



Commonwealth of Massachusetts
Executive Office of Energy & Environmental Affairs

Department of Environmental Protection

Southeast Regional Office • 20 Riverside Drive, Lakeville MA 02347 • 508-946-2700

DEVAL L. PATRICK
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Commissioner

February 19, 2014

Mr. Michael New
Environmental, Safety, Health and
Security Director
Sensata Technologies, Inc.
529 Pleasant Street
Attleboro, MA 02703

RE: ATTLEBORO
Transmittal No.: X258448
Application No.: SE-13-043
Class: *NM50*
FMF No.: 405317
AIR QUALITY PLAN APPROVAL

Dear Mr. New:

The Massachusetts Department of Environmental Protection (“MassDEP”), Bureau of Waste Prevention, has reviewed your Limited Plan Application (“Application”) listed above. This Application concerns the proposed operational modifications and emission limit revisions of existing fuel burning equipment at the Sensata Technologies, Inc., facility located at 529 Pleasant Street in Attleboro, Massachusetts (“Sensata” or “Facility”).

This Application was submitted in accordance with 310 CMR 7.02 Plan Approval and Emission Limitations as contained in 310 CMR 7.00 “Air Pollution Control,” regulations adopted by MassDEP pursuant to the authority granted by Massachusetts General Laws, Chapter 111, Section 142 A-J, Chapter 21C, Section 4 and 6, and Chapter 21E, Section 6. MassDEP’s review of your Application has been limited to air pollution control regulation compliance and does not relieve you of the obligation to comply with any other regulatory requirements.

MassDEP has determined that the Application is administratively and technically complete and that the Application is in conformance with the Air Pollution Control regulations and current air pollution control engineering practice, and hereby grants this **Plan Approval** for said Application, as submitted, subject to the conditions listed below.

Please review the entire Plan Approval, as it stipulates the conditions with which the Facility owner/operator (“Permittee”) must comply in order for the Facility to be operated in compliance with this Plan Approval.

1. DESCRIPTION OF FACILITY AND APPLICATION

Sensata Technologies, Inc. (“Sensata”), operates a world headquarters and a sensor and control research and development (R&D) facility located on property that was once part of a larger Texas Instruments facility. Sensata was a division of Texas Instruments Sensors & Controls until 2006. The devices produced by Sensata are used in automotive, appliance, aircraft, industrial, military, heavy vehicle, heating, air conditioning, data and telecommunications, recreational vehicle and marine applications. Currently, the Sensata facility is comprised of two buildings, the Operations Center (formerly Building 12) and the Business Center.

The Operations Center facility includes two Cleaver Brooks boilers, as described in Table 1 below, to provide heat and hot water. The two boilers were originally included by Texas Instruments as part of application No. 4B91070, which was approved by MassDEP on April 21, 1992. On September 10, 2008, MassDEP issued Approval No. 4B08042 which authorized a modification and the continued operation of existing fuel burning equipment at Sensata. The boilers are approved to fire Natural Gas and No. 6 Fuel Oil ($\leq 0.5\%$ S) and cannot be operated simultaneously.

In this application, Sensata has proposed to increase the allowable usage of Natural Gas fuel for the back-up boiler (EU7), in order to be prepared for additional maintenance downtime in the primary boiler (EU8). The only emission unit to be modified in this approval is EU7.

2. EMISSION UNIT (EU) IDENTIFICATION

Each Emission Unit (EU) identified in Table 1 is subject to and regulated by this Plan Approval:

Table 1			
EU#	Description	Design Capacity	Pollution Control Device (PCD)
EU7	Cleaver Brooks Boiler Model No. CB-428-600	25.125 MMBtu/hr heat input	None
EU8	Cleaver Brooks Boiler Model No. CBW-400-300-125	12.555 MMBtu/hr heat input	None

Table 1 Key:

EU# = Emission Unit Number

No. = Number

MMBtu/hr = Million British Thermal Units per hour

PCD = Pollution Control Device

3. APPLICABLE REQUIREMENTS

A. OPERATIONAL, PRODUCTION and EMISSION LIMITS

The Permittee is subject to, and shall not exceed the Operational, Production, and Emission Limits as contained in Table 2 below:

