 CFR 63.5(b), Minn. R. 7011.7000]
COMG 2 (NESHAP Subpart VVVV)	21	Proper Operation and Maintenance: At all times, including periods of startup, shutdown and malfunction, the Permittee shall operate and maintain the emission unit subject to the MACT standard and its associated air pollution control and monitoring equipment in a manner consistent with safety and good air pollution control practices for minimizing emissions at least to the levels required by all relevant standards. [40 CFR 63.6(e)(1)(i) & Minn. R. 7011.7000]
COMG 2 (NESHAP Subpart VVVV)	22	Malfunctions shall be corrected as soon as practicable after their occurrence. [40 CFR 63.6(e)(1)(ii) & Minn. R. 7011.7000]
COMG 2 (NESHAP Subpart VVVV)	23	Recordkeeping: The Permittee shall maintain files of all information required by 40 CFR pt. 63 in a form suitable and readily available for expeditious inspection and review. The files should be retained for at least 5 years following the date of each occurrence, measurement, maintenance, corrective action, report, or record. Only the most recent two years of information must be kept on site. [40 CFR 63.10(b)(1), Minn. R. 7019.0100, subp. 2(B)]
COMG 2 (NESHAP Subpart VVVV)	24	Prior to construction or reconstruction of a major-emitting "affected source" under the promulgated MACT standards, the Permittee must apply for and obtain an air emission permit. [40 CFR 63.5(b)(3)& Minn. R. 7011.7000]
COMG 5 (Spray Booth Panel Filters)	1	The Permittee shall operate and maintain control equipment such that it achieves a control efficiency for Total Particulate Matter >= 92 percent control efficiency. [CAAA of 1990, Minn. R. 7007.0100, subps. 7(A) & (B), Minn. R. 7007.0800, subps.1&2, Minn. Stat. 116.07, subds.4a&9]
COMG 5 (Spray Booth Panel Filters)	2	The Permittee shall operate and maintain control equipment such that it achieves a control efficiency for PM < 10 micron >= 92 percent control efficiency. [CAAA of 1990, Minn. R. 7007.0100, subps. 7(A) & (B), Minn. R. 7007.0800, subps.1&2, Minn. Stat. 116.07, subds.4a&9]

COMG 5 (Spray Booth Panel Filters)	3	The Permittee shall operate and maintain control equipment such that it achieves a control efficiency for PM < 2.5 micron >= 92 percent control efficiency. [CAAA of 1990, Minn. R. 7007.0100, subps. 7(A) & (B), Minn. R. 7007.0800, subps. 1&2, Minn. Stat. 116.07, subds.4a&9]
COMG 5 (Spray Booth Panel Filters)	4	The Permittee shall vent emissions from all spray booths, including existing, modified, or new spray booths, to panel filters meeting the permit requirements for COMG 5. [Title I Condition: Avoid major modification under 40 CFR 52.21(b)(2) and Minn. R. 7007.3000, Title I Condition: Avoid major source under 40 CFR 52.21(b)(1)(i) and Minn. R. 7007.3000]
COMG 5 (Spray Booth Panel Filters)	5	If the Permittee replaces any existing panel filter, adds new panel filters, or modifies the panel filters listed in COMG 5, such equipment is subject to all of the requirements of COMG 5. Prior to making such a change, the Permittee shall apply for and obtain the appropriate permit amendment, as applicable. [Title I Condition: Avoid major modification under 40 CFR 52.21(b)(2) and Minn. R. 7007.3000, Title I Condition: Avoid major source under 40 CFR 52.21(b)(1)(i) and Minn. R. 7007.3000]
COMG 5 (Spray Booth Panel Filters)	6	Documentation of Need for Improved Monitoring: If the Permittee fails to achieve compliance with an emission limitation or standard for which the monitoring did not provide an indication of an excursion or exceedance while providing valid data, or the results of compliance or performance testing document a need to modify the existing pressure drop range, the Permittee shall promptly notify the MPCA and, if necessary, submit a permit amendment application to address the necessary monitoring change. [40 CFR 64.7(e), Minn. R. 7017.0200]
COMG 5 (Spray Booth Panel Filters)	7	As required by 40 CFR Section 64.9(a)(2), for the Semi-Annual Deviations Report required by this permit and/or the Notification of Deviations Endangering Human Health and the Environment required by this permit, as applicable, the Permittee shall include the following related to the monitoring identified as required by 40 CFR pt. 64: 1) Summary information on the number, duration, and cause of excursions or exceedances, as applicable, and the corrective action taken; and 2) Summary information on the number, duration, and cause for monitor downtime incidents. [40 CFR 64.9(a)(2), Minn. R. 7017.0200]

