



STATE OF MAINE
DEPARTMENT OF ENVIRONMENTAL PROTECTION

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**National Semiconductor Corporation
Cumberland County
South Portland, Maine
A-698-71-U-R (SM)**

**Departmental
Findings of Fact and Order
Air Emission License**

After review of the air emissions license renewal 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., §344 and §590, the Department finds the following facts:

I. REGISTRATION

A. Introduction

National Semiconductor Corporation (National Semiconductor) of South Portland, Maine has applied to renew its Air Emission License permitting the operation of emission sources associated with the production of micro-circuits on thin silica wafers at its semiconductor manufacturing facility.

This renewal contains calculation updates for the emissions from the back-up generators, the use of the original licensed emission limits for the boilers, a change to the operation of the VOC incinerator, revisions to scrubber requirements, and a change in the facility-wide calculation method (from equations to a specific fuel limit).

B. Emission Equipment

The following equipment is addressed in this air emission license:

Boilers and VOC Unit Burner

| Equipment | Maximum Capacity (MMBtu/hr) | Fuel Type | Maximum Firing Rate | Stack # |
|-----------|-----------------------------|-------------------------|---------------------|---------|
| Boiler #1 | 29.3 | #2 fuel oil (ASTM D396) | 209 gal/hr | 1 |
| | | Natural gas | 28,446 scf/hr | |
| Boiler #2 | 29.3 | #2 fuel oil (ASTM D396) | 209 gal/hr | 1 |
| | | Natural gas | 28,446 scf/hr | |
| Boiler #3 | 29.3 | #2 fuel oil (ASTM D396) | 209 gal/hr | 1 |
| | | Natural gas | 28,446 scf/hr | |

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Table Continued:

| Equipment | Maximum Capacity (MMBtu/hr) | Fuel Type | Maximum Firing Rate | Stack # |
|--------------------|-----------------------------|-------------------------|---------------------|---------|
| Boiler #4 | 29.3 | #2 fuel oil (ASTM D396) | 209 gal/hr | 2 |
| | | Natural gas | 28,446 scf/hr | |
| Boiler #5 | 29.3 | #2 fuel oil (ASTM D396) | 209 gal/hr | 2 |
| | | Natural gas | 28,446 scf/hr | |
| Boiler #7 | 1.8 | Natural gas | 1748 scf/hr | 4 |
| VOC Abatement Unit | 1.5* | Natural gas | 1456 scf/hr | 3 |
| | | Propane back-up | 16 gal/hr | |

* This replacement unit was licensed in amendment #3 (Sept. 19, 2007). The old unit (2.0 MMBtu/hr) has been removed.

Back-up Generators

| Equipment | Maximum Capacity (MMBtu/hr) | Fuel Type, % Sulfur | Maximum Firing Rate (gal/hr) |
|-------------------------------------|-----------------------------|---------------------|------------------------------|
| Generator 1 (Building 1 South) | 5.5 | diesel, 0.05% | 40.2 |
| Generator 2 (Building 4, 1500KW) | 14.6 | diesel, 0.05% | 106.7 |
| Generator 3 (Building 4, 2000KW) | 18.8 | diesel, 0.05% | 137.4 |
| Generator 4 (Building 1 North) | 4.4 | diesel, 0.05% | 32.0 |
| Generator 5 (spare – not installed) | 5.37 | diesel, 0.05% | 38.9 |

Process Equipment (in Building 4)

| Process ID | Control Type |
|----------------------------------|--------------------|
| SEF 4-1 (acid gas) | Wet Scrubber 1 |
| SEF 4-2 (acid gas) | Wet Scrubber 2 |
| SEF 4-3 (acid gas) | Wet Scrubber 3 |
| SEF 4-4 (acid gas) | Wet Scrubber 4 |
| SEF 4-5 (acid gas) | Wet Scrubber 5 |
| SEF 4-6 (acid or alkali gas) | Wet Scrubber 6 |
| SEF 4-7 (alkali gas) | Wet Scrubber 7 |
| SEF 4-8 (alkali gas) | Wet Scrubber 8 |
| SEF 4-9 (acid gas) | Wet Scrubber 9 |
| Process Exhaust – Volatile (PEV) | VOC Abatement Unit |

National Semiconductor also has insignificant activities including, but not limited to, storage tanks (fuel oil, diesel, waste solvent, liquid hydrogen, liquid nitrogen, liquid argon) and natural gas-fired burn boxes. Heat exhaust vents listed in the previous license have been removed since they are considered insignificant activities.

In addition, National Semiconductor has tool baths to clean metal parts, but these are not applicable to *Solvent Cleaners*, 06-096 CMR 130 (last amended June 28, 2004). Acetone, which is exempt from the definition of volatile organic compounds (VOC), is used in the tool baths. No other parts washers or degreasers are used on site.

C. Application Classification

The application for National Semiconductor does not include the licensing of increased emissions or the installation of new or modified equipment, only updates. Therefore, the license is considered to be a renewal of current licensed emission units only and has been processed through *Major and Minor Source Air Emission License Regulations*, 06-096 CMR 115 (last amended December 24, 2005). With facility-wide emission restrictions, National Semiconductor is licensed below the major source thresholds and is considered a synthetic minor.

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 *Definitions Regulation*, 06-096 CMR 100 (last amended December 24, 2005). 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.

Process Description

National Semiconductor manufactures silicon wafers sized at 8 inches in diameter. Each semiconductor manufactured goes through the same general process steps, but the complexity and structural makeup between the products are slightly different. Oxide and metallic layers are built up on the blank wafers with changes or additions in chemicals or process parameters to build the various layers to the required specifications. The manufacturing processes include repeated batch operation steps such as precleaning, doping, photo mask development, etching, backgrinding, and cleaning.

