



STATE OF MAINE
DEPARTMENT OF ENVIRONMENTAL PROTECTION

PAUL R. LEPAGE
GOVERNOR

PATRICIA W. AHO
COMMISSIONER

**Fairchild Semiconductor Corporation
Cumberland County
South Portland, Maine
A-370-71-Y-M (SM)**

**Departmental
Findings of Fact and Order
Air Emission License
Amendment #2**

After review of the air emissions license amendment 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

Fairchild Semiconductor Corporation (Fairchild Semiconductor) was issued Air Emission License A-370-71-V-R on December 30, 2009, permitting the operation of emission sources associated with the semiconductor manufacturing facility in South Portland, Maine. The license was also amended on July 19, 2011 (A-370-71-X-M), to limit the facility’s potential to emit greenhouse gas (GHG) emissions under the CO₂e (carbon dioxide equivalent) short tons per year major source threshold.

Fairchild Semiconductor has submitted a minor revision to change the GHG limit to a single facility-wide limit for added flexibility, rather than separate GHG limits for fuel burning equipment and process equipment as currently stated. There will be no change to the overall facility’s GHG license limit.

B. Emission Equipment

This minor revision addresses the facility’ greenhouse gas emission limit from the semiconductor manufacturing processes and the associated fuel burning equipment.

C. Application Classification

Fairchild Semiconductor’s request to revise the greenhouse gas emission limit to a total facility-wide basis does not involve an increase in facility licensed emissions or changes to the emissions equipment. Therefore, the application is classified as a minor revision and has been processed through *Major and Minor Source Air Emission License Regulations*, 06-096 CMR 115 (as amended).

AUGUSTA
17 STATE HOUSE STATION
AUGUSTA, MAINE 04333-0017
(207) 287-7688 FAX: (207) 287-7826
RAY BLDG., HOSPITAL ST.

BANGOR
106 HOGAN ROAD, SUITE 6
BANGOR, MAINE 04401
(207) 941-4370 FAX: (207) 941-4584

PORTLAND
312 CANCO ROAD
PORTLAND, MAINE 04103
(207) 822-6300 FAX: (207) 822-6303

PRESQUE ISLE
1235 CENTRAL DRIVE, SKYWAY PARK
PRESQUE ISLE, MAINE 04679-2094
(207) 764-0477 FAX: (207) 760-3143

II. MINOR REVISION DESCRIPTION

A. Greenhouse Gas Limit

Fairchild Semiconductor has requested a revision to merge the GHG limits for process and fuel burning equipment, which are currently licensed separately, into one facility-wide GHG license limit. Amendment A-370-71-X-M was issued in order to ensure that Fairchild Semiconductor remained below the major source threshold for greenhouse gases. At the time, there was a possibility that EPA might reduce the major source threshold from 100,000 to 75,000 short tons of CO₂e per year; therefore, the amendment is based on remaining below 75,000 short tons of CO₂e per year. In the amendment, the total of 74,895 short tons of CO₂e per year is separated into a limit of 50,000 short tons of CO₂e per year from the semiconductor manufacturing processes and a limit of 24,895 short tons of CO₂e per year from the fuel burning equipment, both on a 12-month rolling total basis. Compliance is determined by using emission factors and global warming potentials in accordance with 40 CFR Part 98, *Mandatory Greenhouse Gas Reporting*, and additional factors as needed.

Since the issuance of the facility's GHG potential-to-emit license limits amendment, Fairchild Semiconductor has refined its GHG emissions recordkeeping and estimation methods to meet the recently amended applicable requirements of 40 CFR Part 98. Based on the updated emissions estimation methods, Fairchild Semiconductor is closer to the 50,000 short tons of CO₂e per year limit from the semiconductor manufacturing processes than originally expected. In order to add flexibility to allow for minor changes to the manufacturing equipment and to account for any future revisions to GHG emission estimation methods, Fairchild is requesting a single facility-wide limit equal to the two limits currently in amendment A-370-71-X-M.

The Department approves this minor revision request; therefore, the two limits shall be replaced with one 74,895 short tons of CO₂e per year, based on a 12-month rolling total. Recordkeeping shall continue to include emissions from the semiconductor manufacturing processes and the fuel burning equipment.

B. Annual Emissions

1. Total Annual Criteria Pollutant and HAP Emissions

The following shall not be exceeded on a 12-month rolling total (see air emission license A-370-71-V-R for the specific equations used to calculate compliance with the criteria pollutant limits):

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

Pollutant	Tons/Year
PM	99.9
PM ₁₀	99.9
SO ₂	99.9
NO _x	99.9
CO	99.9
VOC	25 process equipment; 15 fuel burning

Pollutant	Tons/year
Single HAP	9.9
Total HAP	24.9

2. Total Greenhouse Gas Emissions

Greenhouse gases are considered regulated pollutants as of January 2, 2011, through 'Tailoring' revisions made to EPA's *Approval and Promulgation of Implementation Plans*, 40 CFR Part 52, Subpart A, §52.21 Prevention of Significant Deterioration of Air Quality rule. Greenhouse gases, as defined in 06-096 CMR 100 (as amended), are the aggregate group of the following gases: Carbon dioxide, nitrous oxide, methane, hydrofluorocarbons, perfluorocarbons, and sulfur hexafluoride. For licensing purposes, greenhouse gases (GHG) are calculated and reported as carbon dioxide equivalents (CO₂e).

The following shall not be exceeded on a 12-month rolling total facility-wide basis:

Pollutant	Short Tons/Year
CO ₂ e	74,895

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-370-71-Y-M subject to the conditions found in Air Emission License A-370-71-V-R, amendment A-370-71-X-M, and in 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.

SPECIFIC CONDITIONS

The following shall replace condition (29) in air emission license amendment A-370-71-X-M:

(29) Facility-Wide Greenhouse Gas Emissions

- A. The combined total greenhouse gas emissions from all stationary fuel combustion sources and the semiconductor manufacturing processes at Fairchild Semiconductor shall be limited to 74,895 short tons of CO₂e per year as determined by using emission factors and global warming potentials in accordance with 40 CFR Part 98, and additional factors, as applicable.
- B. Fairchild Semiconductor shall maintain records documenting facility-wide greenhouse gas emissions, as CO₂e, on a monthly and 12-month rolling total basis. For the purpose of demonstrating compliance with the annual CO₂e

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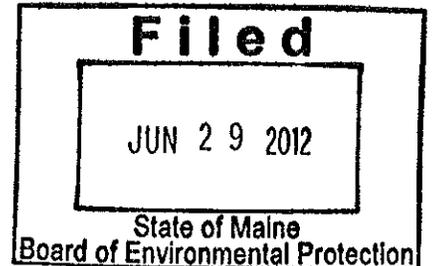
short tons limit, greenhouse gases are as defined in 06-096 CMR 100 (as amended).

[06-096 CMR 115 and 40 CFR Part 98]

DONE AND DATED IN AUGUSTA, MAINE THIS 26th DAY OF June, 2012.

DEPARTMENT OF ENVIRONMENTAL PROTECTION

BY: Melanie A. Bator
PATRICIA W. AHO, COMMISSIONER



The term of this amendment shall be concurrent with the term of Air Emission License A-370-71-V-R.

PLEASE NOTE ATTACHED SHEET FOR GUIDANCE ON APPEAL PROCEDURES

Date of initial receipt of application: April 24, 2012
Date of application acceptance: April 25, 2012

Date filed with the Board of Environmental Protection:

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