



FLORIDA DEPARTMENT OF Environmental Protection

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2600 Blair Stone Road
Tallahassee, FL 32399-2400

Ron DeSantis
Governor

Jeanette Nuñez
Lt. Governor

Shawn Hamilton
Secretary

PERMITTEE

Renesas Electronics America, Inc.
1650 Robert J. Conlan Blvd. NE
Palm Bay, Florida 32905-3406

Authorized Representative:
Kevin Hoopingarner, Senior Director

Air Permit No. 0090014-021-AO
Air Operation Permit Renewal
Renesas Electronics America, Inc.- Palm Bay
Brevard County, Florida

PROJECT

This is the final air operation permit, which authorizes the operation of Renesas Electronics America (REA), Inc.- Palm Bay, which is a Semiconductor Manufacturing Facility (Standard Industrial Classification No. 3674). This project is a renewal of the Air Operation Permit No. 0090014-019-AO. The facility is located in Brevard County at 1650 Robert J. Conlan Blvd. NE in Palm Bay, Florida. The UTM coordinates are Zone 17, 539.55 kilometers (km) East, and 3101.46 km North.

This final permit is organized into the following sections: Section 1 (General Information); Section 2 (Administrative Requirements); Section 3 (Emissions Unit Specific Conditions); and Section 4 (Appendices). Because of the technical nature of the project, the permit contains numerous acronyms and abbreviations, which are defined in Appendix A of Section 4 of this permit.

Permitting Authority: Applications for air operation permits are subject to review in accordance with the provisions of Chapter 403, Florida Statutes (F.S.) and Chapters 62-4 and 62-210 of the Florida Administrative Code (F.A.C.). The Permitting Authority responsible for making a permit determination for this project is the Permit Review Section in the Division of Air Resource Management of the Department of Environmental Protection (Department). The Permitting Authority's physical address is: 2600 Blair Stone Road, Tallahassee, Florida 32399-2400. The Permitting Authority's mailing address is: 2600 Blair Stone Road (MS #5505), Tallahassee, Florida 32399-2400. The Permitting Authority's telephone number is 850/717-9000.

Petitions: A person whose substantial interests are affected by the proposed decision may petition for an administrative hearing in accordance with Sections 120.569 and 120.57, F.S. The petition must contain the information set forth below and must be filed (received) in the Department's Office of General Counsel, MS #35, 3900 Commonwealth Boulevard, Tallahassee, Florida 32399-3000, Agency_Clerk@dep.state.fl.us. Petitions filed by the applicant or any of the parties listed below must be filed within 14 days of receipt of this notice. Petitions filed by any other person must be filed within 14 days of receipt of this proposed action. A petitioner must mail a copy of the petition to the applicant at the address indicated above, at the time of filing. The failure of any person to file a petition within the appropriate time period shall constitute a waiver of that person's right to request an administrative determination (hearing) under Sections 120.569 and 120.57, F.S., or to intervene in this proceeding and participate as a party to it. Any subsequent intervention will be only at the approval of the presiding officer upon the filing of a motion in compliance with Rule 28-106.205, F.A.C.

A petition that disputes the material facts on which the Department's action is based must contain the following information: (a) The name and address of each agency affected and each agency's file or identification number, if known; (b) The name, address, and telephone number of the petitioner; the name, address and telephone number of the petitioner's representative, if any, which shall be the address for service purposes during the course of the proceeding; and an explanation of how the petitioner's substantial interests will be affected by the agency determination; (c) A statement of how and when each petitioner received notice of the agency action or proposed action; (d) A statement of all disputed issues of material fact. If there are none, the petition must so indicate; (e)

A concise statement of the ultimate facts alleged, as well as the rules and statutes which entitle the petitioner to relief; (f) A statement of the specific rules or statutes the petitioner contends require reversal or modification of

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the agency's proposed action; and, (g) A statement of the relief sought by the petitioner, stating precisely the action petitioner wishes the agency to take with respect to the agency's proposed action.

A petition that does not dispute the material facts upon which the permitting authority's action is based shall state that no such facts are in dispute and otherwise shall contain the same information as set forth above, as required by Rule 28-106.301, F.A.C.