COMG 5 (Spray Booth Panel Filters)	8	The Permittee shall maintain records of monitoring data, monitor performance data, corrective actions taken, and other supporting information required to be maintained. The Permittee may maintain records on alternative media, such as microfilm, computer files, magnetic tape disks, or microfiche, provided that the use of such alternative media allows for expeditious inspection and review, and does not conflict with other applicable recordkeeping requirements. [40 CFR 64.9(b), Minn. R. 7017.0200]
COMG 5 (Spray Booth Panel Filters)	9	The Permittee shall operate and maintain the panel filter in accordance with the Operation and Maintenance (O & M) Plan. The Permittee shall keep copies of the O & M Plan available onsite for use by staff and MPCA staff. [Minn. R. 7007.0800, subp. 14]
COMG 5 (Spray Booth Panel Filters)	10	Daily Inspections: At least once per 24-hour period, the Permittee shall visually inspect the condition of the panel filter with respect to alignment, saturation, tears, holes and any other matter that may affect the filter's performance. The Permittee shall record the time and date of each inspection and any actions resulting from the inspection. [40 CFR 64.3, Minn. R. 7017.0200, Title I Condition: Avoid major source under 40 CFR 52.21(b)(1)(i) and Minn. R. 7007.3000]
COMG 5 (Spray Booth Panel Filters)	11	Periodic Inspections: The Permittee shall inspect the control equipment components as required by the manufacturing specifications. The Permittee shall maintain a written record of these inspections. [40 CFR 64.3, Minn. R. 7017.0200]
COMG 5 (Spray Booth Panel Filters)	12	Corrective Actions: The Permittee shall take corrective action as soon as possible if the panel filter or any of its components are found during the inspections to need repair. Corrective actions shall include completion of necessary repairs identified during the inspection, as applicable. Corrective actions include, but are not limited to, those outlined in the O & M Plan for the panel filter. The Permittee shall keep a record of the type and date of any corrective action taken for the panel filter. [40 CFR 64.7(d)]

EQUI 7 (Paint Booth 2)	1	The Permittee shall limit emissions of Volatile Organic Compounds <= 30 tons per year 12-month rolling sum to be calculated by the 15th day of each month for the previous 12-month period as described later in this permit. VOC contents for each VOC-containing material shall be determined as described under the Material Content requirement in COMG 1. [CAAA of 1990, Minn. R. 7007.0100, subps. 7(A) & (B), Minn. R. 7007.0800, subps.1&2, Minn. Stat. 116.07, subds.4a&9]
EQUI 7 (Paint Booth 2)	2	Opacity <= 20 percent opacity. [Minn. R. 7011.0715, subp. 1(B)]
EQUI 7 (Paint Booth 2)	3	Total Particulate Matter <= 0.30 grains per dry standard cubic foot of exhaust gas unless required to further reduce emissions to comply with the less stringent limit of either Minn. R. 7011.0730 or Minn. R. 7011.0735. [Minn. R. 7011.0715, subp. 1(A)]
EQUI 7 (Paint Booth 2)	4	Paint Booth Total Enclosure: Paint booth doors must be closed during all spray painting and coating operations. [CAAA of 1990, Minn. R. 7007.0100, subps. 7(A) & (B), Minn. R. 7007.0800, subps. 1&2, Minn. Stat. 116.07, subds.4a&9]
EQUI 7 (Paint Booth 2)	5	Transfer Efficiency: The Permittee shall use a coating application method with at least 75 percent transfer efficiency. [CAAA of 1990, Minn. R. 7007.0100, subps. 7(A) & (B), Minn. R. 7007.0800, subps. 1&2, Minn. Stat. 116.07, subds.4a&9]
EQUI 7 (Paint Booth 2)	6	Recordkeeping: The Permittee shall maintain records documenting the transfer efficiency of each coating application method used in EQUI 7. [CAAA of 1990, Minn. R. 7007.0100, subps. 7(A) & (B), Minn. R. 7007.0800, subps. 1&2, Minn. Stat. 116.07, subds.4a&9]
EQUI 7 (Paint Booth 2)	7	The Permittee shall vent emissions from all EQUI 7 to control equipment meeting the requirements of COMG 5. [Title I Condition: Avoid major source under 40 CFR 52.21(b)(1)(i) and Minn. R. 7007.3000]
EQUI 7 (Paint Booth 2)	8	Weekly Recordkeeping. Once every seven days, the Permittee shall calculate, record, and maintain the total quantity of all coatings and other VOC-containing materials used in EQUI 7 for the previous week. This shall be based on purchase records. [CAAA of 1990, Minn. R. 7007.0100, subps. 7(A) & (B), Minn. R. 7007.0800, subps. 1&2, Minn. Stat. 116.07, subds.4a&9]

EQUI 7 (Paint Booth 2)	9	Volatile Organic Compounds: Monthly Calculations. The Permittee shall calculate VOC emissions using the following equation: VOC (tons/month) = V V = (A1 x B1) + (A2 x B2) + (A3 x B3) + ... where: V = total VOC used in tons/month; A# = amount of each VOC-containing material used, in tons/month; and B# = weight percent VOC in A#, as a fraction. [Minn. R. 7007.0800, subps. 4-5]
EQUI 7 (Paint Booth 2)	10	Volatile Organic Compounds: Monthly Recordkeeping. By the 15th of the month, the Permittee shall calculate and record the following: 1) The total usage of VOC-containing materials for the previous calendar month using records obtained from weekly usage records. This record shall also include the VOC content of each material as determined by the Material Content requirement under COMG 1 of this permit; 2) The VOC emissions for the previous month using the formulas specified in this permit; and 3) The 12-month rolling sum VOC emissions for the previous 12-month period by summing the monthly VOC emissions data for the previous 12 months. [Minn. R. 7007.0800, subps. 4-5]
EQUI 8 (Paint Booth 3)	1	The Permittee shall limit emissions of Volatile Organic Compounds <= 30 tons per year 12-month rolling sum to be calculated by the 15th day of each month for the previous 12-month period as described later in this permit. VOC contents for each VOC-containing material shall be determined as described under the Material Content requirement in COMG 1. [CAAA of 1990, Minn. R. 7007.0100, subps. 7(A) & (B), Minn. R. 7007.0800, subps. 1&2, Minn. Stat. 116.07, subds.4a&9]
EQUI 8 (Paint Booth 3)	2	Opacity <= 20 percent opacity. [Minn. R. 7011.0715, subp. 1(B)]
EQUI 8 (Paint Booth 3)	3	Total Particulate Matter <= 0.30 grains per dry standard cubic foot of exhaust gas unless required to further reduce emissions to comply with the less stringent limit of either Minn. R. 7011.0730 or Minn. R. 7011.0735. [Minn. R. 7011.0715, subp. 1(A)]
EQUI 8 (Paint Booth 3)	4	Paint Booth Total Enclosure: Paint booth doors must be closed during all spray painting and coating operations. [CAAA of 1990, Minn. R. 7007.0100, subps. 7(A) & (B), Minn. R. 7007.0800, subps. 1&2, Minn. Stat. 116.07, subds.4a&9]

