



State of Wisconsin \  DEPARTMENT OF NATURAL RESOURCES

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Darrell Bazzell, Secretary  
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August 19, 2005

FILE CODE: 4560-1  
FID #: 268144250  
PERMIT #: 268144250-S01

John Steelman  
Vice President  
Maysteel, LLC-Corp Menomonee Falls  
P.O. Box 1240  
Menomonee Falls, WI 53052-1240

Dear Mr. Steelman:

The Air Management Program of the Department of Natural Resources has performed a preliminary review of the air pollution control permit application regarding operation of an existing facility for the manufacture of office furniture and misc. metal products.

The Southeast Region Air Program has prepared an analysis of the proposed project and has made a preliminary determination that it is approvable. The analysis and preliminary determination indicated that the emission limitations and special permit conditions in the attached draft permit should be included in any permit which may be issued by the Department. Please review this draft permit carefully.

The Department will now accept public comments on the preliminary analysis and draft permit as required by ss. 285.62(3), (4) and (5), Wis. Stats. Comments will be received for 30 days after publication of a Class I Legal notice. The Department will publish this notice. **Please review the Draft Permit and provide your comments to the Department within the same 30 day period.**

Please be advised that this is only a preliminary determination. If you have any questions regarding this matter, please feel free to contact me at 414-263-8507.

Sincerely,

Willie J. Anderson  
Permit Review Engineer  
Southeast Region Air Management Program

cc: BAM - AM/7



ANALYSIS, PRELIMINARY DETERMINATION AND DRAFT PERMIT

FOR

MAYSTEEL, LLC - MENOMONEE FALLS

LOCATED AT

N89 W14700 PATRITA DRIVE  
MENOMONEE FALLS, WI

WAUKESHA COUNTY, WISCONSIN

ON THE OPERATION OF

MANUFACTURER OF METAL FURNITURE.

This review was performed by the Wisconsin Department of Natural Resources in accordance with Sections 285.60 to 285.65, Wis. Stats and Chapter NR 407, Wis. Adm. Code. This review is for a non-Part 70 source located in an area which is designated nonattainment for Ozone and attainment/unclassified for all other criteria pollutants.

**Air Pollution Control Operation Permit 268144250-S01  
Analysis, Preliminary Determination**

**and Draft Permit prepared by:** W. Anderson Date 7/31/02

Approval Element	Initials and Date
Preliminary Determination Document (including calculations)	WJA
Applicable Requirement	WJA
Compliance Documentation Methods (compliance inspector concurrence)	
Compliance Plan and Schedule	N/A
Federal Enforceability of Permit Conditions (synthetic minor conditions)	N/A

**Approved for Public Review and Comment:** /s/ Jeff Hanson for Dan Schramm Date: 8/12/02

cc: District/Bureau Office  
Maue Shunk Public Library, W156 N8446 Pilgrim Rd., Menomonee Falls, WI 53051

## **INTRODUCTION**

Sources which are not exempt from the operation permit requirements under Section 407.03, Wis. Adm. Code, are required to obtain an air pollution control operation permit. Sources subject to the requirements must submit a permit application to the Department of Natural Resources by the date set forth in Sections 285.62(11)(b)1., Wis. Stats., and NR 407.04, Wis. Adm. Code. The application is then reviewed following the provisions set forth in Sections 285.62, 285.63 and 285.64, Wis. Stats., and Chapter NR 407, Wis. Adm. Code.

Subject sources are to be reviewed for their air pollution control technology and for their impact upon the air quality. This is to insure compliance with all applicable rules and statutory requirements. The review will show why the source(s) operation should be approved, conditionally approved, or disapproved. It will encompass emission calculations and air quality analysis using U.S. EPA models, if applicable. Emissions from volatile organic compound (VOC) sources and small sources whose emissions are known to be insignificant are normally not modeled. As a precautionary note, the emission estimates may be based on U.S. EPA emission factors (AP-42) or theoretical data and can vary from actual stack test data.

This review is based on information contained within the application submitted for an air pollution control operation permit. An operation permit may be issued if the criteria set forth in sections 285.63 and 285.64, Wis. Stats., are met.

A final decision on the operation permit will not be made until the public has had an opportunity to comment on the Department's analysis, preliminary determination and draft permit. The conditions proposed in the draft permit may be revised in any final permit issued based on comments received or further evaluation by the Department.

Owner/Operator:  
MAYSTEEL, LLC - MENOMONEE FALLS  
N89 W14700 PATRITA Drive  
MENOMONEE FALLS, WI 53052

Responsible Official:  
JOHN STEELMAN  
VICE PRESIDENT  
(262)832-9135

Permit Contact Person:  
DARRYL ZANOW  
(262) 832-9135

Date of Administratively Complete Application:  
04/04/1995

Dates of Submittal:  
4-04-95;1-11-02

**SOURCE DESCRIPTION**

**SIGNIFICANT EMISSIONS UNITS**

1. S12, B22 Space Heating - rated capacity of 14.6 mmBTU/hr burning natural gas with LPG back-up.
2. S11, P31 Washers and Dry-Off Ovens. This process is a 9-stage washing system used to clean metal parts prior to coating.
3. S10, P30 Automatic and Manual Powder Coating Application and Associated Curing Ovens.

1. **STACK INFORMATION**

Stack Identification Number: S12  
 Exhausting Unit(s): B22  
 This stack has an actual exhaust point: No  
 Discharge height above ground level (ft): n/a  
 Inside dimensions at outlet (ft): n/a  
 Exhaust flow rate (Normal) (ACFM): n/a  
 Exhaust gas temperature (Normal) (°F): n/a  
 Exhaust gas discharge direction: n/a  
 Stack equipped with any obstruction: n/a

A. **Emission Unit Information**

Process number: B22

Unit description:

Space heating equipment including one air make-up unit rated at 5.283 mmBTU/hr, 6 space heaters rated at 0.15 mmBTU/hr each, 4 Cambridge heaters rated at 2 mmBTU/hr each, and 2 new Reznor heaters rated at 0.2 mmBTU/hr each.