Because the administrative hearing process is designed to formulate final agency action, the filing of a petition means that the Department's final action may be different from the position taken by it in this notice. Persons whose substantial interests will be affected by any such final decision of the permitting authority on the application have the right to petition to become a party to the proceeding, in accordance with the requirements set forth above.

Effective Date: This permitting decision is final and effective on the date filed with the clerk of the Permitting Authority unless a petition is filed in accordance with the above paragraphs or unless a request for extension of time in which to file a petition is filed within the time specified for filing a petition pursuant to Rule 62-110.106, F.A.C., and the petition conforms to the content requirements of Rules 28-106.201 and 28-106.301, F.A.C. Upon timely filing of a petition or a request for extension of time, this action will not be effective until further order of the Permitting Authority.

Extension of Time: Under Rule 62-110.106(4), F.A.C., a person whose substantial interests are affected by the Department's action may also request an extension of time to file a petition for an administrative hearing. The Department may, for good cause shown, grant the request for an extension of time. Requests for extension of time must be filed with the Office of General Counsel of the Department at 3900 Commonwealth Boulevard, Mail Station 35, Tallahassee, Florida 32399-3000, or via electronic correspondence at Agency_Clerk@dep.state.fl.us, before the deadline for filing a petition for an administrative hearing. A timely request for extension of time shall toll the running of the time period for filing a petition until the request is acted upon.

Mediation: Mediation is not available in this proceeding.

Judicial Review: Any party to this permitting decision (order) has the right to seek judicial review of it under Section 120.68, F.S., by filing a notice of appeal under Rule 9.110 of the Florida Rules of Appellate Procedure with the clerk of the Department of Environmental Protection in the Office of General Counsel, Mail Station #35, 3900 Commonwealth Boulevard, Tallahassee, Florida, 32399-3000, and by filing a copy of the notice of appeal accompanied by the applicable filing fees with the appropriate District Court of Appeal. The notice must be filed within 30 days after this order is filed with the clerk of the Department.

Finality of Permitting Action: You cannot justifiably rely on the finality of this decision unless notice of this decision and the right of substantially affected persons to challenge this decision has been duly published or otherwise provided to all persons substantially affected by the decision. While you are not required to publish notice of this action, you may elect to do so pursuant Rule 62-110.106(10)(a).

0090014-021-AO Effective Date: May 24, 2022

Renewal Application Due Date: March 25, 2027

Expiration Date: May 24, 2027

Executed in Tallahassee, Florida

David Lyle Read, P.E., Environmental Administrator
Permit Review Section
Division of Air Resource Management

CERTIFICATE OF SERVICE

The undersigned duly designated deputy agency clerk hereby certifies that this Air Permit package was sent by electronic mail, or a link to these documents made available electronically on a publicly accessible server, with received receipt requested before the close of business on the date indicated below to the following persons.

Mr. Kevin Hoopingarner, Renesas Electronics America, Inc.: kevin.hoopingarner.zn@gr.renesas.com

Mr. Wayman Aldridge, Renesas Electronics America, Inc.: wayman.aldridge.jy@gr.renesas.com

Ms. Lu Burson, FDEP Central District: Lu.Burson@dep.state.fl.us

FDEP Central District: DEP_CD@dep.state.fl.us

Ms. Elizabeth Walker, DEP OPC: Elizabeth.Walker@FloridaDEP.gov

Ms. Amy Hilliard, DEP OPC: Amy.Hilliard@FloridaDEP.gov

Clerk Stamp

FILING AND ACKNOWLEDGMENT FILED on
this date, pursuant to Section 120.52(7), Florida Statutes,
with the designated agency clerk, receipt of which is
hereby acknowledged.

SECTION 1. GENERAL INFORMATION

FACILITY DESCRIPTION

The REA semiconductor manufacturing facility is comprised of ten (10) buildings and an industrial water plant (IWP). The facility serves as the US manufacturing arm of Renesas Electronics Corporation, and houses its wafer manufacturing, high reliability, and probe, assembly, and test operations. Additionally, many design functions such as product engineering, test engineering, and package engineering are also present at the site. IWP is equipped with a forced draft degasification system that is instrumental in the production of high-quality deionized water used in the wafer manufacturing process.