EQUI 8 (Paint Booth 3)	5	Transfer Efficiency: The Permittee shall use a coating application method with at least 75 percent transfer efficiency. [CAAA of 1990, Minn. R. 7007.0100, subps. 7(A) & (B), Minn. R. 7007.0800, subps. 1&2, Minn. Stat. 116.07, subds.4a&9]
EQUI 8 (Paint Booth 3)	6	Recordkeeping: The Permittee shall maintain records documenting the transfer efficiency of each coating application method used in EQUI 8. [CAAA of 1990, Minn. R. 7007.0100, subps. 7(A) & (B), Minn. R. 7007.0800, subps. 1&2, Minn. Stat. 116.07, subds.4a&9]
EQUI 8 (Paint Booth 3)	7	The Permittee shall vent emissions from EQUI 8 to control equipment meeting the requirements of COMG 5. [Title I Condition: Avoid major source under 40 CFR 52.21(b)(1)(i) and Minn. R. 7007.3000]
EQUI 8 (Paint Booth 3)	8	Weekly Recordkeeping. Once every seven days, the Permittee shall calculate, record, and maintain the total quantity of all coatings and other VOC-containing materials used in EQUI 8 for the previous week. This shall be based on purchase records. [CAAA of 1990, Minn. R. 7007.0100, subps. 7(A) & (B), Minn. R. 7007.0800, subps. 1&2, Minn. Stat. 116.07, subds.4a&9]
EQUI 8 (Paint Booth 3)	9	Volatile Organic Compounds: Monthly Calculations. The Permittee shall calculate VOC emissions using the following equation: VOC (tons/month) = V V = (A1 x B1) + (A2 x B2) + (A3 x B3) + ... where: V = total VOC used in tons/month; A# = amount of each VOC-containing material used, in tons/month; and B# = weight percent VOC in A#, as a fraction; [Minn. R. 7007.0800, subps. 4-5]
EQUI 8 (Paint Booth 3)	10	Volatile Organic Compounds: Monthly Recordkeeping. By the 15th of the month, the Permittee shall calculate and record the following: 1) The total usage of VOC-containing materials for the previous calendar month using records obtained from weekly usage records. This record shall also include the VOC content of each material as determined by the Material Content requirement under COMG 1 of this permit; 2) The VOC emissions for the previous month using the formulas specified in this permit; and 3) The 12-month rolling sum VOC emissions for the previous 12-month period by summing the monthly VOC emissions data for the previous 12 months. [Minn. R. 7007.0800, subps. 4-5]

EQUI 9 (Paint Booth 4)	1	The Permittee shall limit emissions of Volatile Organic Compounds <= 25 tons per year 12-month rolling sum to be calculated by the 15th day of each month for the previous 12-month period as described later in this permit. VOC contents for each VOC-containing material shall be determined as described under the Material Content requirement in COMG 1. [CAAA of 1990, Minn. R. 7007.0100, subps. 7(A) & (B), Minn. R. 7007.0800, subps. 1&2, Minn. Stat. 116.07, subds.4a&9]
EQUI 9 (Paint Booth 4)	2	Opacity <= 20 percent opacity. [Minn. R. 7011.0715, subp. 1(B)]
EQUI 9 (Paint Booth 4)	3	Total Particulate Matter <= 0.30 grains per dry standard cubic foot of exhaust gas unless required to further reduce emissions to comply with the less stringent limit of either Minn. R. 7011.0730 or Minn. R. 7011.0735. [Minn. R. 7011.0715, subp. 1(A)]
EQUI 9 (Paint Booth 4)	4	Paint Booth Total Enclosure: Paint booth doors must be closed during all spray painting and coating operations. [CAAA of 1990, Minn. R. 7007.0100, subps. 7(A) & (B), Minn. R. 7007.0800, subps. 1&2, Minn. Stat. 116.07, subds.4a&9]
EQUI 9 (Paint Booth 4)	5	Transfer Efficiency: The Permittee shall use a coating application method with at least 75 percent transfer efficiency. [CAAA of 1990, Minn. R. 7007.0100, subps. 7(A) & (B), Minn. R. 7007.0800, subps. 1&2, Minn. Stat. 116.07, subds.4a&9]
EQUI 9 (Paint Booth 4)	6	Recordkeeping: The Permittee shall maintain records documenting the transfer efficiency of each coating application method used in EQUI 9. [CAAA of 1990, Minn. R. 7007.0100, subps. 7(A) & (B), Minn. R. 7007.0800, subps. 1&2, Minn. Stat. 116.07, subds.4a&9]
EQUI 9 (Paint Booth 4)	7	The Permittee shall vent emissions from EQUI 9 to control equipment meeting the requirements of COMG 5. [Title I Condition: Avoid major source under 40 CFR 52.21(b)(1)(i) and Minn. R. 7007.3000]
EQUI 9 (Paint Booth 4)	8	Weekly Recordkeeping. Once every seven days, the Permittee shall calculate, record, and maintain the total quantity of all coatings and other VOC-containing materials used in EQUI 9 for the previous week. This shall be based on purchase records. [CAAA of 1990, Minn. R. 7007.0100, subps. 7(A) & (B), Minn. R. 7007.0800, subps. 1&2, Minn. Stat. 116.07, subds.4a&9]