Table 2			
EU#	Operational / Production Limit	Air Contaminant	Emission Limit ^(Note 1)
EU7	1. $\leq 4,000,000$ ft ³ of Natural Gas per month.	SO ₂	0.20 TPM 0.40 TPY
	2. $\leq 5,000$ gallons of No. 6 fuel oil per month.	NO _x	0.34 TPM 0.68 TPY
	3. $\leq 8,000,000$ ft ³ of Natural Gas per consecutive 12-month period.	CO	0.18 TPM 0.36 TPY
	4. $\leq 10,000$ gallons of No. 6 fuel oil per consecutive 12-month period.	PM ^(Note 3)	0.12 lb/MMBtu 0.285 TPM 0.57 TPY
	5. Fuel Oil sulfur content limited to ≤ 0.28 lb/MMBtu ^(Note 2)	VOC	0.012 TPM 0.023 TPY
EU8	6. $\leq 15,000,000$ ft ³ of Natural Gas per month.	SO ₂	2.95 TPM 5.90 TPY
	7. $\leq 75,000$ gallons of No. 6 fuel oil per month.	NO _x	2.82 TPM 5.63 TPY
	8. $\leq 30,000,000$ ft ³ of Natural Gas per consecutive 12-month period.	CO	0.82 TPM 1.64 TPY
	9. $\leq 150,000$ gallons of No. 6 fuel oil per consecutive 12-month period.	PM ^(Note 4)	0.10 lb/MMBtu (Fuel Oil) 0.62 TPM 1.24 TPY
	10. Fuel Oil sulfur content limited to ≤ 0.28 lb/MMBtu ^(Note 2)	VOC	0.09 TPM 0.18 TPY
		Pb	0.0001 TPM 0.0001 TPY

(1) Unless noted, emissions calculated based on emission factors contained in U.S. EPA document AP-42, Section 1.3 and 1.4, dated 5/10 and 7/98 respectively.

(2) Fuel Oil sulfur content of 0.28 lb/MMBtu is equivalent to approximately 0.5% sulfur by weight.

(3) PM emissions for Unit 7 are based on previously approved 0.12 lb/MMBtu emission limits.

(4) PM limits for Unit 8 are based on previously approved 0.10 lb/MMBtu for oil and on AP-42, Section 1.4 as proposed in LPA No. 4B08042 for natural gas.

Table 2 Key:

EU# = Emission Unit Number

ft³ = cubic feet
 No. = number
 NO_x = Nitrogen Oxides
 CO = Carbon Monoxide
 SO₂ = Sulfur Dioxide
 Pb = lead
 PM = Total Particulate Matter
 VOC = Volatile Organic Compounds
 TPM = tons per month
 TPY = tons per consecutive 12-month period
 U.S. EPA = United States Environmental Protection Agency
 lb/MMBtu = pound(s) per million British thermal unit heat release potential
 % = percent

B. COMPLIANCE DEMONSTRATION

The Permittee is subject to, and shall comply with, the monitoring, testing, record keeping, and reporting requirements as contained in Tables 3, 4, and 5 below:

Table 3	
EU#	Monitoring and Testing Requirements
EU7, EU8	1. Monitor natural gas usage in each unit for each month and each consecutive twelve (12) month period.
	2. Monitor fuel oil usage in each unit for each month and each consecutive twelve (12) month period.
	3. In accordance with 310 CMR 7.04(4)(a) each unit shall be inspected and maintained in accordance with the manufacturer's recommendations and tested for efficient operation at least once in each calendar year.
	4. Monitor fuel oil purchases such that only fuel oil with a sulfur content of no greater than 0.28lb/MMBtu is purchased for use in each unit. For compliance purposes fuel oil that is demonstrated to have sulfur content no greater than 0.5%, by weight, shall constitute compliance with this requirement.
	5. Monitor sulfur content of each new shipment of fuel oil received. Sulfur content of the fuel can be demonstrated through fuel analysis. The analysis of sulfur content of the fuel shall be in accordance with the applicable American Society for Testing Materials (ASTM) test methods or any other method approved by the MassDEP and U.S. EPA. Fuel sulfur information may be provided by fuel suppliers.
Facility-wide	6. The Permittee shall monitor all operations to ensure sufficient information is available to comply with 310 CMR 7.12 Source Registration.
	7. If and when MassDEP requires it, the Permittee shall conduct emission testing in accordance with U.S. EPA Reference Test Methods and regulation 310 CMR 7.13