The wafers are first precleaned with chemicals in cleaning tanks for a specific period of time. After each cleaning tank, the wafers are rinsed with deionized water. Following the precleaning steps, the wafers are sent to diffusion furnaces where the initial layer of oxide is grown on the wafer. Depending on the stage of the oxide layer growth, layer number or product type, the operating parameters vary significantly. The introduction of impurities (doping) may occur in the diffusion chambers if required.

After oxidation, the wafers are placed on the photoresist coating equipment. The wafers are dried and photoresist (a light sensitive chemical) is applied. The wafers are baked and each wafer is exposed to a light beam shot through a mask containing the desired network configuration. After exposure, the wafer is developed using a photoresist fixer.

Before etching, some wafers are sent to the ion implanting area. Impurities are deposited into the layer(s) using a high speed particle accelerator. Etching removes the oxide which was not fixed in the development stage. Either a gas or liquid chemical process is used for this removal. After etching, the remaining photoresist on top of the fixed portion of the wafer is stripped with sulfuric peroxide or carbon tetrafluoride and oxygen.

After the required layers are formed, the wafers are transferred to another room where the back side of the disk is ground down to specifications. In the assembly area, the wafers are cut into individual chips, aluminum contacts are soldered onto the proper junctions, and the chips are enclosed in a ceramic housing. Ultrasonic cleaning is used to remove cleaning fluids and machine oils from the chip frames. After completion of chip assembly, the semiconductor chips are inspected, boxed, and shipped.

Semiconductor fabrication makes use of various acids, alkalis, and VOC containing solvents in the different manufacturing tools utilized in each step. Tools are defined as chemical baths consisting of acids or alkalis or solvents. The VOC emitting tools are controlled with a VOC abatement unit. The acid and

alkali tools are controlled with wet scrubbers. The tools are monitored by photohelics (pressure) or automatic power shut off systems and the drain valves are opened to drain the acid, alkali, or VOC solvent to the appropriate waste system.

B. Boilers 1, 2, 3, 4, and 5

National Semiconductor operates five 29.3 MMBtu/hr Cleaver Brooks package firetube boilers (Boilers 1, 2, 3, 4, and 5). Boilers 1, 2, 3, and 4 were manufactured in 1995 and Boiler 5 was manufactured in 2000. The boilers are subject to the New Source Performance Standards (NSPS) 40 CFR Part 60, Subpart Dc, *Standards of Performance for Small Industrial-Commercial-Institutional Steam Generating Units*, for units greater than 10 MMBtu/hr manufactured after June 9, 1989.

These natural gas fired boilers also have the capability of firing #2 fuel oil as a back-up fuel in the event natural gas is not readily available or feasible. The fuel oil fired shall meet the requirements of ASTM D396 (no greater than 0.5% sulfur). Boilers 1, 2, and 3 exhaust through stack 1. Boilers 4 and 5 exhaust through stack 2.

National Semiconductor submitted a BPT analysis for boilers 1, 2, 3, 4, and 5. The previous renewal included slightly different emission factors. For this renewal, the emissions have been revised back to the original limits which were based on BACT and manufacture data in license A-698-71-A-T/N (June 3, 1997) for boilers 1-4 and license A-698-71-D-A (September 9, 1997) for boiler 5. These limits were also part of the ambient air quality analysis in A-698-71-D-A. BPT for each boiler is the following:

PM/PM₁₀ – natural gas: 0.01 lb/MMBtu and 0.29 lb/hr;
 # 2 fuel oil: 0.10 lb/MMBtu and 2.93 lb/hr
SO₂ – natural gas: 0.29 lb/hr
 #2 fuel oil: 14.76 lb/hr, based on meeting the criteria found in ASTM
 396D (0.5% max. sulfur)
NO_x – natural gas: 0.07 lb/MMBtu and 2.05 lb/hr
 #2 fuel oil: 0.20 lb/MMBtu and 5.86 lb/hr
CO – natural gas: 4.40 lb/hr
 #2 fuel oil: 2.05 lb/hr
VOC – natural gas: 0.59 lb/hr
 #2 fuel oil: 0.88 lb/hr

Opacity – visible emissions from the each of the stacks serving Boilers 1, 2, and 3 (Stack 1) and Boilers 4 and 5 (Stack 2) shall not exceed an opacity

of 10% on a six (6) minute block average basis, except for no more than two (2) six (6) minute block averages in a 3-hour period.

Boilers 1, 2, 3, 4, and 5 shall be limited to a total of 2,350,000 gallons/year of #2 fuel oil and a limit of 750,000,000 scf/year of natural gas, based on a 12 month rolling total. The natural gas limit shall also include use by the VOC abatement unit and boiler 7.

Periodic Monitoring

Periodic monitoring for the boilers shall include recordkeeping to document fuel use both monthly and on a 12 month rolling total basis. Documentation shall include certification of the type of fuel used.

C. Boiler 7

Boiler 7, manufactured in 1988, has a heat input capacity of 1.8 MMBtu/hr and fires natural gas. Based on its size, Boiler 7 is not subject to EPA's New Source Performance Standards, 40 CFR Part 60, Subpart Dc. Boiler 7 exhausts through stack 4.

National Semiconductor submitted a BPT analysis for Boiler 7. BPT for Boiler 7 is the following (the previous renewal used slightly different emission factors which have been revised back to the original emissions based on manufacture data in license A-698-71-A-T/N (June 3, 1997)):

PM/PM₁₀ – 0.02 lb/hr
SO₂ – 0.02 lb/hr
NO_x – 0.13 lb/hr
CO – 0.30 lb/hr
VOC – 0.04 lb/hr

Opacity: Visible emissions from the stack serving Boiler 7 (Stack 4) shall not exceed an opacity of 10% on a six (6) minute block average basis, except for no more than one (1) six (6) minute block averages in a 3-hour period; based on *Visible Emissions*, 06-096 CMR 101 (last amended May 18, 2003).

Boiler 7 fuel use shall be included in the facility limit of 750,000,000 scf/year of natural gas, based on a 12 month rolling total. The natural gas limit shall include fuel use from boilers 1, 2, 3, 4, and 5.