EQUI 9 (Paint Booth 4)	9	Volatile Organic Compounds: Monthly Calculations. The Permittee shall calculate VOC emissions using the following equation: VOC (tons/month) = V V = (A1 x B1) + (A2 x B2) + (A3 x B3) + ... where: V = total VOC used in tons/month; A# = amount of each VOC-containing material used, in tons/month; and B# = weight percent VOC in A#, as a fraction. [Minn. R. 7007.0800, subps. 4-5]
EQUI 9 (Paint Booth 4)	10	Volatile Organic Compounds: Monthly Recordkeeping. By the 15th of the month, the Permittee shall calculate and record the following: 1) The total usage of VOC-containing materials for the previous calendar month using records obtained from weekly usage records. This record shall also include the VOC content of each material as determined by the Material Content requirement under COMG 1 of this permit; 2) The VOC emissions for the previous month using the formulas specified in this permit; and 3) The 12-month rolling sum VOC emissions for the previous 12-month period by summing the monthly VOC emissions data for the previous 12 months. [Minn. R. 7007.0800, subps. 4-5]
EQUI 10 (Air Make Up Unit 4)	1	Total Particulate Matter <= 0.4 pounds per million Btu heat input. The potential to emit from the unit is 0.007 lb/MMBtu due to equipment design and allowable fuels. [Minn. R. 7011.0515, subp. 1]
EQUI 10 (Air Make Up Unit 4)	2	Opacity <= 20 percent opacity except for one six-minute period per hour of not more than 60 percent opacity. [Minn. R. 7011.0515, subp. 2]
EQUI 12 (Router 1)	1	Opacity <= 20 percent opacity. [Minn. R. 7011.0715, subp. 1(B)]
EQUI 12 (Router 1)	2	Total Particulate Matter <= 0.30 grains per dry standard cubic foot of exhaust gas unless required to further reduce emissions to comply with the less stringent limit of either Minn. R. 7011.0730 or Minn. R. 7011.0735. [Minn. R. 7011.0715, subp. 1(A)]
EQUI 13 (Router 2)	1	Opacity <= 20 percent opacity. [Minn. R. 7011.0715, subp. 1(B)]
EQUI 13 (Router 2)	2	Total Particulate Matter <= 0.30 grains per dry standard cubic foot of exhaust gas unless required to further reduce emissions to comply with the less stringent limit of either Minn. R. 7011.0730 or Minn. R. 7011.0735. [Minn. R. 7011.0715, subp. 1(A)]
EQUI 14 (Router 3)	1	Opacity <= 20 percent opacity. [Minn. R. 7011.0715, subp. 1(B)]

EQUI 14 (Router 3)	2	Total Particulate Matter <= 0.30 grains per dry standard cubic foot of exhaust gas unless required to further reduce emissions to comply with the less stringent limit of either Minn. R. 7011.0730 or Minn. R. 7011.0735. [Minn. R. 7011.0715, subp. 1(A)]
EQUI 15 (Sander 1)	1	Opacity <= 20 percent opacity. [Minn. R. 7011.0715, subp. 1(B)]
EQUI 15 (Sander 1)	2	Total Particulate Matter <= 0.30 grains per dry standard cubic foot of exhaust gas unless required to further reduce emissions to comply with the less stringent limit of either Minn. R. 7011.0730 or Minn. R. 7011.0735. [Minn. R. 7011.0715, subp. 1(A)]
EQUI 16 (Oven 4)	1	Total Particulate Matter <= 0.4 pounds per million Btu heat input. The potential to emit from the unit is 0.007 lb/MMBtu due to equipment design and allowable fuels. [Minn. R. 7011.0515, subp. 1]
EQUI 16 (Oven 4)	2	Opacity <= 20 percent opacity except for one six-minute period per hour of not more than 60 percent opacity. [Minn. R. 7011.0515, subp. 2]
TREA 11 (Fabric Filter)	1	The Permittee shall operate and maintain control equipment such that it achieves a control efficiency for Total Particulate Matter >= 74 percent control efficiency. [Title I Condition: Avoid major source under 40 CFR 52.21(b)(1)(i) and Minn. R. 7007.3000]
TREA 11 (Fabric Filter)	2	The Permittee shall operate and maintain control equipment such that it achieves a control efficiency for PM < 10 micron >= 74 percent control efficiency. [Title I Condition: Avoid major source under 40 CFR 52.21(b)(1)(i) and Minn. R. 7007.3000]
TREA 11 (Fabric Filter)	3	The Permittee shall operate and maintain control equipment such that it achieves a control efficiency for PM < 2.5 micron >= 74 percent control efficiency. [Title I Condition: Avoid major source under 40 CFR 52.21(b)(1)(i) and Minn. R. 7007.3000]
TREA 11 (Fabric Filter)	4	Pressure Drop >= 1.0 and <= 4.0 inches of water, unless a new range is set pursuant to Minn. R. 7017.2025, subp. 3 based on the values recorded during the most recent MPCA-approved performance test where compliance was demonstrated. The new range shall be implemented upon receipt of the Notice of Compliance letter granting preliminary approval. The range is final upon issuance of a permit amendment incorporating the change. The Permittee shall record the pressure drop at least once each day of operation. [Title I Condition: Avoid major source under 40 CFR 52.21(b)(1)(i) and Minn. R. 7007.3000]

