Florida Department of Environmental Protection

Northeast District
7825 Baymeadows Way, Suite B200
Jacksonville, Florida 32256-7590

Rick Scott
Governor

Jennifer Carroll
Lt. Governor

Herschel T. Vinyard Jr.
Secretary

PERMITTEE

Bren-Tronics Energy Systems, LLC
12871 NW Highway 441
Alachua, Florida 32615

Authorized Representative:
Mr. Joe Barrella, Co-Founder

Air Permit No. 0010133-002-AO
Permit Expires: August 14, 2017
Issue Date: August 14, 2012
Lithium-Ion Battery Manufacturing Facility
ARMS ID No. 0010133

This is the final air operating permit, which authorizes operation of a lithium-ion battery manufacturing facility. The facility will be located at the previous site of US Lithium Energetics battery manufacturing facility which is 12871 NW Highway 441, Alachua, FL 32615-6566. The Standard Industrial Classification Code No. 3691, which is a lithium-ion battery manufacturing facility. The facility is located in Alachua County at the above referenced address. The UTM coordinates are Zone 17: 361.4 km East; 3294.8 km North.

This final permit is organized by the following sections.

Section 1. General Information

Section 2. Administrative Requirements

Section 3. Emissions Unit Specific Conditions

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.

This air pollution operating permit is issued under the provisions of: Chapter 403 of the Florida Statutes (F.S.) and Chapters 62-4, 62-204, 62-210, 62-212, 62-296 and 62-297 of the Florida Administrative Code (F.A.C.). The permittee is authorized to conduct the proposed work in accordance with the conditions of this permit. This project is subject to the general preconstruction review requirements in Rule 62-212.300, F.A.C. and is not subject to the preconstruction review requirements for major stationary sources in Rule 62-212.400, F.A.C. for the Prevention of Significant Deterioration (PSD) of Air Quality.

Upon issuance of this final permit, any party to this order has the right to seek judicial review of it under Section 120.68 of the Florida Statutes 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.

Executed in Jacksonville, Florida

Khalid Al-Nahdy, P. E.
District Air Program Administrator

CERTIFICATE OF SERVICE

The undersigned duly designated deputy agency clerk hereby certifies that this Final Air Permit package (including the Final Determination and Final Permit) 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 August 14, 2012 to the persons listed below.

Ms. Veronica N. Sgro, P.E., Koogler and Associates, Inc. (vsgro@kooglerassociates.com)
Mr. Joe Barrella -Bren-Tronics Energy Systems, LLC (JBarrella@bren-tronics.com)

Clerk Stamp

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

clerk

August 14, 2012
date

Project Description

This is the Initial operating permit for a lithium-ion battery manufacturing plant. The plant was originally permitted by U.S. Lithium Energetics. The applicant has purchased the equipment from the former owners and completed construction of the previous facility. Lithium-ion battery manufacturing consists of three stages including: 1. Coating 2. Electrode Preparation 3. Electrode Winding and Assembly. Note: See Section 3 of the permit for a more detailed description.

Facility ID No. 0010133	
EU ID No.	**Emission Unit Description**
001	Lithium-Ion Battery Manufacturing Facility

Pursuant to Rule 62-212.400, F.A.C., Bren-Tronics Energy Systems, LLC provided information to show that the project will not cause the subject facility to be major for PSD applicability purposes, therefore no further Prevention of Significant Deterioration (PSD) air quality preconstruction review is required.

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.
- The facility is not a Title V major source of air pollution in accordance with Chapter 213, F.A.C.
- The facility is not a major stationary source in accordance with Rule 62-212.400(PSD), F.A.C.

1. Permitting & Compliance Authority: The permitting authority for this project is the Northeast District Office, Air Resources Section, Florida Department of Environmental Protection (Department). The Northeast District Office's mailing address is 7777 Baymeadows Way West, Suite 100, Jacksonville, Florida 32256-7590. All documents related to applications for permits to operate an emissions unit shall be submitted to the Northeast District Office. The Permitting Authority's telephone number is 904/256-1700.

2. Appendices: The following Appendices are attached as part of this permit:

   a. Appendix A. Citation Formats and Glossary of Common Terms;

   b. Appendix B. General Conditions;

   c. Appendix C. Common Conditions

   d. Appendix D. Common Testing Requirements

3. 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.

4. 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.]

5. Modifications: The permittee shall notify the Compliance Authority upon commencement of construction. 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.]

6. Construction Permit Required: Unless exempt from permitting pursuant to Rule 62-210.300(3)(a) or (b), F.A.C., or Rule 62-4.040, F.A.C., an air construction permit shall be obtained by the owner or operator of any proposed new, reconstructed, or modified facility or emissions unit, or any new pollution control equipment prior to the beginning of construction, reconstruction pursuant to CFR 60.15 or 63.2, or modification of the facility or emissions unit or addition of the air pollution control equipment; or to establish a PAL; in accordance with all applicable provisions of Chapter 62-210, F.A.C., Chapter 62-212, F.A.C., and Chapter 62-4, F.A.C.
   [Rule 62-210.300(1)(a), F.A.C.]