Control technology status: uncontrolled

Date of construction or last modification: 3/1/85 (except for 2 Reznors added in 2001)

	Primary Fuel	Backup Fuel
Fuel name	Natural Gas	Propane
Higher heating value	1000 mmBTU/CF6	90.5 mmBTU/gal3
Maximum sulfur content (wt%)	0.0	0.2
Maximum ash content (wt%)	0.0	0.0
Maximum hourly consumption	0.0146 CF6/hr	0.161 gal3/hr
Actual yearly consumption	9.75 CF6/yr	8.6 gal3/yr

2. **STACK INFORMATION**  
 Stack Identification Number: S11  
 Exhausting Unit(s): P31  
 This stack has an actual exhaust point: Yes  
 Discharge height above ground level (ft): 32.0  
 Inside dimensions at outlet (ft): Circular - 1.80  
 Exhaust flow rate (Normal) (ACFM): 5000  
 Exhaust gas temperature (Normal) (°F): 159  
 Exhaust gas discharge direction: Up  
 Stack equipped with any obstruction: No

A. **Emission Unit Information**  
 Process number: P31  
 Unit description:  
 This is a 9-stage washing system used to clean metal parts prior to coating.  
 Control technology status: uncontrolled  
 Date of construction or last modification: 3/85  
 Construction Permit: No

Control devices associated with this emissions unit  
 Emission unit controlled: n/a  
 Control device number: n/a  
 Date of installation: n/a  
 Description of device: n/a  
 n/a

3. **STACK INFORMATION**  
 Stack Identification Number: S10  
 Exhausting Unit(s): P30  
 This stack has an actual exhaust point: yes  
 Discharge height above ground level (ft): 36.7  
 Inside dimensions at outlet (ft):  
 Exhaust flow rate (Normal) (ACFM): 20000  
 Exhaust gas temperature (Normal) (°F): 173  
 Exhaust gas discharge direction: up  
 Stack equipped with any obstruction: no

A. **Emission Unit Information**  
 Process number: P30  
 Unit description:  
 Powder coating activities are completed on this process using the automatic coating line with 16 spray guns and two manual paint application booths currently with 3 operators applying powder using 3 active spray guns for touch-up, pre-coat, etc. The automatic line is set up to reuse the powder coatings that are applied, but this recycle mode is not exclusively used. An estimated 10% of the coatings now reuse the coatings, which should increase with time. The remainder of the coatings are operated in a “spray-to-waste” mode, including all of the manual booth coating. This results in lower transfer efficiencies. The powder booths are manufactured by Nordson, including two versa coat and one colormax booths.

Control technology status:	Controlled
Date of construction or last modification:	3/85
Construction Permit:	No

**INSIGNIFICANT EMISSION UNITS**

Maintenance of Grounds, Equipment, and Buildings  
 Boiler, Turbine and HVAC System Maintenance  
 Pollution Control Equipment Maintenance  
 Internal Combustion Engines Used for Warehousing and Material Transport  
 Fire Control Equipment  
 Janitorial Services  
 Office Activities  
 Convenience Water Heating  
 Convenience Space Heating ( < 5 mil BTU/hr )  
 Purging of Natural Gas Lines  
 Sanitary Sewer and Plumbing Venting  
 Propane Storage Tank  
 Welding  
 Product Cleaning and Wipe down with Isopropyl Alcohol  
 Assembly Activities

**CROSS MEDIA IMPACTS**

Powder captured is currently shipped out to a landfill and disposed of as non-hazardous waste.

**SOURCE SPECIFIC EMISSION LIMIT CALCULATIONS**

**FACILITY DESCRIPTION**

Maysteel fabricates sheet metal products and produces metal furniture, cabinets and miscellaneous metal products. This facility's PD was originally public noticed as a major source permit because of its use of VOC coatings made it a major source because its VOC emissions exceeded the 25-ton-per-year major source threshold. This facility has eliminated all of its VOC-based and water-based coatings and now uses only powder coatings and wishes to have a state-only permit. There are still small quantities of VOCs contained in the powder coatings but far less than the 25 ton/yr threshold amount. Also, there is less than 1% carbon black contained in some of the powder coatings used at this facility but the maximum theoretical emissions are far less than 10 tons per year. Significant processes include pre-wash, powder coating, and facility space heating. A detailed description of each of these processes will now be provided.

A. Process P30, Stack S10:

This process represents the paint application activities at Maysteel, which include only electrostatic application of powder coatings. The powder coating operation includes an automatic line with 16 spray guns. In addition, two manual spray booths are located near the automatic line. These booth each have three spray guns operating, which are primarily used

for post-coating touch-up and preliminary spot coverage with powder coatings, but may be used for more general coating activities if needed.

The transfer efficiencies for the powder coating depends on whether the coating equipment is operating in a one-pass mode (spray to waste) or whether the powder coatings are being reclaimed for reuse. In the spray-to-waste mode the average transfer efficiency is 23.2% as determined by site-specific data. The amount of waste material collected from the process line was compared to the actual powder coating used to develop transfer efficiencies for the spray-to-waste mode of operation.

Powder coating particulate emissions are controlled by filters and then vented to stacks. For the manual coatings booths the air from the booth is exhausted to two separate fiberglass filters in series and then redirected back into the room. For the automatic line the air is exhausted to a nearby module that contains a bank of high efficiency cartridge filters prior to exhausting to the stack. The vendor rates the control efficiency of these filters conservatively at 99% for particulate matter.

It should be noted that for calculation purposes there is no distinction to be made between the spray-to-waste scenario and the reclamation scenario because the filters under both scenarios capture the powder at a control efficiency of 99%. The key difference between the two scenarios is in what happens to the powder after it is captured. But the powder under both scenarios never reaches the ambient air.

Also included in Process P30 are the curing ovens used for the manual coating booths and the automatic coating lines. All the ovens and other process heating for this process and other fuel burning equipment burn natural gas with propane available as a backup fuel. The total rated heat input capacity of the ovens and associated equipment is 8.8 mmBTU/hr.

Criteria pollutant and HAP emissions calculations will be presented in Table 1 below.