TREA 11 (Fabric Filter)	5	The Permittee shall vent emissions from EQUI 12, EQUI 13, and EQUI 14 to TREA 11 whenever EQUI 12, EQUI 13, and EQUI 14 operate, and operate and maintain TREA 11 at all times that any emissions are vented to TREA 11. The Permittee shall document periods of non-operation of the control equipment TREA 11 whenever EQUI 12, EQUI 13 and EQUI 14 are operating. [Title I Condition: Avoid major source under 40 CFR 52.21(b)(1)(i) and Minn. R. 7007.3000]
TREA 11 (Fabric Filter)	6	If the Permittee replaces TREA 11, the replacement control must meet or exceed the control efficiency requirements of TREA 11 as well as comply with all other requirements of TREA 11. Prior to making such a change, the Permittee shall apply for and obtain the appropriate permit amendment, as applicable. If no amendment is needed for the replacement, the Permittee shall submit an electronic notice to the Agency using Form CR-05. The notice must be received by the Agency seven working days prior to the commencement/start of replacement. [Title I Condition: Avoid major source under 40 CFR 52.21(b)(1)(i) and Minn. R. 7007.3000]
TREA 11 (Fabric Filter)	7	The Permittee shall operate and maintain the fabric filter in accordance with the Operation and Maintenance (O & M) Plan. The Permittee shall keep copies of the O & M Plan available onsite for use by staff and MPCA staff. [Minn. R. 7007.0800, subp. 14]
TREA 11 (Fabric Filter)	8	Pressure Drop: Recordkeeping. The Permittee shall record the time and date of each pressure drop reading and whether or not the recorded pressure drop was within the range specified in this permit. [Minn. R. 7007.0800, subps. 4-5, Title I Condition: Avoid major source under 40 CFR 52.21(b)(1)(i) and Minn. R. 7007.3000]

TREA 11 (Fabric Filter)	9	Corrective Actions: The Permittee shall take corrective action as soon as possible if any of the following occur: - the recorded pressure drop is outside the required operating range; or - the fabric filter or any of its components are found during the inspections to need repair. Corrective actions shall return the pressure drop to within the permitted range and/or include completion of necessary repairs identified during the inspection, as applicable. Corrective actions include, but are not limited to, those outlined in the O & M Plan for the fabric filter. The Permittee shall keep a record of the type and date of any corrective action taken for each filter. [Minn. R. 7007.0800, subp. 14, Minn. R. 7007.0800, subp. 4, Minn. R. 7007.0800, subp. 5]
TREA 11 (Fabric Filter)	10	Monitoring Equipment: The Permittee shall install and maintain the necessary monitoring equipment for measuring and recording pressure drop as required by this permit. The monitoring equipment must be installed, in use, and properly maintained when the monitored fabric filter is in operation. [Minn. R. 7007.0800, subp. 4]
TREA 11 (Fabric Filter)	11	Periodic Inspections: At least once per calendar quarter, or more frequently as required by the manufacturing specifications, the Permittee shall inspect the control equipment components. The Permittee shall maintain a written record of these inspections. [Minn. R. 7007.0800, subp. 14, Minn. R. 7007.0800, subp. 4, Minn. R. 7007.0800, subp. 5]
TREA 11 (Fabric Filter)	12	Hood Certification and Evaluation: The Permittee shall maintain the most current record of the hood evaluation and certification on site. The control device hood must be evaluated by a testing company as specified in Minn. R. 7011.0072, subp. 2(A) and must conform to the design and operating requirements listed in Minn. R. 7011.0072, subps. 2(B) and 3. The hood certification must address how cross-drafts are accommodated in the design (e.g., higher face velocity, oversized hood, etc.) and the Permittee shall certify this as specified in Minn. R. 7011.0072, subps. 2 and 3. [Minn. R. 7007.0800, subp. 2, Title I Condition: Avoid major source under 40 CFR 52.21(b)(1)(i) and Minn. R. 7007.3000]

TREA 11 (Fabric Filter)	13	Annual Hood Evaluation: The Permittee shall measure and record at least once every 12 months the fan rotation speed, fan power draw, or face velocity of each hood, or other comparable air flow parameter that was measured during the most recent hood certification to verify the hood design and operation parameters meet or exceed the parameters measured during the most recent hood evaluation conducted according to Minn. R. 7011.0072, subps. 2 & 3 as required by Minn. R. 7011.0072, subp. 4. The Permittee shall maintain a copy of the annual evaluations on site for 5 years. [Minn. R. 7007.0800, subp. 2, Title I Condition: Avoid major source under 40 CFR 52.21(b)(1)(i) and Minn. R. 7007.3000]
TREA 12 (Water Curtain)	1	The Permittee shall operate and maintain control equipment such that it achieves a control efficiency for Total Particulate Matter >= 85 percent control efficiency. [Title I Condition: Avoid major source under 40 CFR 52.21(b)(1)(i) and Minn. R. 7007.3000]
TREA 12 (Water Curtain)	2	The Permittee shall operate and maintain control equipment such that it achieves a control efficiency for PM < 10 micron >= 85 percent control efficiency. [Title I Condition: Avoid major source under 40 CFR 52.21(b)(1)(i) and Minn. R. 7007.3000]
TREA 12 (Water Curtain)	3	The Permittee shall operate and maintain control equipment such that it achieves a control efficiency for PM < 2.5 micron >= 85 percent control efficiency. [Title I Condition: Avoid major source under 40 CFR 52.21(b)(1)(i) and Minn. R. 7007.3000]
TREA 12 (Water Curtain)	4	The Permittee shall vent emissions from EQUI 15 to TREA 12 whenever EQUI 15 operates, and operate and maintain TREA 12 at all times that any emissions are vented to TREA 12. The Permittee shall document periods of non-operation of the control equipment TREA 12 whenever EQUI 15 is operating. [Title I Condition: Avoid major source under 40 CFR 52.21(b)(1)(i) and Minn. R. 7007.3000]