Table 3 Key:

CMR = Code of Massachusetts Regulations
 EU# = Emission Unit Number
 U.S. EPA = United States Environmental Protection Agency

lb/MMBtu = pound(s) per million British thermal unit heat input
% = percent

Table 4	
EU#	Record Keeping Requirements
Facility-wide	1. The Permittee shall maintain adequate records on-site to demonstrate compliance with all operational, production, and emission limits contained in Table 2 above. Records shall also include the actual emissions of air contaminant(s) emitted for each calendar month and for each consecutive twelve month period (current month plus prior eleven months). These records shall be compiled no later than the 15 th day following each month. An electronic version of the MassDEP approved record keeping form, in Microsoft Excel format, can be downloaded at http://www.mass.gov/dep/air/approvals/aqforms.htm#report .
	2. The Permittee shall maintain records of monitoring and testing as required by Table 3.
	3. The Permittee shall maintain a copy of this Plan Approval, underlying Application and the most up-to-date SOMP for the EU(s) approved herein on-site.
	4. The Permittee shall maintain a record of routine maintenance activities performed on the approved EU(s) and monitoring equipment. The records shall include, at a minimum, the type or a description of the maintenance performed and the date and time the work was completed.
	5. The Permittee shall maintain a record of all malfunctions affecting air contaminant emission rates on the approved EU(s) and monitoring equipment. At a minimum, the records shall include: date and time the malfunction occurred; description of the malfunction; corrective actions taken; the date and time corrective actions were initiated and completed; and the date and time emission rates and monitoring equipment returned to compliant operation.
	6. The Permittee shall maintain records to ensure sufficient information is available to comply with 310 CMR 7.12 Source Registration.
	7. The Permittee shall maintain records required by this Plan Approval on-site for a minimum of five (5) years.
	8. The Permittee shall make records required by this Plan Approval available to MassDEP and U.S. EPA personnel upon request.
	9. Maintain oil analysis results used to demonstrate compliance with fuel oil sulfur content requirements.

Table 4 Key:

CMR = Code of Massachusetts Regulations

EU# = Emission Unit Number

SOMP = Standard Operating and Maintenance Procedure

U.S. EPA = United States Environmental Protection Agency

Table 5	
EU#	Reporting Requirements
Facility-wide	1. The Permittee shall submit to MassDEP all information required by this Plan Approval over the signature of a “Responsible Official” as defined in 310 CMR 7.00 and shall include the Certification statement as provided in 310 CMR 7.01(2)(c).
	2. The Permittee shall notify the Southeast Regional Office of MassDEP, BWP C&E Chief by telephone (508) 946-2878, or fax (508) 947-6557, as soon as possible, but no later than one (1) business day after discovery of an exceedance(s) of Table 2 requirements. A written report shall be submitted to BWP C&E Chief at MassDEP within three (3) business days thereafter and shall include: identification of exceedance(s), duration of exceedance(s), reason for the exceedance(s), corrective actions taken, and action plan to prevent future exceedance(s).
	3. The Permittee shall report to MassDEP, in accordance with 310 CMR 7.12, all information as required by the Source Registration/Emission Statement Form. The Permittee shall note therein any minor changes (under 310 CMR 7.02(2)(e), 7.03, 7.26, etc.), which did not require Plan Approval.
	4. The Permittee shall provide a copy to MassDEP of any record required to be maintained by this Plan Approval within 30-days from MassDEP’s request.
	5. The Permittee shall submit to MassDEP for approval a stack emission pretest protocol, at least 30 days prior to emission testing, for emission testing as defined in Table 3 Monitoring and Testing Requirements.
	6. The Permittee shall submit to MassDEP a final stack emission test results report, within 45 days after emission testing, for emission testing as defined in Table 3 Monitoring and Testing Requirements.