### 1. Particulate Matter Emissions

The numbers in the table below were excerpted from Table 14 of Maysteel’s permit application and were based on the assumption that 92% of the powder coating was used on the automatic coating line and 8% of the powder coating was run on the manual line. It is further assumed that the control efficiency of the cartridge filters is 99%. The filters are considered part of the process line because the captured powder is either reused or sent off to a landfill as non-hazardous waste.

Table 1: Paint Application and Associate Dryer Gas Consumption.

Pollutant	MTE		PTE		Inclusion level lb/yr
	lb/hr	lb/yr	lb/hr	tpy	
Particulates	52.96	5219	0.60	2.61	2000
SO2	0.005	46	0.0050	0.023	2000
NOx	1.36	12775	1.36	3.85	2000
VOC	0.097	848	0.10	0.42	2000
CO	0.74	6475	0.74	3.24	2000

Carbon Black	1.25	5210	0.006	0.026	2000
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a. Applicable Regulatory Requirements

- (1) Because this process was installed after April 1, 1972 the emission limits will be set by s. NR 415.05(3)(b), Wis. Adm. Code, where the limit is the more restrictive of 0.20 lbs particulate matter per 1000 lbs of exhaust gas or the process weight equation of  $E=3.59P^{0.62}$ , where E is the allowable emissions in pounds per hour and P is the process weight in tons per hour. Using 231.67 tons/yr as the MTE because 20.14 tons/yr are exhausted inside the building, the hourly throughput is 0.026 ton/hr.  $E=0.37$  lbs/hr; 0.20 lbs particulate matter per 1000 exhaust is not less restrictive.

$2.32 \text{ tons/yr} \times 2000 \text{ lbs/ton} \times 1\text{yr}/8760 \text{ hrs} = 0.53 \text{ lb/hr}$  when emissions are controlled. Therefore, a usage limit will have to be imposed in order for this process to meet the limit set by s. NR 415.05(3)(b):  $53 \text{ lbs/hr}$  (hourly uncontrolled stack emissions)  $\times 0.37/0.53 = 37 \text{ lbs/hr}$ , assuming an average transfer efficiency of 23.2%, and control efficiency of 99%.

- (2) Particulate matter emissions from fuel combustion is covered by s. NR 415.06(2)(a), Wis. Adm. Code, which limits particulate emissions to 0.15 lbs per 1000 pounds of exhaust gas.

c. Compliance Demonstration

- (1) The permittee will demonstrate compliance by controlling emissions with a cartridge filtering system with a control efficiency of at least 99% and will measure and record the pressure drop across the filters in inches of water once per eight hour shift or once per day, whichever is greater.[s. NR 439.055(2)(b)1., Wis. Adm. Code]
- (2) The pressure drop monitoring device shall be accurate to within 5% of the pressure drop being measured or within +/- 1 inch of water column, whichever is greater.[s. NR 439.055(3)(b), Wis. Adm. Code]
- (3) The measuring device for measuring pressure drop across the filters shall be calibrated once per year or at a frequency based on good engineering practice as established by operational history, whichever is more frequent.[s. NR 439.055(4), Wis. Adm. Code]
- (4) Permittee shall use only natural gas as a primary fuel and propane as a backup fuel. [s. 285.65(7), Wis. Stats.]

c. Reference Test Methods, Recordkeeping and Monitoring Requirements.

- (1) Whenever compliance testing is required, permittee shall use USEPA Method 5, or an equivalent method approved in writing by the Department to determine compliance with a non-fugitive particulate emission limitation..[s. NR 439.06(1), Wis. Adm. Code]

2. VOCs

The only VOC process emissions are from the less than 1% VOC content of the powder coatings used on this process line.

Using 656,194 lbs/yr at the maximum throughput of powder coating (from Maysteel's permit application Table 3), then the maximum VOC emission can be represented by  $656,194 \text{ lbs/yr} \times 0.01 = 6561.94 \text{ lbs VOC/yr}$ , or 3.12 tons/yr. Because there is no other powder coating process at this facility, 5 times the inclusion level of 2000 lbs for VOCs is 10,000 lbs, and the VOC emissions from this process are less than 10,000 lbs/yr and do not have to be included in the permit. [s.NR 407.05(4)9b., Wis. Adm. Code]

3. HAPs

From Table 5 of Maysteel's application Carbon Black is the only hazardous air pollutant found in the powder coatings used at the facility and is emitted at the hourly rate of 1.25 lbs/hr uncontrolled, which is 5210 lbs per year. This number is based on the maximum powder consumption of 656,194 lbs/yr, and the assumption that carbon black makes up less than 1% of the powder content by weight, and that the transfer efficiency is 12.7%, and 92% of the powder goes through the automatic booth and is stack vented:  $656,194 \text{ lbs/yr} \times 0.01 \times (1-0.127) \times 0.92 = 5210 \text{ lbs/yr}$ . Since the powder coating line P30 is the only source of process HAPs, 5 times the inclusion level of 2000 lbs per year is 10,000 lbs per year which is not exceeded, and the Carbon Black emissions will not be considered further in this analysis.[s. NR 407.05(4)9b., Wis. Adm. Code]

**B. Process P31, Stack 11**

This process represents the washers and the dry-off oven. This is the 9-stage washing system used to clean metal parts prior to coating. This washing process includes (1) a non-HAP cleaner @ 3% concentration; (2) a non-HAP cleaner @ 1% concentration; (3) fresh water rinse (counter-flow); (4) fresh water rinse; (5) iron phosphate; (6) fresh water rinse; (7) fresh water rinse; (8) "seal-in-place"; and (9) final rinse solution.

The combustion of natural gas to produce heat for the dry-off oven and to heat the water for the wash solutions produces enough nitrogen oxide and carbon dioxide emissions to be included in the application and will be summarized in Table 2 below.

Table 2: Process P31 Washers and Dry-Off with Associated Gas Consumption

Pollutant	MTE		PTE		Inclusion level
	lb/hr	lb/yr	lb/hr	tpy	
Particulates	0.08	739	0.084	0.369	2000
SO2	0.01	58	0.007	0.029	2000
NOx	1.72	9724	1.72	4.86	2000
VOC	0.12	1070	0.12	0.53	2000
CO	0.93	8168	0.93	4.08	2000
Phosphoric Acid	0.30	2610	0.30	1.30	2000

**1. Particulate Matter**

The emissions of particulate matter from the combustion process are insignificant because the MTE is only 739 pounds per year, which is less than the 2000 pounds per year NR 407 inclusion level.