Periodic Monitoring

Periodic monitoring for the boiler shall include recordkeeping to document fuel use both monthly and on a 12 month rolling total basis.

D. Back-up Generators 1-5

National Semiconductor operates four emergency diesel generators (units 1, 2, 3, 4) and has one spare emergency diesel generator (unit 5). Generator 1, located in Building 1 South, was installed in 1982 with a 5.5 MMBtu/hr capacity. Generator 2, located in Building 4, was manufactured and installed in 1996 with a 14.6 MMBtu/hr capacity. Generator 3, also located in Building 4, was manufactured and installed in 1996 with an 18.8 MMBtu/hr capacity. Generator 4, located in Building 1 North, was installed in 1999 with a 4.4 MMBtu/hr capacity. Generator 5 was purchased and manufactured in 1999 and is currently being stored on-site near the loading dock.

The back-up generator units all fire diesel fuel with a sulfur content not to exceed 0.05% and shall each be limited to 500 hours of operation on a 12 month rolling total basis. The units may be used for generator maintenance purposes (i.e. periodic testing of the units) and for situations arising from sudden and reasonably unforeseeable events beyond the control of National Semiconductor. These back-up generators are not to be used for prime power when reliable offsite power is available.

National Semiconductor submitted a BPT analysis for generators 1, 2, 3, 4, and 5. BPT for each of the generators is the following (note that the previous renewal used slightly different emission factors which have been updated in this license):

PM/PM₁₀ – 0.12 lb/MMBtu, based 06-096 CMR 103

| | |
|--------------|------------|
| Generator 1: | 0.66 lb/hr |
| Generator 2: | 1.75 lb/hr |
| Generator 3: | 2.26 lb/hr |
| Generator 4: | 0.53 lb/hr |
| Generator 5: | 0.64 lb/hr |

SO₂ – based on 0.05% sulfur content

| | |
|--------------|------------|
| Generator 1: | 0.28 lb/hr |
| Generator 2: | 0.73 lb/hr |
| Generator 3: | 0.94 lb/hr |
| Generator 4: | 0.22 lb/hr |
| Generator 5: | 0.27 lb/hr |

NO_x – based on AP-42 Table 3.4-1 factor for large diesels (3.2 lb/MMBtu)

| | |
|--------------|-------------|
| Generator 1: | 17.60 lb/hr |
| Generator 2: | 46.72 lb/hr |
| Generator 3: | 60.16 lb/hr |

| | |
|---|-------------|
| Generator 4: | 14.08 lb/hr |
| Generator 5: | 17.18 lb/hr |
| CO – based on AP-42 Table 3.4-1 factor for large diesels (0.85 lb/MMBtu) | |
| Generator 1: | 4.68 lb/hr |
| Generator 2: | 12.41 lb/hr |
| Generator 3: | 15.98 lb/hr |
| Generator 4: | 3.74 lb/hr |
| Generator 5: | 4.56 lb/hr |
| VOC – based on AP-42 Table 3.4-1 factor for large diesels (0.09 lb/MMBtu) | |
| Generator 1: | 0.50 lb/hr |
| Generator 2: | 1.31 lb/hr |
| Generator 3: | 1.69 lb/hr |
| Generator 4: | 0.40 lb/hr |
| Generator 5: | 0.48 lb/hr |

Opacity: Visible emissions from each of the generator stacks shall not exceed an opacity of 30% on a six (6) minute block average basis, except for no more than two (2) six (6) minute block averages in a 3-hour period (based on 06-096 CMR 101, units prior to year 2000).

Periodic Monitoring

Periodic monitoring for the generators shall include recordkeeping to document the hours of operation both monthly and on a 12 month rolling total basis for each of the five units. Documentation shall also be kept on the type of fuel used and the fuel sulfur content.

E. VOC Processes and Abatement Unit

Various operations in the wafer fabrication process at National Semiconductor emit VOCs. Due to product specifications and manufacturing needs, the amount of VOCs emitted from a specific vent can vary. The tools that use VOC solvents are controlled with a VOC abatement unit. These tool exhausts are referred to as Process Exhaust-Volatile (PEV).

The VOC abatement unit, installed in 2007, consists of a zeolite concentrator followed by an incinerator unit with a 1.5 MMBtu/hr natural gas burner and propane hookup. This unit, having a concentration ratio of 20:1, was licensed in amendment A-698-71-R-A/M (Sept. 19, 2007) as a replacement of the previous 10:1 unit which had a 2 MMBtu/hr burner. The unit goes through the existing incinerator stack.

VOC emissions are ducted from the VOC emitting tools (process exhaust – volatile) to the VOC abatement unit via induced draft to ensure any VOC leaks remain in the system. The unit shall be maintained and operated to meet a

minimum treatment efficiency of 90% removal, or demonstrate that the concentration in the outlet exhaust is less than 20 ppm. The removal efficiency shall be calculated as follows:

$$\frac{(VOC \text{ at inlet of abatement unit}) - (VOC \text{ at outlet of abatement unit})}{(VOCs \text{ at inlet of abatement unit})} \times 100$$

The accuracy of the testing equipment makes it difficult to record accurate measurements when the incinerator input is less than 200 ppm VOC and the corresponding output is less than 20 ppm, therefore National Semiconductor may use either the 90% removal efficiency or 20 ppm output concentration to determine compliance.

The unit is designed to run within a temperature range of 1350°F-1500°F. When the monitored temperature goes below 1350°F or above 1500°F, an alarm notification occurs. When the temperature goes below 1250°F or above 1550°F, the unit shuts down. The records of unit shutdowns and alarms shall be incorporated into the emissions calculations since the VOCs vent to the atmosphere when the unit is not operating.