TREA 12 (Water Curtain)	5	If the Permittee replaces TREA 12, the replacement control must meet or exceed the control efficiency requirements of TREA 12 as well as comply with all other requirements of TREA 12. Prior to making such a change, the Permittee shall apply for and obtain the appropriate permit amendment, as applicable. If no amendment is needed for the replacement, the Permittee shall submit an electronic notice to the Agency using Form CR-05. The notice must be received by the Agency seven working days prior to the commencement/start of replacement. [Title I Condition: Avoid major source under 40 CFR 52.21(b)(1)(i) and Minn. R. 7007.3000]
TREA 12 (Water Curtain)	6	The Permittee shall operate and maintain the water curtain in accordance with the Operation and Maintenance (O & M) Plan. The Permittee shall keep copies of the O & M Plan available onsite for use by staff and MPCA staff. [Minn. R. 7007.0800, subp. 14]
TREA 12 (Water Curtain)	7	Daily Inspections: Once each operating day, the Permittee shall visually inspect the water curtain as follows: 1) Spray nozzles for proper operation (i.e., no clogging); 2) Whether the correct water level is maintained to adequately filter exhaust air according to manufacturer's specifications; and 3) Whether the water is re-circulating according to manufacturer's specifications. The Permittee shall maintain a written record of these inspections. [Title I Condition: Avoid major source under 40 CFR 52.21(b)(1)(i) and Minn. R. 7007.3000]
TREA 12 (Water Curtain)	8	Periodic Inspections: At least once per calendar quarter, or more frequently as required by the manufacturer's specifications, the Permittee shall inspect the control equipment components. The Permittee shall maintain a written record of these inspections. [Minn. R. 7007.0800, subp. 14, Minn. R. 7007.0800, subp. 4, Minn. R. 7007.0800, subp. 5]

TREA 12 (Water Curtain)	9	Corrective Actions: If any components of the water curtain are found during the inspections to need repair, the Permittee shall take corrective action as soon as possible. Corrective actions shall include completion of necessary repairs identified during the inspection, as applicable. Corrective actions include, but are not limited to, those outlined in the O & M Plan for the water curtain. The Permittee shall keep a record of the type and date of any corrective action taken. [Minn. R. 7007.0800, subp. 14, Minn. R. 7007.0800, subp. 4, Minn. R. 7007.0800, subp. 5]
TFAC 1 (Total Facility)	1	Permit Appendices: This permit contains appendices as listed in the permit Table of Contents. The Permittee shall comply with all requirements contained in Appendices A, B, and C of this permit. [Minn. R. 7007.0800, subp. 2]
TFAC 1 (Total Facility)	2	PERMIT SHIELD: Subject to the limitations in Minn. R. 7007.1800, compliance with the conditions of this permit shall be deemed compliance with the specific provision of the applicable requirement identified in the permit as the basis of each condition. Subject to the limitations of Minn. R. 7007.1800 and 7017.0100, subp. 2, notwithstanding the conditions of this permit specifying compliance practices for applicable requirements, any person (including the Permittee) may also use other credible evidence to establish compliance or noncompliance with applicable requirements. This permit shall not alter or affect the liability of the Permittee for any violation of applicable requirements prior to or at the time of permit issuance. [Minn. R. 7007.1800, (A)(2)]
TFAC 1 (Total Facility)	3	The Permittee shall comply with National Primary and Secondary Ambient Air Quality Standards, 40 CFR pt. 50, and the Minnesota Ambient Air Quality Standards, Minn. R. 7009.0010 to 7009.0080. Compliance shall be demonstrated upon written request by the MPCA. [Minn. R. 7007.0100, subp. 7(A), 7(L), & 7(M), Minn. R. 7007.0800, subp. 4, Minn. R. 7007.0800, subps. 1-2, Minn. Stat. 116.07, subd. 4a, Minn. Stat. 116.07, subd. 9]
TFAC 1 (Total Facility)	4	Circumvention: Do not install or use a device or means that conceals or dilutes emissions, which would otherwise violate a federal or state air pollution control rule, without reducing the total amount of pollutant emitted. [Minn. R. 7011.0020]

