

**Sanmina-SCI Corporation
Cumberland County
Westbrook, Maine
A-167-71-J-R**

) **DEPARTMENTAL
) FINDINGS OF FACT AND ORDER
) AIR EMISSION LICENSE**

After review of the air emissions license application, staff investigation reports and other documents in the applicant's file in the Bureau of Air Quality, pursuant to 38 M.R.S.A., Section 344 and Section 590, the Department finds the following facts:

I. REGISTRATION

A. Introduction

Sanmina-SCI Corporation (Sanmina) of Westbrook, Maine has applied to renew their Air Emission License, permitting the operation of emission sources associated with their sheet metal fabrication facility.

B. Emission Equipment

Sanmina is authorized to operate the following air emission units:

Fuel Burning Equipment

Equipment	Maximum Capacity (MMBtu/hr)	Fuel Type	Maximum Firing Rate (ft ³ /hr)	Post Combustion Ctrl Equipment	Stack
Boiler 1	6.0	nat. gas	6,000	none	8
Make up air Unit 1	5.0	nat. gas	5,000	none	none
Make up air Unit 2	5.0	nat. gas	5,000	none	none
Washer Stage 1	3.3	nat. gas	3,300	none	5
Washer Stage 3	3.3	nat. gas	3,300	none	6
Paint Finish Bake Oven	2.4	nat. gas	2,400	none	1
Pre-texture Oven	2.0	nat. gas	2,000	none	2
Burn Off Incinerator*	0.35	nat. gas	350	afterburner	7
Silk Screen Oven*	0.35	nat. gas	350	none	13
Sludge Dryer*	0.2	nat. gas	200	Cyclone & Venturi scrubber	12

* insignificant activities noted for inventory purposes only.

Process Equipment

<u>Equipment</u>	<u>Pollutant Emitted</u>	<u>Pollution Control Equipment</u>	<u>Stack #</u>
Off-line Paint Booth	PM, VOC	paper & fabric filters	4
Washer Stage 1 (Phosphoric)	Acid	none	5
Washer Stage 3 (Phosphoric)	Acid	none	6
Paint Spray Booths (4)	PM, VOC	paper & fabric filter	9
Aluminum Chromate Line	see BPT section	none	10
Zinc Plating Line	Acids, Alkali	Packed Bed Scrubber	11

C. Application Classification

The application for Sanmina does not include the licensing of increased emissions or the installation of new or modified equipment, therefore the license is considered to be a renewal of current licensed emission units only.

II. BEST PRACTICAL TREATMENT (BPT)

A. Introduction

In order to receive a license the applicant must control emissions from each unit to a level considered by the Department to represent best practical treatment (BPT), as defined in Chapter 100 of the Air Regulations. Separate control requirement categories exist for new and existing equipment as well as for those sources located in designated non-attainment areas.

BPT for existing emissions equipment means that method which controls or reduces emissions to the lowest possible level considering:

- the existing state of technology;
- the effectiveness of available alternatives for reducing emissions from the source being considered; and
- the economic feasibility for the type of establishment involved.

B. Process Description

Sanmina processes flat sheets of steel, raw material to produce metal parts that are later assembled to make computer chassis and cabinets with steel frames. Once the parts are shaped to form the desired pieces, they are sent to be plated, washed, painted, and in some cases, silk screened.

The silk screen operation is used to print words or numbers on to various parts. Ink used in this process amounts to approximately 6 gallons per year, therefore, this process is considered an insignificant licensed activity. Sanmina operates a

natural gas fired oven, an insignificant activity, to dry the ink on the parts from the silk screen process.

At this time, the aluminum chromate line is seldom used by Sanmina. This line is a manual conversion coating process equipped with a push/pull capture system which vents the uncontrolled vapors out of the building through the roof.

The zinc plating line is a fully automated system. The parts are loaded and sent through the automated cycle where a zinc coating is deposited on the parts. A boiler is used to heat the plating room and the plating baths.

Hoods in the zinc plating room pull vapors into the packed bed scrubber. There are some hexavalent chromium emissions from this process and Sanmina is subject to DEP Chapter 135, however, since there are no chrome anode deposits, Sanmina is not subject to the Chromium MACT Rule.