The facility consists of many different emission points that are currently regulated as one emissions unit. There are six scrubbers located at Building 58 (one scrubber) and Building 59 (five scrubbers), dedicated to treating caustic and volatile organic compounds (VOC) exhaust with medium efficiency. The wet scrubbers are all horizontal cross flow packed scrubbers with volumetric flow rates ranging from 14,000 to 48,000 cfm. The majority of the site's emissions are generated from the wafer manufacturing processes that occur in Building 59.

The existing facility consists of the following emissions unit (EU).

EU No.	Emission Unit Description
045	Semiconductor Manufacturing

Also, the facility maintains one (1) diesel fire pump and six (6) diesel emergency power generators that are exempt from the requirements to obtain an air construction permit or non-Title V air operation permit pursuant to Rule 62-210.300(a)(35), F.A.C. (See Appendix E, List of Insignificant and/or Exempt Emission Units.)

APPLICABLE REGULATIONS

A summary of applicable regulations is shown in the following table.

Regulation	EU No(s).
<i>State Rule Citations</i>	
Chapter 62-4 and Rule 62-210.300, F.A.C., Permits Required	045
Rule 62-210.370(3), F.A.C., Annual Operating Report	
Rule 62-296.320, F.A.C., General Pollutant Emission Limiting Standards	

FACILITY REGULATORY CLASSIFICATION

- The facility is not a major source of hazardous air pollutants (HAP).
- The facility does not operate units subject to the acid rain provisions of the Clean Air Act (CAA).
- The facility is not a Title V major source of air pollution in accordance with Chapter 62-213, F.A.C.
- The facility is not a major stationary source in accordance with Rule 62-212.400, F.A.C. for the Prevention of Significant Deterioration (PSD) of Air Quality.
- This facility is a **synthetic non-Title V source** for total VOCs, total HAPs, and any single HAP.

SECTION 2. ADMINISTRATIVE REQUIREMENTS

1. Permitting Authority: The permitting authority for this project is the Permit review Section in the Division of Air Resource Management of the Department of Environmental Protection (Department). The Permit Review Section mailing address is 2600 Blair Stone Road (MS #5505), Tallahassee, Florida 32399-2400.
2. Compliance Authority: All documents related to compliance activities such as reports, tests, and notifications shall be submitted to the Central District Compliance Assurance Program District at: 3319 Maguire Blvd., Ste. 232, Orlando, FL 32803-3767.
3. Appendices: The following Appendices are attached as a part of this permit: Appendix A (Citation Formats and Glossary of Common Terms); Appendix B (General Conditions); and Appendix C (Common Conditions).
4. Applicable Regulations, Forms and Application Procedures: Unless otherwise specified in this permit, the construction and operation of the subject emissions units shall be in accordance with the capacities and specifications stated in the application. The facility is subject to all applicable provisions of: Chapter 403, F.S.; and Chapters 62-4, 62-204, 62-210, 62-212, 62-213, 62-296 and 62-297, F.A.C. Issuance of this permit does not relieve the permittee from compliance with any applicable federal, state, or local permitting or regulations.
5. New or Additional Conditions: For good cause shown and after notice and an administrative hearing, if requested, the Department may require the permittee to conform to new or additional conditions. The Department shall allow the permittee a reasonable time to conform to the new or additional conditions, and on application of the permittee, the Department may grant additional time. [Rule 62-4.080, F.A.C.]
6. Modifications: No new emissions unit shall be constructed, and no existing emissions unit shall be modified without obtaining an air construction permit from the Department. Such permit shall be obtained prior to beginning construction or modification. [Rules 62-210.300(1) and 62-212.300(1)(a), F.A.C.]
7. Renewal: Prior to 60 days before the expiration date of this permit, the permittee shall apply for a renewal of the permit. A renewal application shall be timely and sufficient. If the application is submitted prior to 60 days before expiration of the permit, it will be considered timely and sufficient. If the renewal application is submitted at a later date, it will not be considered timely and sufficient unless it is submitted and made complete prior to the expiration of the operation permit. When the application for renewal is timely and sufficient, the existing permit shall remain in effect until the renewal application has been finally acted upon by the Department. To properly apply for an air operation permit renewal, the applicant shall submit the following:
 - a. the appropriate permit application form, see current version of Rule 62-210.900, F.A.C. (Forms and Instructions), and/or FDEP Division of Air Resource Management website at: <http://www.dep.state.fl.us/air/>;
 - b. the appropriate operation permit application fee from Rule 62-4.050(4)(a), F.A.C.;
 - c. copies of the most recent two months of records/logs specified in **Specific Condition 8** of Subsection 3.A. of this permit.[Rule 62-4.090, F.A.C.]
8. Annual Operating Report (AOR): Annual Operating Report (AOR): The information required by the Annual Operating Report for Air Pollutant Emitting Facility (DEP Form No. 62-210.900(5)) shall be submitted by April 1 of each year, for the previous calendar year, to the Department of Environmental Protection's (DEP) Central District Office. All synthetic non-Title V sources shall submit a completed DEP Form 62-210.900(5) unless the annual operating report is submitted using the DEP's electronic annual operating report software. Emissions shall be computed in accordance with the provisions of subsection 62-210.370(2), F.A.C. [Rule 62-210.370(3), F.A.C.]