**2. Sulfur Dioxide**

The emissions of sulfur dioxide from the combustion process are insignificant because the MTE is only 58 pounds per year, which is less than the 2000 pounds per year NR 407 inclusion level.

3. NOx

The Nox level is slightly over the 2000-pound-per-year threshold and will be included in Part II of the permit.

4. VOCs

The emissions of VOCs from the combustion process are insignificant because the MTE is only 1070 pounds per year, which is less than the 2000 pounds per year NR 407 inclusion level.[s. NR 407.05(4)(c)10., Wis. Adm. Code]

5. CO

The CO MTE emission level is 8168 pounds per year, which is slightly over the 2000-pound-per-year threshold and will be included in Part II of the permit.

6. HAPs - Phosphoric Acid

The phosphoric acid MTE emissions are 2610 lbs per year. This number is based on the maximum usage of 69,591 pounds per year of a product containing 75% phosphoric acid and an emission factor of 5% based on the turbulence of the tanks and is a conservative estimate of the phosphoric acid emissions from the phosphoric acid tank. The actual emissions for 2001 were 122 pounds per year of phosphoric acid. The de minimus level for phosphoric acid is 0.336 lb/hr for stacks over 25 ft.

a. Applicable Regulatory Limit.

- (1) The emission limit for phosphoric acid to be included in the permit will be 0.29 lbs/hr.[s. 285.65(7), Wis. Adm. Code]

The emission limit was obtained by dividing the MTE of 2610 lbs/yr by 8760 hrs/yr, which is below the de minimus level.

b. Compliance Demonstration

- (1) A monthly usage limit of 5799 pounds of phosphoric acid of 75% concentration. [s. 285.65(7), Wis. Stats.]

- (2) The permittee will maintain a weekly log of the quantity of phosphoric acid used in the acid cleaning tank in units of pounds.[s. NR 439.0(1)(d), Wis. Adm. Code]

C. Process B22, Stack 12 Space Heating and Air Make-up Heating

This process includes the pre-existing space heaters, air makeup units, Cambridge heaters and two small Reznor space heating units with a total heating capacity of 11.1 mmBTU/hr. All of these combustion sources use natural gas as the primary fuel and propane as backup fuel. The criteria pollutant and HAP emissions will be summarized in Table 3 below.

Table 3: Emissions Summary for Air Make-up and Space Heating Units (B22). Total heat input is 14.583 mmBTU/hr, but all but the air make-up unit are less than 5 mmBTU/hr, and as such are considered convenience heating and would exempt from permitting. The emissions in the Table 3 represent the worst-case scenario between natural gas and propane gas for each pollutant.

Pollutant	MTE		PTE	
	lb/hr	lb/yr	lb/hr	lb/yr
Particulate Matter	0.111	971	0.11	0.49
SO2	0.009	77	0.009	0.038
NOx	2.256	12775	2.26	6.39
VOC	0.160	1405	0.16	0.70
CO	1.225	10731	1.22	5.37

1. Particulate Matter

Particulate matter emissions from all of these units are insignificant and will not be considered further.[s. NR 407.05(4)(c)10., Wis. Adm. Code]

2. SO2

Sulfur dioxide emissions from all of these units are insignificant and will not be considered further.[s. NR 407.05(4)(c)10., Wis. Adm. Code]

3. Nox

Nox emissions are slightly over the 2000 per year inclusion level and will only be included in Part II of permit.

4. VOC

VOC emissions from all of these units are insignificant and will not be considered further.[s. NR 407.05(4)(c)10., Wis. Adm. Code]

5. CO

CO emissions from all of these units are insignificant and will not be considered further.[s. NR 407.05(4)(c)10., Wis. Adm. Code]

6. HAPs

HAP emissions from the combustion of group 1 virgin fossil fuels are exempt and will not be considered further.

**FACILITY STATUS UNDER PART 70**

This facility is a natural minor source because none of the MTE emissions of criteria pollutants exceeds the major source category threshold in an ozone nonattainment area, and the HAPs do not exceed the 10 tons per year threshold for a single HAP and the 25 ton per year threshold for a combination of HAPs.

**EARLY HAZARDOUS POLLUTANT EMISSION REDUCTION OPTION**

Not considered in this analysis.

**CONTROL TECHNOLOGY REVIEW**

Control technology review was discussed along with individual processes.

**AIR QUALITY REVIEW**

N/A

**FACILITY EMISSIONS**

Actual emissions are the total emissions generated by the emission sources identified below over the specified time period taking into account any reductions made by a control device or technique. Maximum theoretical emissions are the quantity of air contaminants that theoretically could be emitted by the emissions sources identified below, without considering emission control devices, based on the design capacity of the source. Potential to emit is the maximum capacity of the emission sources identified below to emit any air contaminant under its physical and operational design. Any physical or operational limitation on the capacity of a source to emit an air contaminant shall be treated as part of its design if the limitation is Federally enforceable.

A. STACK EMISSIONS

1./S10 P30: AUTOMATIC AND MANUAL POWDER COATING LINE

Pollutant	Actual Emissions		Maximum Theoretical			P.T.E. TPY	
		Units	TPY		Units		TPY
Particulates	0.456	Lb/hr	0.918	52.96	lb/hr	2.61*	2.61
SO2	0.003	Lb/hr	0.004	0.005	lb/hr	0.023	0.023
NOx		Lb/hr	0.756	1.36	lb/hr	3.85	3.85
VOC		Lb/hr	0.082	0.097	lb/hr	0.420	0.420
CO		Lb/hr	0.620	0.739	lb/hr	3.240	3.420

\*The MTE in lbs/hr represents the maximum usage rate of the powder coating and is not really an emission rate. The powder coating that is not applied to the parts is captured by the filters and is taken to a landfill and has no possibility of reaching the ambient air. Therefore the MTE and the PTE are the same.

