

217/782-2113

FEDERALLY ENFORCEABLE STATE OPERATING PERMIT - NSPS SOURCE - RENEWAL

PERMITTEE

Motorola, Inc.
Attn: Mr. Neil McCloud
1301 East Algonquin Road
Schaumburg, Illinois 60196

<u>Application No.:</u> 90020032	<u>I.D. No.:</u> 031282AAN
<u>Applicant's Designation:</u>	<u>Date Received:</u> May 12, 2005
<u>Subject:</u> Electronic Components Production and Assembly Plant	
<u>Date Issued:</u>	<u>Expiration Date:</u>
<u>Location:</u> 1301 East Algonquin Road, Schaumburg	

This permit is hereby granted to the above-designated Permittee to OPERATE emission source(s) and/or air pollution control equipment consisting of three 15 mmBtu/hour, two 10 mmBtu/hour and seventy-four small natural gas fired boilers and heaters, seven natural gas and six diesel oil fired emergency engine/generators pursuant to the above-referenced application. This Permit is subject to standard conditions attached hereto and the following special condition(s):

- 1a. This federally enforceable state operating permit is issued to limit the emissions of air pollutants from the source to less than major source thresholds (i.e., less than 100 tons/year for nitrogen oxides (NO_x)). As a result, the source is excluded from requirements to obtain a Clean Air Act Permit Program permit. The maximum emissions of this source, as limited by the conditions of this permit, are described in Attachment A.
- b. Prior to issuance, a draft of this permit has undergone a public notice and comment period.
- c. This permit supersedes all operating permit(s) issued for this location.
- 2a. The three 15 mmBtu/hr boilers constructed after June 9, 1989 are subject to New Source Performance Standards (NSPS) for small Industrial-Commercial-Institutional Steam Generating Units, 40 CFR 60, Subparts A and Dc. The Illinois EPA is administering these standards in Illinois on behalf of the United States EPA under a delegation agreement.
- b. The Permittee shall fulfill applicable reporting and recordkeeping requirements of 40 CFR 60.48(c).
- c. At all times the Permittee shall, to the extent practicable, maintain and operate the boilers, including associated air pollution control equipment, in a manner consistent with good air pollution control practice for minimizing emissions.

3. All fuel combustion emission units covered by this permit are subject to 35 Ill. Adm. Code 212.206, which provides that no person shall cause or allow the emission of particulate matter into the atmosphere in any one hour period to exceed 0.15 kg of particulate matter per MW-hr of actual heat input from any fuel combustion emission unit using liquid fuel exclusively (0.10 lbs/mmBtu).
- 4a. No person shall cause or allow the emission of sulfur dioxide into the atmosphere from any process emission unit to exceed 2000 ppm, pursuant to 35 Ill. Adm. Code 214.301.
- b. Pursuant to 35 Ill. Adm. Code 214.304 the emissions from the burning of fuel at process emission units located in the Chicago major metropolitan areas shall comply with 35 Ill. Adm. Code 214.122(b)(2), which provides that:

No person shall cause or allow the emission of sulfur dioxide into the atmosphere in any one hour period from any new fuel combustion source with actual heat input smaller than, or equal to, 73.2 MW (250 mmBtu/hour), burning liquid fuel exclusively To exceed 0.46 kg of sulfur dioxide per MW-hr of actual heat input when distillate fuel oil is burned (0.3 lbs/mmBtu).
- 5a. Only natural gas shall be fired in 8 of the emergency generators and distillate fuel oil (Grades No. 1 and 2 oil) in the other 6 generators.
- b. At the above location, the Permittee shall not keep, store, or utilize distillate fuel oil (Grades No. 1 and 2) with a sulfur content greater than the larger of the following two values:
 - i. 0.28 weight percent, or
 - ii. The wt. percent given by the formula: Maximum wt. percent sulfur = $(0.000015) \times (\text{Gross heating value of oil, Btu/lb})$.
- c. Organic liquid by-products or waste materials shall not be used in the diesel-powered emergency generator without written approval from the Illinois EPA.
- d. The Illinois EPA shall be allowed to sample all fuels stored at the above location.
- e. The Permittee shall notify the Illinois EPA prior to any change in the type of fuel used at the source.
- f. The Permittee shall keep a maintenance and repair log for the engine-generators, listing significant activities performed with date.
6. Use of Organic Material. Pursuant to 35 Ill. Adm. Code 215.301, no person shall cause or allow the discharge of more than 8.0 lbs/hour of organic material into the atmosphere from any emission unit. If no odor nuisance exists then this limitation shall only apply to

photochemically reactive material as define in 35 Ill. Adm. Code 211.4690.

7. Operation and emissions of the fuel combustion equipment shall not exceed the following limits:

- a. Boilers (combined):

Natural Gas Usage: 88 mmscf/month, 374 mmscf/year

<u>Pollutant</u>	Emission	Emissions	
	Factor (Lb/mmscf)	(Tons/Mo)	(Tons/Yr)
Nitrogen Oxides (NO _x)	100	4.4	18.7
Carbon Monoxide (CO)	84	3.6	15.7
Volatile Organic Material (VOM)	5.5	0.3	1.0

- b. Natural Gas Fired Engines (Combined):

Natural Gas Usage: 1.5 mmscf/month, 1.5 mmscf/year

<u>Pollutant</u>	Emission	Emissions	
	Factor (Lb/mmscf)	(Tons/Mo)	(Tons/Yr)
Nitrogen Oxides (NO _x)	4,598	3.5	3.5
Carbon Monoxide (CO)	7,739	5.8	5.8
Volatile Organic Material (VOM)	619	0.5	0.5