Table 5 Key:

BWP = Bureau of Waste Prevention
 C&E = Compliance and Enforcement
 CMR = Code of Massachusetts Regulations
 EU# = Emission Unit Number

4. SPECIAL TERMS AND CONDITIONS

The Permittee is subject to, and shall comply with, the following special terms and conditions:

A. The Permittee shall comply with the Special Terms and Conditions as contained in Table 6 below:

Table 6	
Special Terms and Conditions	
1.	EU7 and EU8 shall be equipped with an electrical interlock system so that both boilers cannot operate simultaneously.
2.	Natural gas and No. 6 fuel oil shall be the only fuels combusted in EU7 and EU8.
3.	The Permittee has indicated that the boiler identified as EU8 is subject to 40 CFR Part 60, Subpart Dc - <u>New Source Performance Standards (NSPS) for Small Industrial-Commercial-Institutional Steam Generating Units</u> . Since the MassDEP has not accepted delegation of Subpart Dc for the subject boiler, you are advised to consult with U.S. EPA for additional information.
4.	The Permittee has indicated that EU7 and EU8 may be subject to 40 CFR Part 63, Subpart JJJJJ - <u>National Emission Standards for Hazardous Air Pollutants (NESHAP) for Industrial, Commercial, and Institutional Boilers Area Sources</u> . Since the MassDEP has not accepted delegation of Subpart JJJJJ for the subject boilers, you are advised to consult with U.S. EPA for additional information. EPA’s address is: US EPA Region 1, 5 Post Office Square – Suite 100, Boston, MA 02109-3912, attn: Susan Lancey.
5.	There shall be no visible emissions from the fuel utilization facility during normal operations. The term “normal operations” shall not include periods of start-up, shut-down and malfunction of EU7 and EU8. During periods of start-up, shut-down and malfunction opacity and visible emissions from EU7 and EU8 shall be limited in accordance with the provisions contained in 310 CMR 7.06: Visible Emissions. Visible emissions or opacity, which exceed the limits set forth in this approval, shall be reported to the MassDEP in writing or by fax within seven (7) days.
6.	This approval letter supersedes the following approval letters: Final Approval of LPA For Fuel Utilization Facility No. 4B08042, issued on September 10, 2008 and Revised Final Approval of LPA For Fuel Utilization Facility No. 4B08042, issued on February 26, 2009.

Table 6 Key:

- CFR = Code of Federal Regulations
- CMR = Code of Massachusetts Regulations
- EU = Emission Unit Number
- LPA = Limited Plan Application
- No. = number
- lb = pound(s)
- U.S. EPA = United States Environmental Protection Agency

- B. The Permittee shall install and use an exhaust stack, as required in Table 7, on each of the Emission Units that is consistent with good air pollution control engineering practice and that discharges so as to not cause or contribute to a condition of air pollution. Each exhaust stack shall be configured to discharge the gases vertically and shall not be equipped with any part or device that restricts the vertical exhaust flow of the emitted gases, including but not limited to rain protection devices known as “shanty caps” and “egg beaters.” The Permittee shall install and utilize exhaust stacks with the following parameters, as contained in Table 7 below, for the Emission Units that are regulated by this Plan Approval:

Table 7				
EU#	Stack Height Above Ground (feet)	Stack Inside Exit Dimensions (feet)	Stack Gas Exit Velocity Range (feet per second)	Stack Gas Exit Temperature Range (°F)
EU7	50	2	0.1-20	150-300
EU8	50	2	0.1-20	150-300

Table 7 Key:

EU# = Emission Unit Number

°F = Degree Fahrenheit

5. GENERAL CONDITIONS

The Permittee is subject to, and shall comply with, the following general conditions:

- A. Pursuant to 310 CMR 7.01, 7.02, 7.09 and 7.10, should any nuisance condition(s), including but not limited to smoke, dust, odor or noise, occur as the result of the operation of the Facility, then the Permittee shall immediately take appropriate steps including shutdown, if necessary, to abate said nuisance condition(s).
- B. If asbestos remediation/removal will occur as a result of the approved construction, reconstruction, or alteration of this Facility, the Permittee shall ensure that all removal/remediation of asbestos shall be done in accordance with 310 CMR 7.15 in its entirety and 310 CMR 4.00.
- C. If construction or demolition of an industrial, commercial or institutional building will occur as a result of the approved construction, reconstruction, or alteration of this Facility, the Permittee shall ensure that said construction or demolition shall be done in accordance with 310 CMR 7.09(2) and 310 CMR 4.00.
- D. Pursuant to 310 CMR 7.01(2)(b) and 7.02(7)(b), the Permittee shall allow MassDEP and / or USEPA personnel access to the Facility, buildings, and all pertinent records for the purpose

of making inspections and surveys, collecting samples, obtaining data, and reviewing records.