TFAC 1 (Total Facility)	5	Air Pollution Control Equipment: Operate all pollution control equipment whenever the corresponding process equipment and emission units are operated. [Minn. R. 7007.0800, subp. 16(J), Minn. R. 7007.0800, subp. 2]
TFAC 1 (Total Facility)	6	Operation and Maintenance Plan: Retain at the stationary source an operation and maintenance plan for all air pollution control equipment. At a minimum, the O & M plan shall identify all air pollution control equipment and control practices and shall include a preventative maintenance program for the equipment and practices, a description of (the minimum but not necessarily the only) corrective actions to be taken to restore the equipment and practices to proper operation to meet applicable permit conditions, a description of the employee training program for proper operation and maintenance of the control equipment and practices, and the records kept to demonstrate plan implementation. [Minn. R. 7007.0800, subp. 14, Minn. R. 7007.0800, subp. 16(J)]
TFAC 1 (Total Facility)	7	Operation Changes: In any shutdown, breakdown, or deviation the Permittee shall immediately take all practical steps to modify operations to reduce the emission of any regulated air pollutant. The Commissioner may require feasible and practical modifications in the operation to reduce emissions of air pollutants. No emissions units that have an unreasonable shutdown or breakdown frequency of process or control equipment shall be permitted to operate. [Minn. R. 7019.1000, subp. 4]
TFAC 1 (Total Facility)	8	Fugitive Emissions: Do not cause or permit the handling, use, transporting, or storage of any material in a manner which may allow avoidable amounts of particulate matter to become airborne. Comply with all other requirements listed in Minn. R. 7011.0150. [Minn. R. 7011.0150]
TFAC 1 (Total Facility)	9	Noise: The Permittee shall comply with the noise standards set forth in Minn. R. 7030.0010 to 7030.0080 at all times during the operation of any emission units. This is a state only requirement and is not enforceable by the EPA Administrator or citizens under the Clean Air Act. [Minn. R. 7030.0010-7030.0080]
TFAC 1 (Total Facility)	10	Inspections: The Permittee shall comply with the inspection procedures and requirements as found in Minn. R. 7007.0800, subp. 9(A). [Minn. R. 7007.0800, subp. 9(A)]

TFAC 1 (Total Facility)	11	The Permittee shall comply with the General Conditions listed in Minn. R. 7007.0800, subp. 16. [Minn. R. 7007.0800, subp. 16]
TFAC 1 (Total Facility)	12	Monitoring Equipment Calibration - The Permittee shall either: 1. Calibrate or replace required monitoring equipment every 12 months; or 2. Calibrate at the frequency stated in the manufacturer's specifications. For each monitor, the Permittee shall maintain a record of all calibrations, including the date conducted, and any corrective action that resulted. The Permittee shall include the calibration frequencies, procedures, and manufacturer's specifications (if applicable) in the Operations and Maintenance Plan. Any requirements applying to continuous emission monitors are listed separately in this permit. [Minn. R. 7007.0800, subp. 4(D)]
TFAC 1 (Total Facility)	13	Operation of Monitoring Equipment: Unless noted elsewhere in this permit, monitoring a process or control equipment connected to that process is not necessary during periods when the process is shutdown, or during checks of the monitoring systems, such as calibration checks and zero and span adjustments. If monitoring records are required, they should reflect any such periods of process shutdown or checks of the monitoring system. [Minn. R. 7007.0800, subp. 4(D)]
TFAC 1 (Total Facility)	14	The Permittee shall submit an application for permit reissuance : Due 180 calendar days before Permit Expiration Date. [Minn. R. 7007.0400, subp. 2]
TFAC 1 (Total Facility)	15	Recordkeeping: Retain all records at the stationary source, unless otherwise specified within this permit, for a period of five (5) years from the date of monitoring, sample, measurement, or report. Records which must be retained at this location include all calibration and maintenance records, all original recordings for continuous monitoring instrumentation, and copies of all reports required by the permit. Records must conform to the requirements listed in Minn. R. 7007.0800, subp. 5(A). [Minn. R. 7007.0800, subp. 5(C)]
TFAC 1 (Total Facility)	16	Recordkeeping: Maintain records describing any insignificant modifications (as required by Minn. R. 7007.1250, subp. 3) or changes contravening permit terms (as required by Minn. R. 7007.1350, subp. 2), including records of the emissions resulting from those changes. [Minn. R. 7007.0800, subp. 5(B)]

TFAC 1 (Total Facility)	17	If the Permittee determines that no permit amendment or notification is required prior to making a change, the Permittee must retain records of all calculations required under Minn. R. 7007.1200. [For expiring permits, these records shall be kept for a period of five years from the date the change was made or until permit reissuance, whichever is longer.][For non-expiring permits, these records shall be kept for a period of five years from the date that the change was made.] The records shall be kept at the stationary source for the current calendar year of operation and may be kept at the stationary source or office of the stationary source for all other years. The records may be maintained in either electronic or paper format. [Minn. R. 7007.1200, subp. 4]
TFAC 1 (Total Facility)	18	Shutdown Notifications: Notify the Commissioner at least 24 hours in advance of a planned shutdown of any control equipment or process equipment if the shutdown would cause any increase in the emissions of any regulated air pollutant. If the owner or operator does not have advance knowledge of the shutdown, notification shall be made to the Commissioner as soon as possible after the shutdown. However, notification is not required in the circumstances outlined in Items A, B and C of Minn. R. 7019.1000, subp. 3. At the time of notification, the owner or operator shall inform the Commissioner of the cause of the shutdown and the estimated duration. The owner or operator shall notify the Commissioner when the shutdown is over. [Minn. R. 7019.1000, subp. 3]
TFAC 1 (Total Facility)	19	Breakdown Notifications: Notify the Commissioner within 24 hours of a breakdown of more than one hour duration of any control equipment or process equipment if the breakdown causes any increase in the emissions of any regulated air pollutant. The 24-hour time period starts when the breakdown was discovered or reasonably should have been discovered by the owner or operator. However, notification is not required in the circumstances outlined in Items A, B and C of Minn. R. 7019.1000, subp. 2. At the time of notification or as soon as possible thereafter, the owner or operator shall inform the Commissioner of the cause of the breakdown and the estimated duration. The owner or operator shall notify the Commissioner when the breakdown is over. [Minn. R. 7019.1000, subp. 2]