National Semiconductor submitted a BACT (Best Available Control Technology) analysis to allow the required VOC abatement unit operation to be April 1 through September 30 and on an as needed basis from October 1 through March 31. Ongoing continual improvement processes have reduced the amount of VOCs going to the VOC abatement unit and from the facility overall, making the unit less cost-effective than when originally installed. By allowing the flexible usage of the VOC abatement unit, CO₂, NO_x, CO, SO₂ and PM₁₀ will be decreased by the reduction of fuel usage (189.1 tons/year total decrease, mainly CO₂). VOC actual emissions may increase slightly but will still remain below the licensed allowed (an estimated increase of 10.7 tons VOC with 0.67 tons HAP). According to the submitted data, the historical emissions of HAPs sent to the VOC abatement unit meet the insignificance levels in 06-096 CMR 115. Due to pollution prevention efforts and process improvements, the Department approves the operational flexibility for the VOC abatement unit. However, National Semiconductor shall submit a report documenting reductions in usage and emissions of catechol by December 31, 2010.

National Semiconductor shall operate the VOC abatement unit at all times the wafer process is operating from April 1 – September 30; and may need to operate the unit during October 1-March 31, as necessary, to meet the facility-wide VOC and HAP limits. The requirement to operate the unit from April 1 – September 30 includes the official ozone season of May 1 – September 30, while taking into account the month of April which can also have high ozone numbers. The unit shall have a 97% uptime (including malfunctions and maintenance).

BPT for National Semiconductor's solvent processes is the following:

- the use of a VOC abatement unit (with 90% efficiency; continuous monitoring of temperature, rotor rotation alarms, and air flow alarms; 97% uptime, operating minimally from April 1-Sept. 30),
- monitoring of the tool exhaust fans by the Facility Management System (FMS),
- a limit of 25 tons/year of VOCs on a 12 month rolling total basis, and
- visible emissions from the VOC abatement unit shall not exceed 10% opacity on a six-minute average basis, except for no more than one (1) six (6) minute average in any one (1) hour period.
- visible emissions from VOC venting directly to the atmosphere shall not exceed 10% opacity on a six-minute average basis, except for no more than one (1) six (6) minute average in any one (1) hour period.

Calculations

In order to show compliance with the annual VOC limit, National Semiconductor shall use its records of solvents issued from the stockroom, along with the VOC abatement unit control efficiency to calculate emissions. National Semiconductor shall keep separate records for those solvents issued to controlled processes and those issued to uncontrolled processes.

Because most of the spent solvents are collected along with water at the manufacturing tool, National Semiconductor is not able to measure the amount of spent solvent collected. Therefore, an alternate method was developed for calculating VOC emissions. For each financial period during the year, National Semiconductor shall compute emissions for the previous 12 financial periods (the facility uses an accounting calendar consisting of four quarters, each with two four week financial periods and one five week financial period). The emissions shall be estimated in accordance with the equations below:

Hourly rate

$$HR = \text{average VOC emission rate measured during VOC testing, (lbs VOC/hr)}$$

When the VOC abatement unit is not operating, the emissions from the normally controlled area shall be considered uncontrolled in the VOC emission calculations. For this period, the uncontrolled hourly rate will be used.

Period Hours

$$PH = 672 \text{ hours per four week period or } 840 \text{ hours per five week period}$$

Period Rate

$$PR = HR \times PH \text{ lbs VOC emitted/period}$$

Period process solvents issued from stockroom to manufacturing floor

$$PS \text{ (lbs VOCs issued/period)}$$

Emission rate

$$ER = \frac{PR}{PS} (\text{lb VOC emitted/lb VOC issued})$$

Annual process emission rate

$$PAR = \sum_{n=1}^{n=12} (PS \times ER)_1 + \dots + (PS \times ER)_{12} \text{ for the 12 periods in a year (lbs/yr)}$$

Uncontrolled annual rate

$$UAR = \sum_{n=1}^{n=12} \text{Uncontrolled VOCs Emitted for the 12 periods in a year (lbs/yr)}$$

Total annual rate

$$TAR = PAR + UAR, (\text{lbs/yr})$$

$$TAR = (PAR + UAR)/2000 (\text{tons/yr})$$

For VOCs from insignificant activities, National Semiconductor shall maintain in its files an estimate of the VOCs emitted annually from such activities, to the extent that the VOC emissions are not included in the 12 month rolling average recordkeeping program. The estimate shall be updated annually if process or raw material changes have occurred that would affect the previous estimate.

Periodic Monitoring

National Semiconductor shall perform efficiency testing on the VOC abatement unit in 2010 and every other year thereafter (by December 1 of each year), testing the concentrator inlet and oxidizer outlet. The efficiency testing method may measure VOCs or total hydrocarbons.

National Semiconductor shall keep records of events when the unit shuts down and events when the alarms are activated. The records shall include the dates and times the unit is not operating or controlling emissions (from when to when) and shall be used to determine compliance with the 97% uptime requirement, including malfunctions and maintenance.

National Semiconductor shall maintain VOC emission records in accordance with the equations above, on a monthly and 12 month rolling total. National Semiconductor may use the facility's financial periods as 'months'.

Parameter Monitoring

The following parameters shall be monitored on the unit: combustion temperature; alarms that indicate the status of the concentrator's rotor; and the status of the fans located in the process vents.

F. Acid and Alkaline Scrubbers

National Semiconductor has several acid and alkaline emission points which are controlled by alkaline and acidic wet scrubbers. The acid or alkali usage depends on the specific wafer and circuit design. The usage can vary from batch to batch, resulting in fluctuations in types of chemicals emitted as well as fluctuations in concentrations. However, in general, the most common acids are hydrochloric, hydrofluoric, and nitric. The most common alkali (base) is ammonia.

Control efficiency is dependent on the inlet concentration, which can vary. Therefore, compliance shall be demonstrated by operating the scrubbers within a specific design range. The scrubbers were tested in April 2006. The results showed an acid scrubber control efficiency in excess of 98% when the inlet concentration of hydrofluoric acid and nitric acid were in excess of 100 ppmv, in the mid 90% when the inlet concentrations ranged from 10-100 ppmv and 92% when the inlet concentrations were below 10 ppmv. The alkaline scrubbers demonstrated a control efficiency in excess of 99% for ammonia when the inlet concentrations were in excess of 60 ppmv.

