

August 25, 2015

ZLand®

GEN2

FairfieldNodal Lithium Ion Battery Pack Testing – 221.7702.0002

**UN Manual of Tests and Criteria, Part III, Subsection 38.3
Underwriters Laboratories Inc., October 21, 2008, their reference SV17457, Project 08CA43185.**



CERTIFICATE OF CONFORMANCE

CUSTOMER: Fairfield Nodal, 1111 Gillingham Lane, Sugarland, TX 77478

PROJECT: UN Manual of Tests and Criteria, Part III, Subsection 38.3, 5th Edition

ITEM OR SERVICE: Tests T1 to T5 & Test T7

MODEL NUMBER(S):	SERIAL NUMBER(S):
<u>770202 (1st Cycle)</u>	<u>37, 41, 59, 130</u>
<u>770202 (50th Cycle)</u>	<u>43, 81, 125, 153</u>

SPECIFICATION NO. AND TITLE: Wyle Quote No. 542/056908-R3/MT dated 3/1/13

SELLER'S ADDRESS: Wyle Laboratories, Inc., 7800 Highway 20 West (35806)
P.O. Box 077777, Huntsville, AL 35807-7777


CUSTOMER P.O. NO.: 0313F **WYLE JOB NO.:** T70873

DEVIATIONS FROM SPECIFICATION REQUIREMENTS: (IF NONE, SO STATE)
ATTACH COPIES OF DEVIATION APPROVAL DOCUMENTS.

- | | |
|----------------|----------|
| 1. <u>None</u> | 4. _____ |
| 2. _____ | 5. _____ |
| 3. _____ | 6. _____ |

The seller, including his sub-suppliers, hereby certifies that the item or service supplied on this order complies with the above listed specifications, drawings, applicable codes, standards, and procedures. The seller certifies that all deviations from specification requirements are listed above and that deviation approval documents are attached.

The seller also certifies that items referenced on this order are in conformance with the Wyle Laboratories' Quality Assurance Manual, Revision 3, effective March 31, 2009.

SIGNATURE:  **DATE:** 6/18/13
PROJECT ENGINEER

SIGNATURE:  **DATE:** 6/18/13
FOR QUALITY ASSURANCE
MANAGER OR EQUIVALENT



CERTIFICATE OF CONFORMANCE

CUSTOMER: Fairfield Nodal, 1111 Gillingham Lane, Sugarland, TX 77478

PROJECT: UN Manual of Tests and Criteria, Part III, Subsection 38.3, 5th Edition

ITEM OR SERVICE: Tests T1 to T5 & Test T7

MODEL NUMBER(S):	SERIAL NUMBER(S):
<u>77000001 (1st Cycle)</u>	<u>267, 272, 295, 297</u>
<u>77000001 (50th Cycle)</u>	<u>151, 164, 171, 173</u>

SPECIFICATION NO. AND TITLE: Wyle Quote No. 542/056908-R3/MT dated 3/1/13

SELLER'S ADDRESS: Wyle Laboratories, Inc., 7800 Highway 20 West (35806)
P.O. Box 077777, Huntsville, AL 35807-7777

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- | | |
|----------------|----------|
| 1. <u>None</u> | 4. _____ |
| 2. _____ | 5. _____ |
| 3. _____ | 6. _____ |

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SIGNATURE:  **DATE:** 6/18/13
PROJECT ENGINEER

SIGNATURE:  **DATE:** 6/18/13
QUALITY ASSURANCE
MANAGER OR EQUIVALENT

August 19, 2015

ZLand® GEN2 UN 38.3 Battery Pack Testing

Testing required under UN Manual of Tests and Criteria, Part III, Subsection 38.3 was successfully completed on the FairfieldNodal lithium ion battery pack part number **221.7702.0002** by **Wyle Laboratories** on **June 18, 2013**, their reference **T70873**. Testing under this reference number was done on; the battery pack contained in the unit case and the battery pack outside of the case.

I confirm FairfieldNodal lithium ion battery pack part numbers; **221.7702.0012** is the same design, manufacturing process and does not differ from the tested type outlined in 38.3.2.2 shown below.

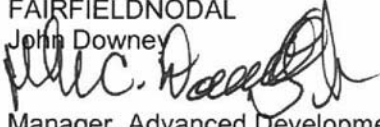
This battery pack is used in the following ZLand Nodes;

ZLand® GEN2 Node (1C); 221.8300.0001, 221.7700.0001, 221.7700.0002

I do hereby certify these facts to be true and correct to the best of my knowledge.

FAIRFIELDNODAL

John Downey


Manager, Advanced Development Group

Date

8/28/15

Validated

William Guyton


Manager of Engineering

Date

8/28/15

38.3.2.2 Lithium metal and lithium ion cells and batteries shall be subjected to the tests, as required by special provisions 188 and 230 of Chapter 3.3 of the Model Regulations prior to the transport of a particular cell or battery type. Cells or batteries which differ from a tested type by:

- (a) For primary cells and batteries, a change of more than 0.1 g or 20% by mass, whichever is greater, to the cathode, to the anode, or to the electrolyte;
- (b) For rechargeable cells and batteries, a change in nominal energy in Watt-hours of more than 20% or an increase in nominal voltage of more than 20%; or
- (c) A change that would lead to failure of any of the tests, shall be considered a new type and shall be subjected to the required tests.

NOTE: The type of change that might be considered to differ from a tested type, such that it might lead to failure of any of the test results, may include, but is not limited to:

- (a) A change in the material of the anode, the cathode, the separator or the electrolyte;
- (b) A change of protective devices, including hardware and software;
- (c) A change of safety design in cells or batteries, such as a venting valve;
- (d) A change in the number of component cells; and
- (e) A change in connecting mode of component cells.

In the event that a cell or battery type does not meet one or more of the test requirements, steps shall be taken to correct the deficiency or deficiencies that caused the failure before such cell or battery type is retested.