{Permitting Note: Resources to help you complete your AOR are available on the electronic AOR (EAOR) website at: <http://www.dep.state.fl.us/air/emission/eaor>. If you have questions or need assistance after reviewing the information posted on the EAOR website, please contact the Department by phone at (850) 717-9000 or email at eaor@dep.state.fl.us.}

SECTION 3. EMISSIONS UNIT SPECIFIC CONDITIONS

A. EU 045 - Semiconductor Manufacturing

This section of the permit addresses the following emissions unit.

EU No.	Emission Unit Description
045	Semiconductor Manufacturing

The facility consists of many different emission points that are currently regulated as one emissions unit (EU 045). The majority of the site's emissions are generated from the wafer manufacturing processes that occur in Building 59. The following six water scrubbers located at Building 58 (one scrubber) and Building 59 (five scrubbers) are dedicated to treating caustic and VOC exhaust with medium efficiency:

Emission Point ID	Location	Description	Flow Rate (cfm)
58S01	Bldg. 58	Beverly Pacific horizontal cross-flow packed water scrubber; medium efficiency (80-94.9%)	20,000
59S01	Bldg. 59 (west side)	Beverly Pacific horizontal cross-flow packed water scrubber; medium efficiency (80-94.9%)	30,000
59S02	Bldg. 59 (west side)	Beverly Pacific horizontal cross-flow packed water scrubber; medium efficiency (80-94.9%)	14,000
59S03	Bldg. 59 (west side)	Beverly Pacific horizontal cross-flow packed water scrubber; medium efficiency (80-94.9%)	35,000
59S04	Bldg. 59 (west side)	Beverly Pacific horizontal cross-flow packed water scrubber; medium efficiency (80-94.9%)	48,000
59S05	Bldg. 59 (east side)	Beverly Pacific horizontal cross-flow packed water scrubber; medium efficiency (80-94.9%)	26,000

PERFORMANCE RESTRICTIONS

- Restricted Operation:** The hours of operation are not limited (8760 hours per year). [Rules 62-4.070(3) and 62-210.200(PTE), F.A.C.]
- Circumvention.** The permittee shall not circumvent the air pollution control equipment or allow the emission of air pollutants without this equipment operating properly. [Rule 62-210.650, F.A.C.]
- VOC (Volatile Organic Compound) or OS (Organic Solvents) Emissions:** No person shall store, pump, handle, process, load, unload or use in any process or installation, volatile organic compounds (VOC) or organic solvents (OS) without applying known and existing vapor emission control devices or systems deemed necessary and ordered by the Department. To comply, procedures to minimize pollutant emissions should include but not be limited to following:
 - Tightly cover or close all VOC containers when they are not in use;
 - Tightly covers, where possible, all open troughs, basins, baths, tanks, etc. when they are not in use;
 - Maintain all piping, valves, fittings, etc., in good operating condition;
 - Prevent excessive air turbulence across exposed VOCs; and
 - Immediately confine and clean up VOC spills and make sure certain wastes are placed in closed containers for reuse, recycling or proper disposal.[Rule 62-296.320(1), F.A.C.; and, Permit No. 0090014-009-AC]
- Equipment Relocation:** The permittee may relocate equipment and/or operations within the Renesas Electronics America, Inc. - Palm Bay site. [Rule 62-4.070, F.A.C.; and, Permit No. 0090014-009-AC]