HAZARDOUS AIR POLLUTANT EMISSIONS FOR STACK:  
S01

Pollutant	Actual Emissions		Maximum Theoretical		Potential to Emit
		Units		Units	TPY
Carbon Black	0.0041	lb/hr	1.25	Lb/hr	0.026

2. S11 P31: WASHERS AND DRY-OFF OVENS

Pollutant	Actual Emissions			Maximum Theoretical			P.T.E.
		Units	TPY		Units	TPY	TPY
Particulates	0.042	lb/hr	0.056	0.067	lb/hr	0.29	0.29
SO2	0.003	lb/hr	0.004	0.005	lb/hr	0.023	0.023
NOx	0.899	lb/hr	0.756	1.361	lb/hr	3.85	3.85
VOC	0.082	lb/hr	0.082	0.097	lb/hr	0.42	0.42
CO	0.371	lb/hr	0.620	0.739	lb/hr	3.24	3.24

HAZARDOUS AIR POLLUTANT EMISSIONS FOR STACK:  
S11

Pollutant	Actual Emissions		Maximum Theoretical		Potential to Emit
		Units		Units	TPY
n/a					

3. S12, B22 AIR MAKE-UP AND SPACE HEATING UNITS

Pollutant	Actual Emissions	Maximum Theoretical	P.T.E.
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		Units	TPY		Units	TPY	TPY
Particulates	0.117	lb/day	0.039	0.111	lb/hr	0.49	0.49
SO2	0.008	lb/day	0.003	0.009	lb/hr	0.038	0.038
NOx	2.483	lb/day	0.548	2.256	lb/hr	6.39	6.39
VOC	0.161	lb/day	0.056	0.160	lb/hr	0.70	0.70
CO	1.023	lb/day	0.418	1.225	lb/hr	5.37	5.37

HAZARDOUS AIR POLLUTANT EMISSIONS FOR STACK:  
S12

Pollutant	Actual Emissions		Maximum Theoretical			P.T.E.
	Units	TPY	Units	TPY	TPY	
n/a						

B. FACILITY EMISSIONS

Pollutant	Actual Emissions	Potential to Emit
	TPY	TPY
Particulates	1.0	3.46
SO2	0.010	0.09
NOx	1.8	15.1
VOC	0.2	1.66
CO	1.5	12.69

Pollutant	Actual Emissions		Maximum Theoretical		Potential to Emit
		Units		Units	TPY
Carbon Black	0.0086	tpy	0.26	tpy	0.26
Phosphoric acid	0.003	tpy	1.3	tpy	1.3

**COMPLIANCE DEMONSTRATION MONITORING METHODS**

Compliance demonstration monitoring methods will be handled along with each individual process pollutant.

**FACILITY COMPLIANCE STATUS**

The Department finds that:

1. The source will meet applicable emission limits and other requirements.
2. The source will not cause nor exacerbate a violation of an ambient air quality standard or ambient air increment.

**PRELIMINARY DETERMINATION**

The Wisconsin Department of Natural Resources has reviewed the permit application and other materials submitted by SNAP-ON, INC. and hereby makes a preliminary determination that an operation permit may be issued with the following Draft Applicable Limits and Draft Permit Conditions.

**BEFORE THE DEPARTMENT OF NATURAL RESOURCES  
AIR MANAGEMENT PROGRAM  
FINDINGS OF FACT  
CONCLUSIONS OF LAW  
AND DECISION**

Findings of Fact

The Department of Natural Resources (DNR) finds that:

- 1) MAYSTEEL CORP MENOMONEE FALLS DIVISION, P.O BOX 1240, MENOMONEE FALLS, WI 530521240 has applied for an air pollution control operation permit. The authorized representative of the facility is JOHN STEELMAN, VICE PRESIDENT.
- 2) MAYSTEEL CORP MENOMONEE FALLS DIVISION submitted an air pollution control permit application and plans and specifications and any additional information describing the air pollution source on June 21, 2002.
- 3) DNR has reviewed MAYSTEEL CORP MENOMONEE FALLS DIVISION's air pollution control operation permit application, plans, specifications and other information available to DNR.
- 4) DNR has prepared an analysis and a Preliminary Determination on the approvability of the operation permit application.
- 5) This permit is for the operation of a Operation Permit, Part-70 Source.
- 6) DNR has complied with the procedures set forth in s. 285.62, Wis. Stats.
- 7) The air contaminant source meets all of the applicable criteria in ss. 285.63 and 285.64, Wis. Stats.
- 8) DNR has complied with the requirements of s. 1.11, Stats., and ch. NR 150, Wis. Adm. Code.

Conclusions of Law

DNR concludes that:

- 1) DNR has authority under sec. 285.11(1), Wis. Stats., to promulgate rules contained in chs. NR 400-499, Wis. Adm. Code, including but not limited to rules containing emission limits, compliance schedules and compliance determination methods.
- 2) DNR has the authority under ss. 285.11(1), (5) and (6), 285.27(1) and (2) and 285.65, Wis. Stats., and chs. NR 400-499, Wis. Adm. Code, to establish emission limits for sources of air pollution.
- 3) DNR has the authority to issue air pollution control permits and to include conditions in such permits under ss. 285.60, 285.62, 285.63, 285.64, and 285.65, Wis. Stats.
- 4) The emission limits included in this permit are authorized by ss. 285.65, Wis. Stats., and NR 400-499, Wis. Adm. Code.
- 5) DNR is required to comply with sec. 1.11, Stats., and ch. NR 150, Wis. Adm. Code, in conjunction with issuing an air pollution control permit.

## Decision

MAYSTEEL, LLC-MENOMONEE FALLS is authorized to operate a FACILITY FOR THE MANUFACTURE OF OFFICE FURNITURE AND MISC. METAL PRODUCTS in conformity with the emission limits, monitoring, record keeping and reporting requirements and specific and general conditions set forth in this permit.