The water from plating is pH adjusted to precipitate out the metals. Sludge produced from the water treatment is sent to a natural gas fired sludge dryer. Emissions from the sludge dryer vent to the roof through a venturi scrubber for particulate control. The sludge drying operation is an insignificant activity.

Sanmina operates an automated conveyor paint line. Pieces are manually loaded onto the hook conveyors and washed in a three stage sequence; Stage 1 is iron phosphate, Stages 2 and 3 are rinses. Stages 1 and 3 are heated by the use of natural gas.

The parts are then dried and conveyed to one of the paint spray booths. Sanmina operates high volume, low pressure (HVLV) guns in the four paint spray booths. The booths are equipped with a paper pre-filter and a secondary fabric filter. After the first coat is applied in the booths, the parts are flash dried in the pre-texture oven. The second paint coating includes surface texturing. Parts are then sent into the paint finish bake oven to be dried and then the finished parts are off loaded and sent to assembly. Make-up Air Units 1 & 2 are located in the painting area and are used to bring fresh air into the painting room.

The burn off incinerator is used to burn residual paint off of the hooks that hold the pieces while they are being spray painted. This unit is fired with natural gas and is equipped with an afterburner. The incinerating operation is an insignificant activity.

C. Boiler 1

Boiler 1 has a maximum design heat input capacity of 6.0 MMBtu/hr firing natural gas. Boiler 1 is therefore not subject to EPA New Source Performance Standards (NSPS) Subpart Dc, for boilers with a heat input of 10 MMBtu/hr or greater and manufactured after June 9, 1989.

BPT for Boiler 1 is the following:

- Use of natural gas.
- Emission rate for PM is regulated by MEDEP Regulations, Chapter 103, however BPT is more stringent.
- SO₂, NO_x, CO and VOC emission rates are based on AP-42 data dated 10/96 for natural gas fired boilers smaller than 100 MMBtu/hr.
- Visible emissions from the vents serving the heat treat units shall not exceed 10% opacity on a six (6) minute block average basis.

D. Make-up Air Units 1&2

Make-up Air Units 1&2 each have a maximum design heat input capacity of 5.0 MMBtu/hr firing natural gas. These units are therefore not subject to EPA New Source Performance Standards (NSPS) Subpart Dc, for boilers with a heat input of 10 MMBtu/hr or greater and manufactured after June 9, 1989.

BPT for Make-up Air Units 1&2 is the following:

- Use of natural gas.
- Emission rate for PM is regulated by MEDEP Regulations, Chapter 103, however BPT is more stringent.
- SO₂, NO_x, CO and VOC emission rates are based on AP-42 data dated 10/96 for natural gas fired boilers smaller than 100 MMBtu/hr.
- Visible emissions from the vents serving the heat treat units shall not exceed 10% opacity on a six (6) minute block average basis.

E. Washer Stage 1 & 3 Heaters

Stage 1 & 3 Heaters each have a maximum design heat input capacity of 3.3 MMBtu/hr firing natural gas. These are therefore not subject to EPA New Source Performance Standards (NSPS) Subpart Dc, for boilers with a heat input of 10 MMBtu/hr or greater and manufactured after June 9, 1989.

BPT for Stage 1 & 3 Heaters is the following:

- Use of natural gas.
- Emission rate for PM is regulated by MEDEP Regulations, Chapter 103, however BPT is more stringent.
- SO₂, NO_x, CO and VOC emission rates are based on AP-42 data dated 10/96 for natural gas fired boilers smaller than 100 MMBtu/hr.
- Visible emissions from the vents serving the heat treat units shall not exceed 10% opacity on a six (6) minute block average basis.

BPT for phosphoric acid emissions from the washers is the use of iron phosphatizer not to exceed 10% phosphoric acid.

Compliance with the ton per year limits shall be demonstrated by monthly mass balance calculations using the amount of material used and the VOC and HAP content of the material as found on the MSDS sheets.

I. Aluminum Chromate Line

Sanmina tested for hexavalent chromium emissions in 1989 and found that the levels emitted were below detectable levels. This process is only a conversion coating process and no electroplating occurs. Sanmina is therefore not subject to the Chromium MACT.