National Semiconductor shall test each scrubber (acid and alkaline) for efficiency within 6 months of the signature of this license. National Semiconductor shall conduct a study of the wet scrubbers to determine appropriate operating and recordkeeping requirements for optimal scrubber control. Within a year of the date of signature of this license, National Semiconductor shall submit a written report to the Department summarizing the summary and results. The written report shall include proposed monitoring and recordkeeping to demonstrate proper operation of the scrubbers.

BPT for the acid and alkaline emission points shall be the use of wet scrubbers operated as follows:

- The pH of the alkali scrubber media shall be maintained at or below 7. National Semiconductor may use either the effluent from the acid scrubbers and/or an addition of sulfuric acid to control the pH in the alkali scrubber.
- The pH of the acid scrubber media shall be maintained at or greater than 2.2.
- The Department may revise or replace the pH requirements based on the results of the study of the scrubbers required by this license.
- Opacity from each scrubber stack shall not exceed 15% opacity on a six minute average basis, except for no more than one six minute average in any one hour period.

Periodic Monitoring

The pH of the alkali and acid scrubbers shall be checked and recorded once per shift.

A maintenance log shall be kept for each scrubber. The log shall contain dates and reasons for all emission upsets as well as descriptions and dates of any maintenance, routine or otherwise, performed on the scrubbers.

An operational log shall be kept for each scrubber. The log shall contain dates and reasons that the scrubber is not operating (including periods of pH deviation). National Semiconductor shall also record the operating time of the wafer process.

The scrubbers (acid and alkaline) shall be tested for efficiency within 6 months of the signature of this license under normal operating conditions.

G. HAP (Hazardous Air Pollutant) processes

Several VOCs emitted by National Semiconductor contain HAPs (substances listed in Section 112(b) of the Clean Air Act). In order to meet BPT and keep the facility under the major source thresholds, National Semiconductor shall be limited to emissions of 9.9 tons/year of any single HAP and less than 24.9 tons/year total of all HAPs. Recordkeeping shall be done on a monthly basis documenting compliance with these 12 month rolling total limits. National Semiconductor may use the facility's financial periods as 'months'.

Emissions from the acid and alkaline scrubbers include water vapor and a small amount of acid or base. These non-water vapor emissions are reported as part of National Semiconductor's HAPs. Emission rates may be based on previous stack test results.

Periodic Monitoring

National Semiconductor shall maintain HAP emission records using a similar calculation method as used for VOC emissions, on a monthly and 12 month rolling total. National Semiconductor may use the facility's financial periods as 'months'. HAP emissions calculations shall be based on stockroom records, MSDS (material safety data sheets) records for the various materials used in the facility, and whether the HAP emission points are controlled.

H. General Process Emissions

Visible emissions from any general process source not specifically listed in the license shall not exceed an opacity of 20% 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.

I. Annual Emissions

Facility emissions from National Semiconductor are based on a 2,350,000 gallon #2 fuel, 750,000,000 scf/year natural gas limit, 500 hours/year operation for each generator, and 25 tons/year from process sources. National Semiconductor shall be restricted to the following licensed annual emissions, based on a 12 month rolling total (the facility's financial periods may be considered 'months'):

Total Licensed Annual Emissions for the Facility (tons/yr)
 (used to calculate the annual license fee)

| | PM | PM ₁₀ | SO ₂ | NO _x | CO | VOC |
|-----------------------------------|------|------------------|-----------------|-----------------|------|-----|
| Boilers on Oil | 16.5 | 16.5 | 82.8 | 32.9 | 11.5 | 4.9 |
| Boilers and VOC unit on Nat'l Gas | 3.9 | 3.9 | 3.8 | 27.0 | 58.0 | 7.8 |
| Generator 1 | 0.2 | 0.2 | 0.1 | 4.4 | 1.2 | 0.1 |
| Generator 2 | 0.4 | 0.4 | 0.2 | 11.7 | 3.1 | 0.3 |
| Generator 3 | 0.6 | 0.6 | 0.2 | 15.0 | 4.0 | 0.4 |
| Generator 4 | 0.1 | 0.1 | 0.1 | 3.5 | 0.9 | 0.1 |
| Generator 5 | 0.2 | 0.2 | 0.1 | 4.3 | 1.1 | 0.1 |
| VOC process emissions | | | | | | 25 |

| | | | | | | |
|------------------|-------------|-------------|-------------|-------------|-------------|-------------|
| Total TPY | 21.9 | 21.9 | 87.3 | 98.8 | 79.8 | 38.7 |
|------------------|-------------|-------------|-------------|-------------|-------------|-------------|

| Pollutant | Tons/year |
|------------|-----------|
| Single HAP | 9.9 |
| Total HAP | 24.9 |

Note: Previous license emission calculations utilized equations for each criteria pollutant with a limit of 99.9 tons/year each. The fuel limits in this license revise the way total emissions are calculated.

III. AMBIENT AIR QUALITY ANALYSIS

National Semiconductor previously submitted an ambient air quality analysis demonstrating that emissions from the facility, in conjunction with all other sources, do not violate ambient air quality standards. The ambient modeling was performed as part of amendment A-698-71-D-A (September 9, 1997). An additional ambient air quality analysis is not required for this renewal.

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-698-71-U-R subject to the following conditions.

Severability. The invalidity or unenforceability of any provision, or part thereof, of this License shall not affect the remainder of the provision or any other provisions. This License shall be construed and enforced in all respects as if such invalid or unenforceable provision or part thereof had been omitted.