- E. This Plan Approval does not negate the responsibility of the Permittee to comply with any other applicable Federal, State, or local regulations now or in the future.
- F. Should there be any differences between the Application and this Plan Approval, the Plan Approval shall govern.
- G. Pursuant to 310 CMR 7.02(3)(k), MassDEP may revoke this Plan Approval if the construction work is not commenced within two years from the date of issuance of this Plan Approval, or if the construction work is suspended for one year or more.
- H. This Plan Approval may be suspended, modified, or revoked by MassDEP if MassDEP determines that any condition or part of this Plan Approval is being violated.
- I. This Plan Approval may be modified or amended when in the opinion of MassDEP such is necessary or appropriate to clarify the Plan Approval conditions or after consideration of a written request by the Permittee to amend the Plan Approval conditions.
- J. The Permittee shall conduct emission testing, if requested by MassDEP, in accordance with USEPA Reference Test Methods and regulation 310 CMR 7.13. If required, a pretest protocol report shall be submitted to MassDEP at least 30 days prior to emission testing and the final test results report shall be submitted within 45 days after emission testing.
- K. Pursuant to 310 CMR 7.01(3) and 7.02(3)(f), the Permittee shall comply with all conditions contained in this Plan Approval. Should there be any differences between provisions contained in the General Conditions and provisions contained elsewhere in the Plan Approval, the latter shall govern.

6. MASSACHUSETTS ENVIRONMENTAL POLICY ACT

MassDEP has determined that the filing of an Environmental Notification Form (ENF) with the Secretary of Energy & Environmental Affairs, for air quality control purposes, was not required prior to this action by MassDEP. Notwithstanding this determination, the Massachusetts Environmental Policy Act (MEPA) and 301 CMR 11.00, Section 11.04, provide certain "Fail-Safe Provisions," which allow the Secretary to require the filing of an ENF and/or an Environmental Impact Report (EIR) at a later time.

7. APPEAL PROCESS

This Plan Approval is an action of MassDEP. If you are aggrieved by this action, you may request an adjudicatory hearing. A request for a hearing must be made in writing and postmarked within twenty-one (21) days of the date of issuance of this Plan Approval.

Under 310 CMR 1.01(6)(b), the request must state clearly and concisely the facts, which are the grounds for the request, and the relief sought. Additionally, the request must state why the Plan Approval is not consistent with applicable laws and regulations.

The hearing request along with a valid check payable to the Commonwealth of Massachusetts in the amount of one hundred dollars (\$100.00) must be mailed to:

Commonwealth of Massachusetts
Department of Environmental Protection
P.O. Box 4062
Boston, MA 02211

This request will be dismissed if the filing fee is not paid, unless the appellant is exempt or granted a waiver as described below. The filing fee is not required if the appellant is a city or town (or municipal agency), county, or district of the Commonwealth of Massachusetts, or a municipal housing authority.

MassDEP may waive the adjudicatory hearing-filing fee for a person who shows that paying the fee will create an undue financial hardship. A person seeking a waiver must file, together with the hearing request as provided above, an affidavit setting forth the facts believed to support the claim of undue financial hardship.

Enclosed is a stamped approved copy of the application submittal.

Should you have any questions concerning this Plan Approval, please contact Peter Russell by telephone at (508) 946-2821, or in writing at the letterhead address.

*This final document copy is being provided to you electronically by the
Department of Environmental Protection. A signed copy of this document
is on file at the DEP office listed on the letterhead.*

Thomas Cushing
Permit Chief
Bureau of Waste Prevention

Enclosure

ecc: City of Attleboro, Dept. of Health
City of Attleboro, Fire Department
Mark Sestak, Sensata Technologies
Stephen Piper, P.E., M.J. Bradley & Associates
Yi Tian, MassDEP/Boston
Laura Black, MassDEP/SERO
Peter Russell, MassDEP/SERO