DEP Chapter 135 requires an emission standard be determined on a case by case basis, therefore, chrome emissions shall be maintained less than 500 parts per million by weight.

J. Zinc Plating Line

BPT for emissions from this process is the venting of vapors captured by the vents to the current packed bed scrubber with water recirculation.

K. Facility Emissions and Fuel Use Caps

Sanmina is limited to the use of 50,000,000 cubic feet of natural gas on a 12 month rolling total basis.

Total Annual Emissions for the Facility
(used to calculate the annual license fee)

Pollutant	Tons/year
PM	2.7
PM ₁₀	2.7
SO ₂	0.03
NO _x	5.2
CO	4.0
VOC	40.2
each individual HAP	9.9
total HAP	24.9

III. AMBIENT AIR QUALITY ANALYSIS

According to the Maine Regulations Chapter 115, the level of air quality analyses required for a renewal source shall be determined on a case-by-case basis. Based on the above total facility emissions, Sanmina is below the emissions level required for modeling and monitoring.

ORDER

Based on the above Findings and subject to conditions listed below the Department concludes that the emissions from this source:

- will receive Best Practical Treatment,
- will not violate applicable emission standards,
- will not violate applicable ambient air quality standards in conjunction with emissions from other sources.

The Department hereby grants Air Emission License A-167-71-J-R, subject to the following conditions:

- (1) Employees and authorized representatives of the Department shall be allowed access to the licensee's premises during business hours, or any time during which any emissions units are in operation, and at such other times as the Department deems necessary for the purpose of performing tests, collecting samples, conducting inspections, or examining and copying records relating to emissions (Title 38 MRSA §347-C).
- (2) The licensee shall acquire a new or amended air emission license prior to commencing construction of a modification, unless specifically provided for in Chapter 115.
- (3) Approval to construct shall become invalid if the source has not commenced construction within eighteen (18) months after receipt of such approval or if construction is discontinued for a period of eighteen (18) months or more. The Department may extend this time period upon a satisfactory showing that an extension is justified, but may condition such extension upon a review of either the control technology analysis or the ambient air quality standards analysis, or both.
- (4) The licensee shall establish and maintain a continuing program of best management practices for suppression of fugitive particulate matter during any period of construction, reconstruction, or operation which may result in fugitive dust, and shall submit a description of the program to the Department upon request.
- (5) The licensee shall pay the annual air emission license fee to the Department, calculated pursuant to Title 38 MRSA §353.

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- (6) The license does not convey any property rights of any sort, or any exclusive privilege.
- (7) The licensee shall maintain and operate all emission units and air pollution control systems required by the air emission license in a manner consistent with good air pollution control practice for minimizing emissions.
- (8) The licensee shall maintain sufficient records, to accurately document compliance with emission standards and license conditions and shall maintain such records for a minimum of six (6) years. The records shall be submitted to the Department upon written request.
- (9) The licensee shall comply with all terms and conditions of the air emission license. The filing of an appeal by the licensee, the notification of planned changes or anticipated noncompliance by the licensee, or the filing of an application by the licensee for the renewal of a license or amendment shall not stay any condition of the license.
- (10) The licensee may not use as a defense in an enforcement action that the disruption, cessation, or reduction of licensed operations would have been necessary in order to maintain compliance with the conditions of the air emission license.
- (11) In accordance with the Department's air emission compliance test protocol and 40 CFR Part 60 or other method approved or required by the Department, the licensee shall:
 - (i) perform stack testing to demonstrate compliance with the applicable emission standards under circumstances representative of the facility's normal process and operating conditions:
 - a. within sixty (60) calendar days of receipt of a notification to test from the Department or EPA, if visible emissions, equipment operating parameters, staff inspection, air monitoring or other cause indicate to the Department that equipment may be operating out of compliance with emission standards or license conditions; or
 - b. pursuant to any other requirement of this license to perform stack testing.
 - (ii) install or make provisions to install test ports that meet the criteria of 40 CFR Part 60, Appendix A, and test platforms, if necessary, and other accommodations necessary to allow emission testing; and
 - (iii) submit a written report to the Department within thirty (30) days from date of test completion.