AIR POLLUTION CONTROL OPERATION PERMIT

EI FACILITY NO. 268144250

PERMIT NO. 02-DJH-246-OP

TYPE: Operation Permit - Non Part-70 Source

In compliance with the provisions of Chapter 285, Wis. Stats., and Chapters NR400 to NR499, Wis. Adm. Code,

Name of Source: MAYSTEEL, LLC- MENOMONEE FALLS

Street Address:  
N89 W14700 PATRITA DRIVE  
MENOMONEE FALLS  
WAUKESHA County, Wisconsin

Responsible Official, & Title:  
JOHN STEELMAN, VICE-PRES.

is authorized to operate A FACILITY FOR THE MANUFACTURE OF OFFICE FURNITURE AND MISC. METAL PRODUCTS in conformity with the conditions herein.

**THIS OPERATION PERMIT EXPIRES February 26, 2008 .**

RENEWAL APPLICATION MUST BE SUBMITTED AT LEAST 12 MONTHS, BUT NOT MORE THAN 18 MONTHS, PRIOR TO THIS EXPIRATION DATE. [s. NR 407.09(1)(b)1., Wis. Adm. Code].

No permittee may continue operation of a source after the operation permit expires, unless the permittee submits a timely and complete application for renewal of the permit [s.285.66(3), Wis. Stats. and NR 407.04(2), Wis. Adm. Code].

This authorization requires compliance by the permit holder with the emission limitations, monitoring requirements and other terms and conditions set forth in Parts I and II hereof.

Dated at Milwaukee, Wisconsin, \_\_\_\_\_, 2003 .

STATE OF WISCONSIN  
DEPARTMENT OF NATURAL RESOURCES  
For the Secretary

By

Daniel H. Schramm, Supervisor  
Southeast Region Air Management Program  
Milwaukee Service Center

## Preamble

An Asterisk "\*" throughout this document denotes legal authority, limitations and conditions which are not federally enforceable.

**The following permits, orders, etc. are adopted, under ss. 285.65(3), Wis. Stats., NR 406.11(1)(c) and (d), NR 407.09(2)(d) and NR 407.15(3) and (4), Wis. Adm. Code, by Permit FID# 268144250-S01 which then becomes the primary enforceable document:**

### **Stack and Process Index**

#### **Stack S10**

##### **Process P30**

**AUTOMATIC POWDER COATING LINE CONSISTING OF 16 SPRAY GUNS AND TWO MANUAL PAINT APPLICATION BOOTHS. THERE ARE 3 GUNS IN EACH BOOTH THAT DO PRIMARILY TOUCH-UP WORK. APPROXIMATELY 8% OF THE POWDER COATING IS REUSED.**

#### **Stack S11**

##### **Process P31**

**THIS IS A DUMMY STACK REPRESENTING THE INDIVIDUAL STACKS FROM THIS PROCESS. NINE TANKS WITH TANK HEATERS AND ONE DRY OFF OVEN. TANK HEATERS HAVE THE FOLLOWING HEAT INPUT RATINGS OF STAGE (1) 4.5 MMBTU/HR, STAGE (2) 3.0 MMBTU/HR, STAGE ( 5) 2.5 MMBTU/HR, STAGE (7) 2.5 MMBTU/HR. THE DRY OFF OVEN HAS A HEAT INPUT RATING OF 2.5 MMBTU/HR.**

#### **Stack S12**

##### **Process B22**

**UNITS INCLUDE ONE (1) AIR MAKE UP UNIT FOR COATING AREA AT 5.283 MMBTU/HR, SIX (6) SPACE HEATERS AT 0.15 MMBTU/HR EACH, AND FOUR (4) CAMBRIDGE HEATERS AT 2.0 MMBTU/HR EACH.**

Permit Shield Unless precluded by the Administrator of the USEPA, compliance with all emission limitations in this operation permit is considered to be compliance with all emission limitations established under ss. 285.01 to 285.87, Wis. Stats., and emission limitations under the federal clean air act, that are applicable to the source if the permit includes the applicable limitation or if the Department determines that the emission limitations do not apply. The following emission limitations were reviewed in the analysis and preliminary determination and were determined not to apply to this stationary source: None.

Part I The headings for the areas in the permit are defined below. The legal authority for these limitations or methods follows them in [brackets].

Pollutant -- This area will note which pollutant is being regulated by the permit.

Limitations -- This area will list all applicable emission limitations that apply to the source, including case-by-case limitations such as Latest Available Control Techniques (LACT), Best Available Control Technology (BACT), or Lowest Achievable Emission Rate (LAER). It will also list any voluntary restrictions on hours of operation, raw material use, or production rate requested by the permittee to limit potential to emit.

Compliance Demonstration -- The compliance demonstration methods outlined in this area may be used to demonstrate compliance the associated emission limit or work practice standard listed under the corresponding *Limitations* area. The compliance demonstration area contains limits on parameters or other mechanisms that will be monitored periodically to insure compliance with the limitations. The requirement to test as well as initial and periodic test schedules, if testing is required, will be stated here. Notwithstanding the compliance determination methods which the owner or operator of a sources is authorized to use under ch. NR 439, Wis. Adm. Code, the Department may use any relevant information or appropriate method to determine a source's compliance with applicable emission limitations.

Reference Test Methods, Recordkeeping, and Monitoring Requirements -- Specific USEPA Reference test methods or other approved test methods will be contained in this area and are the methods that must be used whenever testing is required. A reference test method will be listed even if no testing is immediately required. Also included in this area are any recordkeeping requirements and their frequency and reporting requirements. Accuracy of monitoring equipment and frequency of monitoring shall meet, at a minimum, the requirements of ss. NR 439.055(3) and (4), Wis. Adm. Code, as specified in Part II of this permit.

Condition Type -- This column will specify other conditions that are applicable to the entire facility that may not be tied to one specific pollutant.

Conditions -- Specific conditions usually applicable to the entire facility or compliance requirements.

Compliance Demonstration -- This area contains monitoring and testing requirements and methods to demonstrate compliance with the conditions.

PART II -- This section contains the general limitations that the permittee must abide by. These requirements are standard for most sources of air pollutants so they are included in this section with every permit.