7. Considering operational variations in types of industrial equipment operations affected by this rule, the Department may adjust maximum and minimum factors to provide reasonable and practical regulatory controls consistent with the public interest.
   [Rule 62-210.700(5), F.A.C.]

8. A completed **Application for Non-Title V Air Permit Renewal** (DEP Form No. 62-210.900(4), F.A.C.), shall be submitted to the Department at least 60 days prior to the expiration date of this operation permit. To properly apply for an operation permit, the permittee shall submit the appropriate application form, processing fee, and compliance test reports as required by this permit.
[Rules 62-4.055, 62-4.090, and 62-4.220, F.A.C.]

This section of the permit addresses the following emissions unit.

ID No.	Emission Unit Description
001	Lithium-Ion Battery Manufacturing Facility

PROJECT DESCRIPTION

Lithium-Ion Battery Manufacturing Facility:

This project is for the operation of a lithium-ion battery manufacturing plant. The plant was originally permitted by U.S. Lithium Energetics. The applicant purchased the equipment from the former owners and has complete construction of the previous facility. Lithium-ion battery manufacturing consists of three stages as follows:

Stage 1: Coating

For each anode and cathode manufacturing operation, dry materials will be weighed, transferred and mixed with a solvent in a closed system. Particulate Matter (PM) emissions generated from the weighing process in each system are controlled by Torit dust collectors Model No. DF T3-18 or equivalent. Each of the two dust collectors is vented into the closed building. There are no roof vents or openings to vent the PM outside the building. The uniform slurries will be pumped to (4) four closed coating machines. Specific substrates (metallic foils) will be heat treated and precision coated with the appropriate slurry in the coating machines. The coated substrates will then be dried with hot air provided by steam (indirect heat exchanger) generated by a small natural gas fired boiler (approximately 6.2 MMBtu per hour heat input). The individual machines will be ducted to a condenser for solvent recovery and then exhausted to the atmosphere. The condenser volatile organic compound recovery efficiency is expected to be greater than 99.9% efficient. The solvent/water mixture recovered from the condenser will be pumped to a closed distillation system and re-used in the process. Heating for the solvent recovery process will be provided by steam generated by the boiler. The solvent storage tanks will be equipped with a conservation vent.

Stage 2: Electrode Preparation

The coated rolls of substrate will be passed between precision rollers, unwound, slit into strips and rewound. Any dust generated in this operation, will be exhausted to a recirculating air filtration system. The electrodes are vacuum dried to remove trace quantities of moisture. The vacuum system is connected to a carbon filter to remove any minute amount of solvent in the air stream.

Stage 3: Electrode Winding and Assembly

Metal tabs will be attached to the electrode and wound together with a plastic film. Any dust generated in this operation will be exhausted to a recirculating air filtration system. The various components will be assembled into a battery and tested, stamped/marked and packaged for shipment. [Application No. 0010133-001-AC]

EMISSION LIMITATIONS AND PERFORMANCE STANDARDS

1. **Volatile Organic Compounds (VOC)/Organic Solvents (OS)**: The permittee shall allow no person to store, pump, handle, process, load, unload or use in any process or installation VOC or OS without applying known and existing vapor emission control devices or systems deemed necessary and ordered by the Department. Procedures to minimize VOC emissions shall include, but not be limited to:

   a. Maintain tightly fitting cover, lids, etc. on all containers of materials containing VOC when they are not being handled, tapped, etc.
   b. Where possible and practical, procure/fabricate a tightly fitting cover for any open trough, basin, bath, etc., of VOC so that it can be covered when not in use.
   c. All fittings, valves, lines, etc., shall be properly maintained.
   d. All VOC spills shall be attended to immediately and the materials properly disposed of, recycled, etc.

   [Rule 62-296.320(1), F.A.C.]

PERFORMANCE RESTRICTIONS

2. **Hours of Operation**: The hours of operation shall not be limited (i.e., 8760 hours per year). [Rules 62-4.070(3) and 62-210.200(PTE), F.A.C.]

RECORDKEEPING AND REPORTING REQUIREMENTS

3. **Recordkeeping – VOC Emissions**: The VOC emission rate shall be determined monthly by recording the following data for each material used that contains VOCs:

Quantity	
• Gallons of Material Used (Plant usage logs shall be maintained)	
Emissions Factors	
• Density of Material in Pounds per Gallon (Manufacturer specification's data shall be maintained)	• Pollutant Factor (Percentage by Weight) * For solvent use percentage of total which is made up
Emissions	
• Total Cumulative VOC Emissions (Tons)	

   Calculations determining the monthly VOC emission rate shall be made available to the Department upon request. Records shall be maintained for a minimum period of two years. [Rule 62-4.070, F.A.C.]

4. This facility is subject to the attached Section 4 Combined Appendices A-D.