- (12) If the results of a stack test performed under circumstances representative of the facility's normal process and operating conditions indicate emissions in excess of the applicable standards, then:
- (i) within thirty (30) days following receipt of such test results, the licensee shall re-test the non-complying emission source under circumstances representative of the facility's normal process and operating conditions and in accordance with the Department's air emission compliance test protocol and 40 CFR Part 60 or other method approved or required by the Department; and
 - (ii) the days of violation shall be presumed to include the date of stack test and each and every day of operation thereafter until compliance is demonstrated under normal and representative process and operating conditions, except to the extent that the facility can prove to the satisfaction of the Department that there were intervening days during which no violation occurred or that the violation was not continuing in nature; and
 - (iii) the licensee may, upon the approval of the Department following the successful demonstration of compliance at alternative load conditions, operate under such alternative load conditions on an interim basis prior to a demonstration of compliance under normal and representative process and operating conditions.
- (13) Notwithstanding any other provision in the State Implementation Plan approved by the EPA or Section 114(a) of the CAA, any credible evidence may be used for the purpose of establishing whether a person has violated or is in violation of any statute, regulation, or Part 70 license requirement.
- (14) The licensee shall maintain records of malfunctions, failures, downtime, and any other similar change in operation of air pollution control systems or the emissions unit itself that would affect emissions and that is not consistent with the terms and conditions of the air emission license. The licensee shall notify the Department within two (2) days or the next state working day, whichever is later, of such occasions where such changes result in an increase of emissions. The licensee shall report all excess emissions in the units of the applicable emission limitation.
- (15) Upon written request of the Department, the licensee shall establish and maintain such records, make such reports, install, use and maintain such monitoring equipment, sample such emissions (in accordance with such methods, at such locations, at such intervals, and in such manner as the Department shall prescribe), and provide other information as the Department may reasonably require to determine the licensee's compliance status.
- (16) Sanmina shall fire natural gas as fuel in all fuel burning equipment.

(17) Sanmina is limited to the use of 50,000,000 cubic feet of natural gas facility wide on a 12 month rolling total basis, based on fuel use receipts. Sanmina shall track natural gas usage on a monthly basis.

(18) **Licensed fuel burning equipment emission limits:**

A. Emissions from Boiler 1 shall not exceed the following:

<u>Pollutant</u>	<u>lb/MMBtu</u>	<u>lb/hr</u>
PM	0.05	0.05
PM ₁₀	n/a	0.05
SO ₂	n/a	0.01
NO _x	n/a	0.1
CO	n/a	0.08
VOC	n/a	0.01

B. Emissions from Make up air Unit 1 and Unit 2 each shall not exceed the following:

<u>Pollutant</u>	<u>lb/MMBtu</u>	<u>lb/hr</u>
PM	0.05	0.08
PM ₁₀	n/a	0.08
SO ₂	n/a	0.01
NO _x	n/a	0.16
CO	n/a	0.12
VOC	n/a	0.01

C. Emissions from Washer Stage 1 and Stage 2 each shall not exceed the following:

<u>Pollutant</u>	<u>lb/MMBtu</u>	<u>lb/hr</u>
PM	0.05	0.06
PM ₁₀	n/a	0.06
SO ₂	n/a	0.01
NO _x	n/a	0.12
CO	n/a	0.09
VOC	n/a	0.01

D. Emissions from the Paint Finish Bake Oven shall not exceed the following:

<u>Pollutant</u>	<u>lb/hr</u>
PM	0.06
PM ₁₀	0.06
SO ₂	0.01

NO _x	0.12
CO	0.09
VOC	0.01

E. Emissions from the Pre-texture Oven shall not exceed the following:

<u>Pollutant</u>	<u>lb/hr</u>
PM	0.06
PM ₁₀	0.06
SO ₂	0.01
NO _x	0.12
CO	0.09
VOC	0.01

F. Visible emissions from the vents serving Boiler 1, Make-up Air Unit 1 & Unit 2, Washer Stage 1 & Stage 2, Paint Finish Bake Oven and the Pre-texture Oven each shall not exceed an opacity of 10 percent on a six (6) minute block average basis, except for no more than one (1) six (6) minute block average in a 3-hour period.