STANDARD 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 (38 M.R.S.A. §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. [06-096 CMR 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. [06-096 CMR 115]
- (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. [06-096 CMR 115]

- (5) The licensee shall pay the annual air emission license fee to the Department, calculated pursuant to Title 38 M.R.S.A. §353. [06-096 CMR 115]
- (6) The license does not convey any property rights of any sort, or any exclusive privilege. [06-096 CMR 115]
- (7) The licensee shall maintain and operate all emission units and air pollution systems required by the air emission license in a manner consistent with good air pollution control practice for minimizing emissions. [06-096 CMR 115]
- (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. [06-096 CMR 115]
- (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 a renewal of a license or amendment shall not stay any condition of the license. [06-096 CMR 115]
- (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. [06-096 CMR 115]
- (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:
 - A. perform stack testing to demonstrate compliance with the applicable emission standards under circumstances representative of the facility's normal process and operating conditions:
 1. 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
 2. pursuant to any other requirement of this license to perform stack testing.
 - B. 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
 - C. submit a written report to the Department within thirty (30) days from date of test completion.[06-096 CMR 115]

- (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:
- A. 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
 - B. 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
 - C. 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.
- [06-096 CMR 115]
- (13) Notwithstanding any other provisions 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. [06-096 CMR 115]
- (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 emission 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. [06-096 CMR 115]
- (15) Upon written request from 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 a manner as the Department shall prescribe), and provide other information as the Department may reasonably require to determine the licensee's compliance status. [06-096 CMR 115]

SPECIFIC CONDITIONS

(16) Boilers 1, 2, 3, 4, and 5

- A. Boilers 1, 2, 3, 4, and 5 shall fire #2 fuel oil meeting the criteria of ASTM D396 or natural gas.
1. Combined #2 fuel oil use in boilers 1, 2, 3, 4, and 5 shall not exceed 2,350,000 gallons/year based on a 12 month rolling total.
 2. Combined natural gas use in boilers 1, 2, 3, 4, and 5 (and also including boiler 7 and the VOC abatement unit) shall not exceed 750,000,000 scf/year based on a 12 month rolling total.
 3. Compliance shall be demonstrated by fuel records from the supplier showing the quantity and type of fuel delivered. Records of annual fuel use shall be kept on a monthly and 12-month rolling total basis.
- [06-096 CMR 115, BPT]
- B. Emissions from each of the 29.3 MMBtu/hr boilers shall not exceed the following [06-096 CMR 115, BPT and air licenses A-698-71-A-T/N (June 3, 1997) and A-698-71-D-A (September 9, 1997)]:

Boilers 1, 2, 3, 4, and 5 Emission Limits (each)

| | PM (lb/MMBtu) | NO_x (lb/MMBtu) |
|-------------|--------------------------|--------------------------------------|
| #2 fuel oil | 0.1 | 0.2 |
| Nat'l gas | 0.01 | 0.07 |

| | PM (lb/hr) | PM₁₀ (lb/hr) | SO₂ (lb/hr) | NO_x (lb/hr) | CO (lb/hr) | VOC (lb/hr) |
|-------------|-----------------------|------------------------------------|-----------------------------------|-----------------------------------|-----------------------|------------------------|
| #2 fuel oil | 2.93 | 2.93 | 14.76 | 5.86 | 2.05 | 0.88 |
| Nat'l gas | 0.29 | 0.29 | 0.29 | 2.05 | 4.40 | 0.59 |

- C. Visible emissions from stack 1 (boilers 1, 2, and 3 common stack) and stack 2 (boilers 4 and 5 common stack) shall not exceed an opacity of 10% opacity on a six (6) minute block average basis, except for no more than two (2) six (6) minute block averages in a continuous 3-hour period. [06-096 CMR 115, BPT]
- D. Boilers 1, 2, 3, 4, and 5 are subject to Federal New Source Performance Standards, 40 CFR, Part 60, Subpart Dc, *Standards of Performance for Small Industrial-Commercial-Institutional Steam Generating Units*. National Semiconductor shall comply with all requirements of 40 CFR Part 60, Subpart Dc including, but not limited to, the following:

1. National Semiconductor shall record and maintain records of the total amount of fuel delivered each calendar month as allowed in 40 CFR Part 60, Subpart Dc, Section 60.48c g (3).
2. National Semiconductor shall submit to EPA and the Department semi-annual reports. These reports shall include the calendar dates covered in the reporting period and records of fuel supplier certifications. The semi-annual reports are due within 30 days of the end of each 6-month period.
3. The following address for EPA shall be used for any reports or notifications required to be copied to them:

Compliance Clerk
USEPA Region 1
1 Congress Street
Suite 1100
Boston, MA 02114-2023

[40 CFR 60, Subpart Dc]

(17) **Boiler 7**

- A. Boiler 7 (1.8 MMBtu/hr) shall fire natural gas. The annual fuel use for boiler 7 shall be included in the natural gas fuel limit for boilers 1, 2, 3, 4, 5, and the VOC incinerator in condition (16) above. [06-096 CMR 115, BPT]
- B. Emissions from boiler 7 shall not exceed the following [06-096 CMR 115, BPT and A-698-71-A-T/N (June 3, 1997)]:

Boiler 7 Emission Limits

| | PM (lb/hr) | PM₁₀ (lb/hr) | SO₂ (lb/hr) | NO_x (lb/hr) | CO (lb/hr) | VOC (lb/hr) |
|-----------|-----------------------|------------------------------------|-----------------------------------|-----------------------------------|-----------------------|------------------------|
| Nat'l gas | 0.02 | 0.02 | 0.02 | 0.13 | 0.30 | 0.04 |

- C. Visible emissions from boiler 7 shall not exceed an opacity of 10% opacity on a six (6) minute block average basis, except for no more than one (1) six (6) minute block averages in a continuous 3-hour period. [06-096 CMR 101]

(18) **Back-up Generators 1-5**

- A. The back-up generators shall each be limited to 500 hours per year, based on a 12 month rolling total. Hour meters shall be maintained and operated on each of the back-up generators. [06-096 CMR 115, BPT]
- B. The back-up generators shall only be operated for maintenance purposes and for situations arising from sudden and reasonably unforeseeable events beyond the control of the source. The back-up generators shall not be used for

prime power when reliable offsite power is available. A log shall be maintained documenting the date, time, and reason for operation. [06-096 CMR 115, BPT]