SECTION 3. EMISSIONS UNIT SPECIFIC CONDITIONS

A. EU 045 - Semiconductor Manufacturing

5. **Not federally Enforceable. Objectionable Odor Prohibited:** No person shall cause, suffer, allow or permit the discharge of air pollutants, which cause or contribute to an objectionable odor. An "objectionable odor" means any odor present in the outdoor atmosphere which by itself or in combination with other odors, is or may be harmful or injurious to human health or welfare, which unreasonably interferes with the comfortable use and enjoyment of life or property, or which creates a nuisance. [Rule 62-296.320(2) and 62-210.200(Definitions), F.A.C.]
6. **Unconfined Emissions of Particulate Matter (PM):** No person shall cause, let, permit, suffer or allow the emissions of unconfined PM from any activity, including vehicular movement; transportation of materials; construction, alteration, demolition or wrecking; or industrially related activities such as loading, unloading, storing or handling; without taking reasonable precautions to prevent such emissions. Reasonable precautions shall include, but not be limited to, maintaining acid scrubbers in good working order. [Rule 62-296.320(4)(c), F.A.C.]

EMISSIONS STANDARDS

7. **Emissions Standards:**

- a. **General Visible Emissions:** No person shall cause, let, permit, suffer or allow to be discharged into the atmosphere the emissions of air pollutants from any activity equal to or greater than 20% opacity. This regulation does not impose a specific testing requirement. [Rule 62-296.320(4)(b), F.A.C.]
- b. **VOC/HAP Emissions Limitation:** The maximum **facility-wide** total VOC, total HAP, and individual HAP emissions shall not exceed the following limits:

Pollutant	Emissions (tons per consecutive 12-month period)
Total VOC	Less than 40.0
Total HAP	Less than 25.0
Individual HAP	Less than 10.0

[Rule 62-210.200(PTE), F.A.C.; and, Permit No. 0090014-016-AC]

{Permitting Note: The applicant provided the updated potential to emit (PTE) with the response to the Request for Additional Information for Project No. 0090014-021-AO. The facility-wide PTE were estimated as 39.69 tons per year (TPY) of VOC, 4.44 TPY of individual HAP (hydrogen chloride) and 7.97 TPY of total HAP.}

RECORDS AND REPORTS

8. **Monthly Recordkeeping Requirements:** In order to demonstrate compliance with **Specific Condition 7.b.** of this subsection, the permittee shall maintain a monthly log at the facility for a period of at least five (5) years from the date the data is recorded. The log shall be made available to the Department upon request. The log, at minimum, shall contain the following:
- Facility Name, Facility ID No. (i.e., Renesas Electronics America, Inc., Renesas Electronics America, Inc.- Palm Bay, Facility ID 0090014);
 - Designation of the month and year of operation for which the records are being tabulated;
 - Most recent monthly total of VOC emissions (tons/month);
 - Most recent monthly total of total HAP emissions and individual HAP emissions (tons/month);
 - Most recent consecutive 12-month total of VOC emissions (tons per 12-month total); and
 - Most recent consecutive 12-month total of total HAP emissions and individual HAP emissions (tons per 12-month total).

The monthly logs shall be completed no later than the end of the following month.

SECTION 3. EMISSIONS UNIT SPECIFIC CONDITIONS

A. EU 045 - Semiconductor Manufacturing

[Rules 62-4.070(3) and 62-210.200(PTE), F.A.C.; and, Permit No. 0090014-016-AC]

{Permitting Note: A consecutive 12-month total is equal to the total for the month in question plus the totals for the eleven months previous to the month in question. A consecutive 12-month total treats each month of the year as the end of a 12-month period. A 12-month total is not a year-to-date total. Facilities that have not been operating for 12 months should retain 12-month totals using whatever number of months of data is available until such a time as a consecutive 12-month total can be maintained each month.}

9. Supporting Documentation: Supporting documentation (chemical usage tracking logs, SDS sheets, purchase orders, EPA "As Supplied" data sheets, EPA Method 24, etc.) shall be kept for each chemical and associated products which includes sufficient information to determine usage rates and emissions. These records shall be made available to the Department upon request. Documentation of each chemical reclaimed will use a mass balance method to determine usage/emissions (amount used minus amount collected for disposal or recycle). [Rule 62-4.070(3), F.A.C.; and, Permit No. 0090014-016-AC]