- c. i. 4 Large Diesel Engines (Combined):

Diesel fuel usage: 220,000 gallons/month, 220,000 gallons/year

<u>Pollutant</u>	Emission	Emissions	
	Factors from AP-42, Table 3.4-1 (Lb/1,000 Gal)	(Tons/Mo)	(Tons/Yr)
Nitrogen Oxides (NO _x)	448.0	49.3	49.3
Carbon Monoxide (CO)	119.0	13.1	13.1
Sulfur Dioxide (SO ₂)	140 x 0.05	0.8	0.8
Volatile Organic Material (VOM)	13.0	1.4	1.4

These limits define potential emissions and are based on AP-42 standard emission factors for the boilers and diesel generators, manufacturer's emission factors for the natural gas engines and maximum sulfur content in the diesel fuel of 0.05%. Compliance with annual limits shall be

determined on a monthly basis from a running total of 12 months of data.

- ii. 2 Small Diesel Engines (Combined)

Diesel Fuel Usage: 42,400 gallons/month and gallons/year

<u>Pollutant</u>	Emission Factors from AP-42, Table 3.3-1		
	<u>(Lb/1,000 Gal)</u>	<u>(Tons/Mo)</u>	<u>(Tons/Yr)</u>
Nitrogen Oxides (NO _x)	618	13.1	13.1
Carbon Monoxide (CO)	133	2.8	2.8
Volatile Organic Material (VOM)	49	1.0	1.0
Sulfur Dioxide (SO ₂)	41	0.9	0.9

8. Plant-wide clean-up solvent usage and VOM emissions shall not exceed 1.0 ton/month and 5.0 ton/year. Compliance with annual limits shall be determined on a monthly basis from a running total of 12 months of data.
9. The emissions of Hazardous Air Pollutants (HAP) as listed in Section 112(b) of the Clean Air Act shall be less than 10 tons/year of any single HAP and 25 tons/year of any combination of such HAPs. As a result of this condition, this permit is issued based on the emissions of all HAPs from this source not triggering the requirements to obtain a Clean Air Act Permit Program Permit (CAAPP), and Section 112(G) of the Clean Air Act.
10. The Permittee shall maintain monthly records of the following items:
 - a. Natural gas usage (mmscf/month and mmscf/year);
 - b. Diesel fuel usage (gallons/month and gallons/year);
 - c. Records of the sulfur content of the fuel oil for each shipment of fuel oil received, percent by weight;
 - d. Clean-up solvent usage (tons/month and tons/year) and operating hours to comply with 35 Ill. Adm. Code 218.301; and
 - e. Monthly and annual emissions of CO, NO_x, PM, SO₂ and PM with supporting calculations (tons/month and tons/year).
11. All records and logs required by this permit shall be retained at a readily accessible location at the source for at least three years from the date of entry and shall be made available for inspection and copying by the Illinois EPA or USEPA upon request. Any records retained in an electronic format (e.g., computer) shall be capable of being retrieved and printed on paper during normal source office hours

so as to be able to respond to the Illinois EPA or USEPA request for records during the course of a source inspection.

12. If there is an exceedance of the requirements of this permit as determined by the records required by this permit, the Permittee shall submit a report to the Illinois EPA Compliance Section in Springfield, Illinois within 30 days after the exceedance. The report shall include the emissions released in accordance with the recordkeeping requirements, a copy of the relevant records, and a description of the exceedance or violation and efforts to reduce emissions and future occurrences.
13. Two (2) copies of required reports and notifications concerning equipment operation or repairs, performance testing or a continuous monitoring system shall be sent to:

Illinois Environmental Protection Agency
Division of Air Pollution Control
Compliance Section (#40)
P.O. Box 19276
Springfield, Illinois 62794-9276

and one (1) copy shall be sent to the Illinois EPA regional office at the following address unless otherwise indicated:

Illinois Environmental Protection Agency
Division of Air Pollution Control
9511 West Harrison
Des Plaines, Illinois 60016

It should be noted that coating and soldering operations are exempt from state permit requirements pursuant to 35 Ill. Adm. Code 201.146(g) and (y), respectively.

If you have any questions on this, please call Randy Solomon at 217/782-2113.

Donald E. Sutton, P.E.
Manager, Permit Section
Division of Air Pollution Control

DES:RBS:psj

cc: Illinois EPA, FOS Region 1
Lotus Notes

Attachment A - Emission Summary

This attachment provides a summary of the maximum emissions from the electronic components manufacturing and assembly plant operating in compliance with the requirements of this federally enforceable permit. In preparing this summary, the Illinois EPA used the annual operating scenario which results in maximum emissions from such a plant. This is a usage of 374 mmscf of natural gas and 262,400 gallons of diesel fuel per year. The resulting maximum emissions are below 100 tons per year of NO_x at which this source would be considered a major source for purposes of the Clean Air Act Permit Program. Actual emissions from this source will be less than predicted in this summary to the extent that material is handled, and control measures are more effective than required in this permit.

<u>Item of Equipment</u>	Annual Emissions (Tons/Year)				
	<u>CO</u>	<u>NO_x</u>	<u>PM</u>	<u>SO₂</u>	<u>VOM</u>
Boilers and Heaters	15.7	18.7			1.0
Clean-Up	----	----	----	---	5.0
Generators	<u>21.7</u>	<u>65.9</u>	---	<u>1.7</u>	<u>2.9</u>
Totals:	<u>37.4</u>	<u>84.6</u>	---	<u>1.7</u>	<u>8.9</u>

DES:RBS:psj