C. The diesel fuel oil fired in the diesel back-up generators shall not exceed 0.05% sulfur by weight. Compliance shall be based on fuel records from the supplier showing the quantity of fuel delivered and the percent sulfur of the fuel. [06-096 CMR 115, BPT]

D. The back-up generators shall not exceed the following emission limits:

| Unit | PM (lb/MMBtu) | Origin and Authority |
|-------------|------------------|----------------------|
| Generator 1 | 0.12 | 06-096 CMR 103 |
| Generator 2 | 0.12 | 06-096 CMR 103 |
| Generator 3 | 0.12 | 06-096 CMR 103 |
| Generator 4 | 0.12 | 06-096 CMR 103 |
| Generator 5 | 0.12 | 06-096 CMR 103 |

| Unit | PM (lb/hr) | PM ₁₀ (lb/hr) | SO ₂ (lb/hr) | NO _x (lb/hr) | CO (lb/hr) | VOC (lb/hr) |
|--------------------------------|---------------|-----------------------------|----------------------------|----------------------------|---------------|----------------|
| Generator 1 (5.5 MMBtu/hr) | 0.66 | 0.66 | 0.28 | 17.60 | 4.68 | 0.50 |
| Generator 2 (14.6 MMBtu/hr) | 1.75 | 1.75 | 0.73 | 46.72 | 12.41 | 1.31 |
| Generator 3 (18.8 MMBtu/hr) | 2.26 | 2.26 | 0.94 | 60.16 | 15.98 | 1.69 |
| Generator 4 (4.4 MMBtu/hr) | 0.53 | 0.53 | 0.22 | 14.08 | 3.74 | 0.40 |
| Generator 5 (5.37 MMBtu/hr) | 0.64 | 0.64 | 0.27 | 17.18 | 4.56 | 0.48 |

[06-096 CMR 115, BPT]

E. Visible emissions from each of the diesel back-up generators shall not exceed 30% opacity on a 6 minute block average, except for no more than two (2) six (6) minute block averages in a 3 hour period. [06-096 CMR 101]

(19) VOC Process and Abatement Unit

A. Facility-wide process VOC emissions shall be limited to 25 tons/year, based on a 12 month rolling total. [06-096 CMR 115, BPT]

B. National Semiconductor shall maintain and operate the VOC abatement unit to control VOC emissions from the tool solvent vents. These vents shall be

labeled 'PEV' or 'process exhaust – volatile'. The abatement unit shall be maintained and operated to meet a minimum treatment efficiency of 90% removal or an output stack concentration of less than 20 ppm. The removal efficiency shall be calculated as follows:

$$\frac{(VOC \text{ at inlet of abatement unit}) - (VOC \text{ at outlet of abatement unit})}{(VOCs \text{ at inlet of abatement unit})} \times 100$$

[06-096 CMR 115, BPT]

- C. Testing shall be performed in 2010 and every other year thereafter (by December 1 of each year) on the inlet and outlet streams of the VOC abatement unit. Testing shall be conducted in accordance with the appropriate EPA method for VOCs or the appropriate EPA method for total hydrocarbons.
[06-096 CMR 115, BPT]

D. Monitors

1. The following shall be monitored on the VOC abatement unit:
 - a. combustion temperature (parameter monitor),
 - b. alarms that indicate the status of the concentrator's rotor, and
 - c. the status of the fans located in the process vents.
2. The combustion temperature parameter monitor must record accurate and reliable data. If the parameter monitor is recording accurate and reliable data less than 98% of the VOC abatement unit operating time during April 1- September 30, the Department may initiate enforcement action and may include in that enforcement action any periods of time that the parameter monitor was not recording accurate and reliable data during that six month period unless the licensee can demonstrate to the satisfaction of the Department that the failure of the system to record accurate and reliable data was due to the performance of established quality assurance and quality control procedures or unavoidable malfunctions.

For the purposes of this condition, the parameter monitor shall be considered to be operating if the monitor records two data points in one hour. National Semiconductor shall keep records of all periods of time that the VOC abatement unit is operating and the parameter monitor does not record at least two data points in one hour. This data shall be used to demonstrate compliance with the requirement that the parameter monitor record 98% of the time the source is operating within the April 1- September 30 six month period.

[06-096 CMR 115, BPT]

- E. National Semiconductor shall keep records of events when the VOC abatement unit shuts down, including automatic shutoff when out of the temperature range of 1250°F-1550°F, and activated alarm events when not in the normal operating range (1350°F-1500°F). The records shall include the time the unit is not operating. [06-096 CMR 115, BPT]
- F. National Semiconductor shall operate the VOC abatement unit at all times the wafer process is in operation during April 1 – September 30 with a 97% uptime requirement on the VOC abatement unit. For compliance purposes, the 3% downtime (97% uptime) calculation shall include any downtime of the abatement unit, regardless of cause (malfunctions, maintenance, etc.). [06-096 CMR 115, BPT]
- G. National Semiconductor shall keep a maintenance log for the VOC abatement unit, recording the date, time, and reasons for all emissions upsets as well as all routine maintenance procedures. [06-096 CMR 115, BPT]
- H. Visible emissions from the VOC abatement unit shall not exceed 10% opacity on a six (6) minute average basis, except for no more than one (1) six (6) minute average in any one (1) hour period. [06-096 CMR 115, BPT]
- I. Visible emissions from vents emitting VOCs directly to the atmosphere shall not exceed 10% opacity on a six (6) minute average basis, except for no more than one (1) six (6) minute average in any one (1) hour period. [06-096 CMR 115, BPT]
- J. Total VOC emissions from the processes at National Semiconductor shall be calculated on a 12 month rolling total, updated monthly (using either calendar months or National Semiconductor's financial periods), using the following equations:

Hourly rate

$HR = \text{avg VOC emission rate measured during VOC testing (lbs VOC/hr)}$

When the VOC abatement unit is not operating, the emissions from the normally controlled area shall be considered uncontrolled in the VOC emission calculations. For this period, the uncontrolled hourly rate will be used.