(19) **Painting Process**

- A. Sanmina shall not apply during any week a coating whose weekly weighted average VOC content exceeds 3.0 pounds of VOC per gallon of coating. The weekly weighted average shall be calculated in accordance with MEDEP Chapter 129, Appendix A, Procedure C, substituting “weekly” for “daily”.
- B. Sanmina shall use high volume, low-pressure (HVLV) spray guns in the spray painting process.
- C. Twelve-month rolling total VOC emissions from the painting process shall not exceed a limit of 39.9 tons per year.
- D. HAP emissions from the painting process shall not exceed a limit of 9.9 tons per year of any one single HAP and 24.9 tons per year of total HAPs (12 month rolling total basis).
- E. Compliance with the above VOC and HAP ton per year limits shall be demonstrated by monthly mass balance calculations using the amount of material used and the VOC and HAP content of the material as found on the MSDS sheets.
- F. Visible emissions from each of the paint spray booths shall not exceed an opacity of 5 percent on a six (6) minute block average basis, except for no more than one (1) six (6) minute block average in a 1-hour period.

(20) **Iron Phosphatizer**

Sanmina is limited to 3,000 gallons per year (12 month rolling total) of iron phosphatizer with a phosphoric acid content not to exceed 10% phosphoric acid. Sanmina shall maintain monthly records of iron phosphatizer use as well as the phosphoric acid content of the iron phosphatizer.

(21) **Aluminum Chromate Line**

- A. Electrochemical treatment is prohibited in the Aluminum Chromate Line.
- B. Chrome emissions from the Aluminum Chromate Line shall be maintained below 500 parts per million by weight. When required by the Department, chrome testing shall be performed in accordance with EPA Method 29.

(22) **Zinc Plating Line**

- A. Emissions from the zinc plating line shall vent to a packed bed scrubber.
- B. HCl emissions from the zinc plating shall be controlled to less than or equal to 0.5 ppmv HCl. When requested by the Department, HCl testing shall be performed in accordance with EPA Method 26.

(23) **General Process Sources**

Visible emissions from any general process source not specifically listed in this license shall not exceed an opacity of 20% on a 6-minute block average basis, except for no more than 1 six-minute block average in a 1-hour period.

(24) A. **Annual Emission Statement**

In accordance with MEDEP Chapter 137, the licensee shall annually report by September 1, to the Department, the information necessary to accurately update the State's emission inventory by means of:

A computer program and accompanying instructions supplied by the Department;

or

A written emission statement containing the information required in MEDEP Chapter 137.

Reports and questions should be directed to:

Attn: Criteria Emission Inventory Coordinator
Maine DEP
Bureau of Air Quality
17 State House Station
Augusta, ME 04333-0017
Phone: (207) 287-2437

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B. Biennial Emission Statement

In accordance with MEDEP Chapter 137, the licensee shall report September 1, every two years (2002, 2004, etc.) to the Department, the information necessary to accurately update the State's toxic air pollutants emission inventory by means of a written emission statement containing the information required in MEDEP Chapter 137.

Reports and questions on the Air Toxics emissions inventory portion should be directed to:

Attn: Toxics Inventory Coordinator
Maine DEP
Bureau of Air Quality
17 State House Station
Augusta, ME 04333-0017
Phone: (207) 287-2437

- (25) Sanmina shall pay the annual air emission license fee within 30 days of **October 30th** of each year. Pursuant to 38 MRSA §353-A, failure to pay this annual fee in the stated timeframe is sufficient grounds for revocation of the license under 38 MRSA §341-D, subsection 3.
- (26) The term of this order shall be for five (5) years from the signature date below.

DONE AND DATED IN AUGUSTA, MAINE THIS _____ DAY OF _____ 2002.

DEPARTMENT OF ENVIRONMENTAL PROTECTION

BY: _____
MARTHA G. KIRKPATRICK, COMMISSIONER

PLEASE NOTE ATTACHED SHEET FOR GUIDANCE ON APPEAL PROCEDURES

Date of initial receipt of application: September 17, 2002

Date of application acceptance: October 7, 2002

Date filed with Board of Environmental Protection: _____

This order prepared by Mark E. Roberts, Bureau of Air Quality