**PART I**  
**APPLICABLE LIMITATIONS AND SPECIFIC CONDITIONS**

**A. S10 P30/ C01, C02, C03: AUTOMATIC/MANUAL ELECTROSTATIC POWDER COATING LINE & BAKE OVENS.**

<b>POLLUTANT</b>	<b>a. LIMITATIONS</b>	<b>b. COMPLIANCE DEMONSTRATION</b>	<b>c. REFERENCE TEST METHODS, RECORDKEEPING AND MONITORING REQUIREMENTS</b>
1. Particulate matter emissions (fuel-burning)	(1) Emissions may not exceed 0.15 lbs particulate matter/mmBtu heat input. [s. NR 415.06(2)(a), Wis. Adm. Code]*  (2) Emissions from the E-coat process may not exceed 0.37 lb/hr.[s. NR 415.05(2), Wis. Adm. Code]*	(1) Permittee shall burn only natural gas as a primary fuel and LP gas as a backup fuel. [s. NR 407.09(4)(a)3.b., Wis. Adm. Code]  (2) Permittee shall use filter controls whenever this process is operating. [s. NR 407.09(1)(a), Wis. Adm. Code]  (3) Permittee shall perform visual inspections of the filters as part of a malfunction abatement plan in order to detect and correct filter malfunctions.[s. NR 439.05(6), Wis. Adm. Code]	(1) Permittee keep and maintain a log of the dates the control filters were inspected and the name of the person doing the inspection.[ss.285.65(3) and 285.63(4)(b), Wis. Stats.]  (2) Whenever compliance testing is required, permittee shall use USEPA Method 5 for noncondensable particulate matter and USEPA Method 202 for condensable particulate matter.[s. NR 439.06(1), Wis. Adm. Code]
2. Nitrogen oxides	(1) Emissions may not exceed 1.36 lbs/hr. [s. 285.65(7), Wis. Stats.]*	(1) Permittee shall use only natural gas as a primary fuel and propane as backup fuel. [s. NR 407.09(4)(a)3.b., Wis. Adm. Code]  (2) No recordkeeping and monitoring is required for sources that do not have the potential to violate the emission limitation under normal operating conditions.[ss. 285.65(3) & 285.63(4)(b), Wis. Stats.]	(1) Whenever compliance testing is required USEPA Method 7 or an equivalent method approved in writing by the Department shall be used to show compliance.[s. NR 439.06(6)(a), Wis. Adm. Code]  (2) No recordkeeping and monitoring is required for sources that do not have the potential to violate the emission limitation under normal operating conditions.[ss. 285.65(3) & 285.63(4)(b), Wis. Stats.]
3. Visible Emissions	(1) Emissions may not exceed 20% opacity. [s. NR 431.05 ,	(1) The condition in I.A.1.b.(1) and (2) shall serve as compliance demonstration for the opacity limit.[s.NR	(1) Whenever compliance testing is required USEPA Method 9 shall be used.[s. NR 439.06(9)(a)1., Wis. Adm. Code]

POLLUTANT	a. LIMITATIONS	b. COMPLIANCE DEMONSTRATION	c. REFERENCE TEST METHODS, RECORDKEEPING AND MONITORING REQUIREMENTS
	Wis.Adm.Code]*	407.09(4)(a)3.b., Wis.Adm.Code]	(2) No recordkeeping compliance demonstration is required for sources that do not have the potential to violate the emission limitation under normal operating conditions.[ss.285.65(3) and 285.63(4)(b), Wis. Stats.]
4. Other (VOC Emission Reduction Credit)	(1) The old solvent based booths shall remain shutdown as part of an Emission Reduction Credit certification. A total of 16.76 TPY or ERC's is generated from this requirement. (sec 285.65(5), Wis. Stats.)	(1) Permittee shall label any coating booths other than the powder coat booths in this process. The labeling shall indicate the function the booth is to have (ie. "MAINTAINENCE"). This labeling shall be of a size and positioning that it is in plain view. (sec. 285.65(5), Wis. Stats.)	(1) No recordkeeping compliance demonstration is required for sources that do not have the potential to violate the emission limitation under normal operating conditions.[ss.285.65(3) and 285.63(4)(b), Wis. Stats.]

**B. S11 P31/ :**  
**NINE TANKS WITH TANK HEATERS AND ONE DRY OFF OVEN (Total heat input rating of 11.1 mmBTU/hr)**

POLLUTANT	a. LIMITATIONS	b. COMPLIANCE DEMONSTRATION	c. REFERENCE TEST METHODS, RECORDKEEPING AND MONITORING REQUIREMENTS
1. Phosphoric acid	(1) Emissions may not exceed 0.29 lb/hr.[s. NR 445.05(1), Wis. Adm. Code; s. 285.65(7), Wis. Stats.]*	(1) Permittee shall limit its use of phosphoric acid to 5799 lbs/month averaged over any 12 consecutive months. [s. 285.65(7), Wis. Stats.]	(1) Permittee shall maintain a weekly log of the quantity of phosphoric acid (75% by weight) used in the wash tank.[s. NR 439.04(1)(d), Wis. Adm. Code]

C. S12 B22/ : ONE AIR MAKE UP UNIT (5.283 mmBTU/HR); SIX (6) SPACE HEATERS (0.15 mmBTU/HR) EACH, AND FOUR (4) CAMBRIDGE HEATERS (2.0 mmBTU/HR) EACH. TOTAL RATING OF 14.58 mmBTU/hr.

POLLUTANT	a. LIMITATIONS	b. COMPLIANCE DEMONSTRATION	c. REFERENCE TEST METHODS, RECORDKEEPING AND MONITORING REQUIREMENTS
1. Nitrogen oxides	(1) GENERAL LIMITATIONS NR 428.03		(1) Whenever compliance testing is required, permittee shall use USEPA Method 7, or an equivalent method approved in writing by the Department.[s. NR 439.06(6)(a), Wis. Adm. Code]
2. Visible Emissions	(1) Emissions may not exceed 20% opacity.[s. NR 431.04(2), Wis. Adm. Code]	(1) Permittee shall burn only natural gas as a primary fuel and LP gas as a backup fuel. [s. NR 407.09(4)(a)3.b., Wis. Adm. Code]	(1) Whenever compliance testing is required, permittee shall use USEPA Method 9, or an equivalent method approved in writing by the Department.[s. NR 439.06(9)(a)1., Wis. Adm. Code]

BEFORE THE DEPARTMENT OF NATURAL RESOURCES AIR MANAGEMENT PROGRAM

Wisconsin Department of Natural Resources Air Pollution Control Permit Preliminary Analysis on an Air Pollution Control Permit to Operate an Existing Air Pollution Source at  
MAYSTEEL, LLC-MENOMONEE FALLS  
N89 W14700 PATRITA DRIVE  
MENOMONEE FALLS  
WAUKESHA, Wisconsin.