Period Hours

$PH = 672 \text{ hours per four week period or } 840 \text{ hours per five week period}$

Period Rate

$PR = HR \times PH \text{ lbs VOC emitted/period}$

Period process solvents issued from stockroom to manufacturing floor

$PS \text{ (lbs VOCs issued/period)}$

Emission rate

$$ER = \frac{PR}{PS} (\text{lb VOC emitted/lb VOC issued})$$

Annual process emission rate

$$PAR = \sum_{n=1}^{n=12} (PS \times ER)_1 + \dots + (PS \times ER)_{12} \text{ for the 12 periods in a yr (lbs/yr)}$$

Uncontrolled annual rate

$$UAR = \sum_{n=1}^{n=12} \text{Uncontrolled VOCs Emitted for the 12 periods in a yr (lbs/yr)}$$

Total annual rate

$$TAR = PAR + UAR, (\text{lbs/yr})$$

$$TAR = (PAR + UAR)/2000 (\text{tons/yr})$$

[06-096 CMR 115, BPT]

- K. For VOCs from insignificant activities, National Semiconductor shall maintain in its files an estimate of the VOCs emitted annually from such activities, to the extent that the VOC emissions are not included in the 12 month rolling average recordkeeping program. The estimate shall be updated annually if process or raw material changes have occurred that would affect the previous estimate. [06-096 CMR 115, BPT]

(20) **Acid and Alkaline Scrubbers**

- A. National Semiconductor shall operate wet scrubbers to control emissions from the acid and alkaline emission streams. The wet scrubbers shall be operated at a minimum of 97% of the time the wafer process is operating, on a 12 month rolling average basis (financial periods may be used as 'months'). [06-096 CMR 115, BPT]
- B. The scrubber operations shall be monitored using pH. The pH shall be checked and recorded once per shift.
1. The pH of the acid vapor scrubbing media shall be maintained at or greater than 2.2.
 2. The pH of the alkaline vapor scrubbing media shall be maintained at or less than 7.
- [06-096 CMR 115, BPT]
- C. A maintenance log shall be kept for each of the scrubbers. The log shall contain dates, times, and reasons for all emission upsets, as well as descriptions and dates of any maintenance, routine or otherwise, performed on the scrubbers. [06-096 CMR 115, BPT]

- D. An operations log shall be kept for each of the scrubbers. The log shall contain the dates, times, and reasons that the scrubbers are not operating (including periods of pH deviation). National Semiconductor shall also record the operating time of the wafer process. [06-096 CMR 115, BPT]
- E. Testing of all the wet scrubbers shall occur once within 6 months of the signature of this license during a representative production level. Test results shall include efficiency of the scrubbers, including inlet and outlet mass rates and concentrations. [06-096 CMR 115, BPT]
- F. National Semiconductor shall conduct a study of the wet scrubbers to determine appropriate operating and recordkeeping requirements for optimal scrubber control. Within a year of the date of signature of this license, National Semiconductor shall submit a written report to the Department summarizing the summary and results. The written report shall include proposed monitoring and recordkeeping to demonstrate proper operation of the scrubbers. [06-096 CMR 115, BPT]
- G. Visible emissions from each of the acid scrubber stacks shall not exceed 15% on a six (6) minute average basis, except for no more than one (1) six (6) minute average in any one (1) hour period. [06-096 CMR 115, BPT]

(21) **HAP Process**

- A. National Semiconductor shall be limited to 9.9 tons/year of any single HAP and 24.9 tons/year of total facility HAPs, based on a 12 month rolling total (financial periods may be used as 'months'). [06-096 CMR 115, BPT]
- B. National Semiconductor shall maintain records on a monthly and 12 month rolling total for each HAP and total facility HAPs (financial periods may be used as 'months'). The HAP emission calculations may be directly correlated to the VOC emissions calculations in Condition (19)(J) of this license. HAP emissions calculations shall be based on stockroom records, MSDS (material safety data sheets) records for the various materials used in the facility, and whether the HAP emission points are controlled. The small amount of acid or base vapor exhausted from the acid and alkaline scrubbers shall be included in the facility HAPs (scrubber emission rates may be based on previous stack testing). [06-096 CMR 115, BPT]
- C. National Semiconductor shall submit a report documenting reductions in usage and emissions of catechol by December 31, 2010. [06-096 CMR 115, BPT]

(22) **General Process Sources**

Visible emissions from any general process source not specifically listed in the license shall not exceed an opacity of 20% 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. [06-096 CMR 101]

(23) **Annual Emission Statement**

In accordance with *Emission Statements*, 06-096 CMR 137 (last amended November 8, 2008), the licensee shall annually report to the Department the information necessary to accurately update the State's emission inventory by means of:

- 1) A computer program and accompanying instructions supplied by the Department; or
- 2) A written emission statement containing the information required in 06-096 CMR 137.

The emission statement must be submitted as specified by the date in 06-096 CMR 137.

- (24) National Semiconductor shall notify the Department within 48 hours and submit a report to the Department on a quarterly basis if a malfunction or breakdown in any component causes a violation of any emission standard (38 M.R.S.A. §605).

DONE AND DATED IN AUGUSTA, MAINE THIS 30th DAY OF December, 2009.

DEPARTMENT OF ENVIRONMENTAL PROTECTION

BY: James P. Brubaker
DAVID P. LITTELL, COMMISSIONER

The term of this license shall be five (5) years from the signature date above.

PLEASE NOTE ATTACHED SHEET FOR GUIDANCE ON APPEAL PROCEDURES

Date of initial receipt of application: February 20, 2008

Date of application acceptance: February 21, 2008

Date filed with the Board of Environmental Protection:

This Order prepared by Kathleen E. Tarbuck, Bureau of Air Quality.