TFAC 1 (Total Facility)	20	Notification of Deviations Endangering Human Health or the Environment: As soon as possible after discovery, notify the Commissioner or the state duty officer, either orally or by facsimile, of any deviation from permit conditions which could endanger human health or the environment. [Minn. R. 7019.1000, subp. 1]
TFAC 1 (Total Facility)	21	Notification of Deviations Endangering Human Health or the Environment Report: Within 2 working days of discovery, notify the Commissioner in writing of any deviation from permit conditions which could endanger human health or the environment. Include the following information in this written description: 1. the cause of the deviation; 2. the exact dates of the period of the deviation, if the deviation has been corrected; 3. whether or not the deviation has been corrected; 4. the anticipated time by which the deviation is expected to be corrected, if not yet corrected; and 5. steps taken or planned to reduce, eliminate, and prevent reoccurrence of the deviation. [Minn. R. 7019.1000, subp. 1]
TFAC 1 (Total Facility)	22	The Permittee shall submit a semiannual deviations report : Due semiannually, by the 30th of January and July The first semiannual report submitted by the Permittee shall cover the calendar half-year in which the permit is issued. The first report of each calendar year covers January 1 - June 30. The second report of each calendar year covers July 1 - December 31. If no deviations have occurred, the Permittee shall submit the report stating no deviations. [Minn. R. 7007.0800, subp. 6(A)(2)]
TFAC 1 (Total Facility)	23	Application for Permit Amendment: If a permit amendment is needed, submit an application in accordance with the requirements of Minn. R. 7007.1150 through Minn. R. 7007.1500. Submittal dates vary, depending on the type of amendment needed. Upon adoption of a new or amended federal applicable requirement, and if there are more than 3 years remaining in the permit term, the Permittee shall file an application for an amendment within nine months of promulgation of the applicable requirement, pursuant to Minn. R. 7007.0400, subp. 3. [Minn. R. 7007.0400, subp. 3, Minn. R. 7007.1150 - 7007.1500]

TFAC 1 (Total Facility)	24	Extension Requests: The Permittee may apply for an Administrative Amendment to extend a deadline in a permit by no more than 120 days, provided the proposed deadline extension meets the requirements of Minn. R. 7007.1400, subp. 1(H). Performance testing deadlines from the General Provisions of 40 CFR pt. 60 and pt. 63 are examples of deadlines for which the MPCA does not have authority to grant extensions and therefore do not meet the requirements of Minn. R. 7007.1400, subp. 1(H). [Minn. R. 7007.1400, subp. 1(H)]
TFAC 1 (Total Facility)	25	The Permittee shall submit a compliance certification : Due annually, by the 31st of January (for the previous calendar year). The Permittee shall submit this to the Commissioner on a form approved by the Commissioner. This report covers all deviations experienced during the calendar year. [Minn. R. 7007.0800, subp. 6(C)]
TFAC 1 (Total Facility)	26	Emission Inventory Report: due on or before April 1 of each calendar year following permit issuance, to be submitted on a form approved by the Commissioner. [Minn. R. 7019.3000-7019.3100]
TFAC 1 (Total Facility)	27	Emission Fees: due 30 days after receipt of an MPCA bill. [Minn. R. 7002.0005-7002.0095]
TFAC 1 (Total Facility)	28	This permit establishes limits on the facility to keep it a minor source under New Source Review. The Permittee cannot make any change at the source that would make the source a major source under New Source Review until a permit amendment has been issued. This includes changes that might otherwise qualify as insignificant modifications and minor or moderate amendments. [Minn. R. 7007.3000, Title I Condition: Avoid major modification under 40 CFR 52.21(b)(2), Title I Condition: Avoid major source under 40 CFR 52.21(b)(1)]

TFAC 1 (Total Facility)	29	The Permittee shall submit an annual report : Due annually, by the 31st of January The report shall describe the changes made at the Facility during the previous calendar year using the latest MPCA application forms. The report shall include information for any new or replaced Subject Items. The report shall document the VOC, PM, PM10, and PM2.5 12-month rolling sum calculations for the previous calendar year. The report shall be submitted with the annual Compliance Certification required by this permit. As part of the Annual Report, the Permittee shall verify and certify that the Facility has maintained minor source status for New Source Review. [Minn. R. 7007.0800, subp. 2]
TFAC 1 (Total Facility)	30	Equipment Labeling: The Permittee shall permanently affix a unique number to each emissions unit for tracking purposes. The numbers shall correlate the unit to the appropriate Subject Item numbers used in this permit. The number can be affixed by placard, stencil, or other means. The number shall be maintained so that it is readable and visible at all times from a safe distance. If equipment is added, it shall be given a new unique number; numbers from replaced or removed equipment shall not be reused. [Minn. R. 7007.0800, subp. 2]
TFAC 1 (Total Facility)	31	Equipment Inventory: The Permittee shall maintain a written list of all emissions units and control equipment on site. The Permittee shall update the list to include any replaced, modified, or new equipment prior to making the change. The list shall correlate the units to the Subject Item numbers used in this permit and shall include the data on GI-05A and GI-05B, whichever applies. The date of construction shall be the date the change was made for replaced, modified, or new equipment. [Minn. R. 7007.0800, subp. 2]