Air Pollution Operation Permit No. 268144250-S01

MAYSTEEL CORP MENOMONEE FALLS DIVISION submitted to the Department of Natural Resources (DNR) a permit application, including plans and specifications, for the operation of an existing FACILITY FOR THE MANUFACTURE OF OFFICE FURNITURE AND MISC. METAL PRODUCTS.

The Southeast Region Air Program of the Department has analyzed these materials and has made a preliminary determination that operation of this air pollution source should meet applicable criteria for permit approval as stated in ss. 285.63 and 285.64, Wis. Stats., including both the emission limits and the ambient air standards and that the application is approvable. This preliminary determination does not constitute approval from the Air Management Program or any other DNR sections which may also require a review of the project.

The DNR hereby solicits written comments from the public regarding the preliminary determination to approve an operation permit.

These comments will be considered in the DNR's final decisions regarding this project. Information, including the permit application and the DNR's preliminary analysis regarding this proposal, is available for public inspection at the Department of Natural Resources Bureau of Air Management Headquarters, Seventh Floor, 101 South Webster, Madison, Wisconsin, Southeast Region Air Management Program, P.O. Box 12436, Milwaukee, WI 53212, (414)263-8500 and at the Mauke Shunk Public Library, W156 N8446 Pilgrim Rd., Menomonee Falls, WI 53051, or contact Willie J. Anderson, 414-263-8507. This information is also available for downloading from the internet using a World Wide Web browser at:  
<http://www.dnr.state.wi.us/org/aw/air/reg/regs.htm>

Interested persons wishing to comment on the preliminary determinations should submit written comments within 30 days to:

Wisconsin Department of Natural Resources,  
Southeast Region Air Program,  
P.O. Box 12436, Milwaukee, WI 53212,  
(414)263-8507. Attn: Willie J. Anderson.

A public hearing may be requested by individuals if the preliminary determination is of significant concern to them. The request for hearing should indicate the interest of the party filing the request and reasons why a hearing is warranted. The Department may then hold a public hearing if it determines that there is a significant public interest in holding a hearing.

Reasonable accommodation, including the provision of informational material in an alternative format, will be provided for qualified individuals with disabilities upon request.

Dated at Milwaukee, Wisconsin, July 31, 2002.

STATE OF WISCONSIN  
DEPARTMENT OF NATURAL RESOURCES  
For the Secretary

By /s/Daniel Schramm  
Daniel H. Schramm, Supervisor  
Southeast Region Air Management Program  
Milwaukee Service Center

Final Permit Cover Letter  
Insert your letter head here.

August 19, 2005

FILE CODE: 4530-1  
FID #: 268144250  
PERMIT #: 268144250-S01

CERTIFIED MAIL

James P. Castillo  
Vice-Pres. & Gen. Manager  
Maysteel, LLC-Menomonee Falls  
P.O. BOX 1240  
Menomonee Falls, WI 530521240

RETURN RECEIPT REQUESTED

Dear Mr. James P. Castillo:

Your application for an air pollution control operation has been processed in accordance with s. 285.62, Wis. Stats.

The enclosed operation permit is issued to provide authorization for your source to operate a facility for the manufacture of office furniture and misc. metal products in accordance with the requirements and conditions set forth within Parts I and II of the permit. Please read it carefully. **This permit expires [EXPIRATION DATE].** This source may not operate after this operation permit expires unless you have submitted a new operation permit application that has been deemed complete.

A copy of this permit should be available at the source for inspection by any authorized representative of the Department. Questions about this permits should be directed to the Wisconsin Dept. Of Natural Resources, P.O. Box 12436, Milwaukee, WI 53212, 414-263-8507.

Please note that the following emission limitations may apply to the insignificant emissions units listed in your permit application:

- 1) Section NR 415.05, Wis. Adm. Code - Particulate emission limits for processes;
- 2) Section NR 415.06, Wis. Adm. Code - Particulate emission limits for fuel burning installations;
- 3) Section NR 425.07, Wis. Adm. Code - Particulate emission limits for incinerators;
- 4) Section NR 423.03, Wis. Adm. Code - Solvent metal cleaning;
- 5) Sections NR 431.04 and 431.05, Wis. Adm. Code - Visible emission limitations;
- 6) Section NR 485.05, Wis. Adm. Code - Visible emission limits for motor vehicles, internal combustion engines and mobile sources; and
- 7) Section NR 485.055, Wis. Adm. Code - Particulate emission limits for motor gasoline and diesel internal combustion engines.

While these emission limitations are not specifically listed in your air pollution control permit, you are responsible for ensuring compliance with all emission limitations which apply to the insignificant emission units at your facility.

#### NOTICE OF APPEAL RIGHTS

If you believe that you have a right to challenge this decision, you should know that Wisconsin statutes establish time periods within which requests to review Department decisions must be filed.

To request a contested case hearing pursuant to s. 285.81, Wis. Stats., you have 30 days after the decision is mailed, or otherwise served by the Department, to serve a petition for a contested case hearing on the Secretary of the Department of Natural Resources. Any such petition for hearing shall set forth specifically the issued sought to be reviewed, the interest of the petitioner, the reasons why a hearing is warranted and the relief desired.

For judicial review of a decision pursuant to ss. 227.52 and 227.53, Stats., you have 30 days after the decision is mailed, or otherwise served by the Department, to file your petition with the appropriate circuit court and serve the petition on the Department. Such a petition for judicial review shall name the Department of Natural Resources as the respondent.

This notice is provided pursuant to s. 227.48(2), Stats.

STATE OF WISCONSIN  
DEPARTMENT OF NATURAL RESOURCES

Willie J. Anderson  
Southeast Region - Milwaukee Office  
Maysteel

Enclosure

cc: AM/7 - FOP



