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06 December 2006

Jóse A Marrero
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Re: P1635 - Guide for the Ventilation and Thermal Management of Batteries for Stationary Applications

Dear Jóse:

I am pleased to inform you that on 06 December 2006 the IEEE-SA Standards Board approved the above referenced project until 31 December 2006. A copy of the file can be found on our website at <http://standards.ieee.org/board/nes/projects/1635.pdf>.

Now that your project has been approved, please forward a roster of participants involved in the development of this project. This request is in accordance with the IEEE-SA Operations Manual, Clause 5.1.2i under Duties of the Sponsor which states:

"Submit annually to the IEEE Standards Department an electronic roster of individuals participating on standards projects"

For your convenience, an Excel spreadsheet for your use has been posted on our website at <http://standards.ieee.org/guides/par/roster.xls>. Please forward this list to me via e-mail at s.hampton@ieee.org no later than 06 March 2007.

Please visit our website, IEEE Standards Development Online (<http://standards.ieee.org/resources/development/index.html>), for tools, forms and training to assist you in the standards development process. Also, we strongly recommend that a copy of your draft be sent to this office for review prior to the final vote by the working group to allow for a quick review by editorial staff before sponsor balloting begins.

If you should have any further questions, please contact me at +1 732 562 6003 or by email at s.hampton@ieee.org.

Sincerely,

Sherry Hampton
Administrator, Governance
Standards Activities
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PAR Request Date: 14 October 2006**PAR Approval Date:** 06 December 2006**PAR Signature Page on File:** Yes**Type of PAR:** Modification to Approved PAR**Status:** Modification to a Previously Approved PAR P1635, 11 December 2002**Root Project:** IEEE Std 1635-0**1.1 Project No.:** **P1635****1.2 Type of Document:** Guide**1.3 Life Cycle:** Full-Use**1.4 Is this document in ballot now?** No**2.1 Title**

Guide for the Ventilation and Thermal Management of Batteries for Stationary Applications

2.1 Amendment/Corrigenda Title**3.1 Working Group Name**[Ventilation Working Group](#)**Working Group Chair**[Clark, Mark S.](#)

Phone: 361-972-8234

Email: sclark@stpegs.com

Working Group Vice Chair**3.2 Sponsor**[IEEE Power Engineering Society Stationary Batteries Committee \(PE/SB\)](#)**Sponsor Chair**[Norman, Samuel](#)

Phone: +1 919 563 6610

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Name of Standards Liaison Representative (if applicable)[Marrero, José A](#)

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3.3 Joint Sponsor**4.1 Type of Ballot:** Individual**4.2 Expected Date of Submission for Initial Sponsor Ballot:** March 2004**4.3 Projected Completion Date for Submittal to RevCom:** December 2007**5.1 Approximate number of people expected to work on this project:** 25

5.2 Scope: This guide discusses the ventilation and thermal management of stationary battery systems as applied to: a) Vented (flooded) lead-acid b) Valve-regulated lead acid (VRLA) c) Nickel-cadmium (Ni-Cd) For each category, both the technology and the design of the battery are described in order to facilitate user understanding of the environmental issues associated with each type of technology. The scope of this document includes only stationary batteries under conditions of expected use. Multiple operating modes are identified. Specifically not included in this document are: • Ventilation for spilled electrolyte, as a spill is considered an accident condition. Temporary ventilation for fumes associated with spills due to handling of batteries is addressed in IEEE Std 1578-200A, IEEE Recommended Practice for Electrolyte Spill Containment and Management • Recharging stations for motive power or automotive batteries. These stations use different charging regimes from stationary float applications, although the charging gases produced can be managed in accordance with the guidelines in this document • Batteries that are embedded in small equipment such as desk-top Uninterruptible Power Supply (UPS) systems and emergency lighting systems • Battery installations in classified (hazardous) environments • Ventilation for gases or other byproducts given off by battery installations involved in fires. The latter are not considered conditions of expected use, and in such circumstances ventilation could be disabled • Lithium-based batteries • Ventilation of the charger, UPS, or other equipment associated with the battery system • Battery Room design for fire or smoke events. The ventilation practices described in this guide represent “the ventilation practices described in this guide are recommended” based on the information available at the time this document was developed. The user should evaluate these practices against their operating experience, operating conditions, number and size of battery systems, manufacturer’s recommendations, resources and needs in developing an environment that is both safe and conducive to optimum operation of the equipment. These recommendations were developed without consideration of economics, availability of equipment and personnel, or relative importance of the application. Design of a ventilation system for a specific battery installation requires consideration of all issues, not just the technical issues considered in this document.

Old Scope: This guide discusses the ventilation and thermal management of stationary battery systems (flooded lead-acid batteries, VRLA and Ni-Cd). For each category, both the technology and the design of the battery are described in order to facilitate user understanding of the environmental issues associated with each type of technology. Ventilation for electrolyte spills is not discussed in this guide.

5.3 Is the completion of this document contingent upon the completion of another document? No

5.4 Purpose: No change to existing purpose.

Old Purpose: The purpose of this document is to provide HVAC and battery system designers and users with information and recommendations concerning the ventilation and thermal management of stationary battery installations.

5.5 Need for the Project: Provide a bridge of understanding between the electrical and HVAC design engineers in designing a stationay battery installation.

5.6 Stakeholders for the Standard: The American Society of Heating, Refrigeration, and Air Conditioning Engineers (ASHRAE) All stationary battery installation designer engineers

6.1.a. Has the IEEE-SA policy on intellectual property been presented to those responsible for preparing/submitting this PAR prior to the PAR submittal to the IEEE-SA Standards Board? Yes **Presented Date:** 2001-01-29

If no, please explain:

6.1.b. Is the Sponsor aware of any copyright permissions needed for this project? No

If yes, please explain:

6.1.c. Is the Sponsor aware of possible registration activity related to this project? No

If yes, please explain:

7.1 Are there other standards or projects with a similar scope? No

If yes, please explain:

Sponsor Organization:

Project/Standard Number:

Project/Standard Date: 0000-00-00

Project/Standard Title:

7.2 Is there potential for this standard (in part or in whole) to be adopted by another national, regional, or international organization? ? Do not know at this time

Technical Committee Name and Number:

Contact person:

Contact person Phone Number:

Contact person Email Address:

7.3 Will this project result in any health, safety, security, or environmental guidance that affects or applies to human health or safety? No

The focus of this document is the environmental design of stationary battery installations. This encompasses all aspects of the environment including managing temperature, hydrogen, corrosive and toxic gases associated with stationary battery installations. The document also addresses inspections and maintenance of the environmental control systems and discusses options for environmental management.

7.4 Additional Explanatory Notes:

Revised scope to agree with the actual document. Extended due date to allow time for balloting. The extension is requested due to the problems we have had in getting agreement between the IEEE and ASHRAE on the balloting process. We started the process of getting a memorandum of understanding between the organizations nearly 2 years ago. We will have the MOU this month. In part this has been caused by changes in the IEEE and ASHRAE project managers assigned to the project.

8.1 Sponsor Information:

Is the Scope of this project within the approved scope/definition of the Sponsor's Charter? Yes

If no, please explain: Revised scope to agree with the document scope as approved by the working group.