



OUTCOMES REPORT EPEAT VERIFICATION ROUND 2010-06

1. Summary and Details of Verification Round 2010-06

This report provides the detailed results of EPEAT Verification Round 2010-06. Round 2010-06 consisted of hybrid investigations which started with Level 2 and Level 3 investigations and then followed up with Level 1 investigations¹. The investigations involved purchasing two small form factor notebook computers and examining the physical products to see if they met a number of criteria in the Design for End of Life and Packaging performance categories. In this Verification Round “small form factor notebook computers” was defined as those with screens less than 11”. Below is a list of the criteria investigated:

- 4.3.1.2: Required - Elimination of paints or coatings that are not compatible with recycling or reuse
- 4.3.1.4: Required - Marking of plastic components
- 4.3.1.5: Required - Identification and removal of components containing hazardous materials
- 4.3.1.6: Optional - Reduce number of plastic materials types
- 4.3.1.7: Optional - Molded/glued in metal eliminated or removable
- 4.3.2.1: Optional - Manual separation of plastics
- 4.3.2.2: Optional - Marking of plastics
- 4.8.2.1: Required - Separable packing materials
- 4.8.2.2: Optional - Packaging 90% recyclable and plastics labeled (Investigated “plastics labeled” only)

These criteria were chosen because they lend themselves to investigation using visual examination and destructive disassembly. 4 criteria were required and 5 were optional.

This Round was conducted under the revised IEEE 1680.1 standard including the new international registry representing 41 countries. The criteria were investigated on two randomly selected small form factor notebook computers for which these criteria were applicable from two subscribers. These products were purchased in the United States.

2. Outcomes of Round 2010-06

This Verification Round focused primarily on Level 2 and Level 3 investigations. A Level 1 investigation was added to the Verification Round when, during disassembly, conformance to an

¹ Definitions of investigation levels can be found in Section 6 at the end of this document.



EPEAT, Inc.

One World Trade Center
121 SW Salmon St., Suite 210
Portland OR 97204

www.epeat.net
Voice: (503) 279-9382
Fax: (503) 279-9381

additional, required criterion was called into question (4.3.1.2).

Following are the specific highlights of Round 2010-06:

- 2 products were investigated in the Verification Round
- 18 investigations were launched and completed (on the 2 products):
 - 2 investigations looked at required criterion 4.3.1.2.
 - 2 investigations looked at required criterion 4.3.1.4
 - 2 investigations looked at required criterion 4.3.1.5
 - 2 investigations looked at optional criterion 4.3.1.6
 - 2 investigations looked at optional criterion 4.3.1.7
 - 2 investigations looked at optional criterion 4.3.2.1
 - 2 investigations looked at optional criterion 4.3.2.2
 - 2 investigations looked at required criterion 4.8.2.1
 - 2 investigations looked at optional criterion 4.8.2.2
- There were 18 decisions of conformance for these investigations.
- In other words, there were no decisions of non-conformance for any of the investigated criteria.

3. Key Lessons of Round 2010-06

- NOTE: This Round used Level 2 and Level 3 investigations, with one exception as noted below. For these Level 2 and Level 3 investigations visual inspections took the place of data provided by the Subscribers.
- Required criterion 4.3.1.2 - Elimination of paints or coatings that are not compatible with recycling or reuse.
 - Verification Requirements:
 - Declaration from manufacturer
 - Documentation showing manufacturer test, or supplier verification if paints or coatings are used on plastic parts > 100 g.
 - 2 investigations looked at this criterion and both were found to be in conformance.
 - Both products were found to have coated plastics. As a result, a Level 1 investigation of this criterion was launched. One product had no parts greater than 100g and the other Subscriber provided IZOD test results showing they were in compliance.
 - *Message to Subscribers:*
 - *If parts greater than 100g have paints or coatings, Subscribers must be ready to prove compliance to the IEEE 1680.1 Standard.*



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- 4.3.1.4: Required - Marking of plastic components
 - 2 investigations looked at this criterion and both were found to be in conformance.
 - One product did not have plastic pieces greater than 100g. In the other product, all plastics greater than 100 g were marked appropriately. In some cases, the markings were underneath other parts.
 - *Message to Subscribers:*
 - *It is preferable that plastics are marked in places where they can be seen and sorted to enable recycling.*
- 4.3.1.5: Required - Identification and removal of components containing hazardous materials
 - 2 investigations looked at this criterion and both were found to be in conformance.
 - Both products had clear marking of hazardous components (including batteries) which were easily removed.
- 4.3.1.6: Optional - Reduce number of plastic materials types
 - 2 investigations looked at this criterion and both were found to be in conformance.
 - Visual inspection showed that all large plastic pieces were made from a single polymer blend.
- 4.3.1.7: Optional - Molded/glued in metal eliminated or removable
 - 2 investigations looked at this criterion and both were found to be in conformance.
 - Both products had molded-in or glued-in metal. This included pressed in threaded inserts and the product name embedded in the plastic.
 - At first the inserts caused concern but visual inspection and manual disassembly was done to ensure this criterion was being met.
- 4.3.2.1: Optional - Manual separation of plastics
 - 2 investigations looked at this criterion and both were found to be in conformance.
 - All plastic parts > 25 g used in the investigated products were manually separable with commonly available tools in a short period of time.
- 4.3.2.2: Optional - Marking of plastics
 - 2 investigations looked at this criterion and both were found to be in conformance.
 - In both products, all plastics greater than 25 g were marked. In some cases, the markings were underneath other parts.
- 4.8.2.1: Required - Separable packing materials
 - 2 investigations looked at this criterion and both were found to be in conformance.
 - In one product it was determined that the packaging included with the unit was not



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reusable. All components larger than 25 g were easily separable by hand.

- The second product came inside a carrying case that provided storage for all necessary components. There were no extra packing materials inside the carrying case. The carrying case was designed to be reusable and therefore not subject to this criterion.
- 4.8.2.2: Optional - Packaging 90% recyclable and plastics labeled (Investigated “plastics labeled” only)
 - 2 investigations looked at this criterion and both were found to be in conformance.
 - All applicable plastic packaging pieces were marked.

4. Looking Forward

1. **Plans for Future Verification Activities:** Energy Star requirements changed beginning January 1, 2011. Please review products put on the registry after January 1, 2011 to make sure they are in Conformance and "...declare the version of ENERGY STAR to which the product is qualified or compliant."
2. **International Training:** We have a tentative training schedule for 2011. Please contact EPEAT staff for more information.
3. **Conformity Assessment Protocols:** This and all future rounds will be conducted according to the Conformity Assessment Protocols posted on www.epeat.net.

5. Background

To assure the credibility of the EPEAT Registry, verification of the claims by participating manufacturers (called “Subscribers”) must be rigorous, independent and transparent. Verification is conducted strictly according to policies and procedures described in the IEEE 1680 Standard and in documents provided on www.epeat.net. Subscribers have no forewarning that their products will be verified and verification proceeds against the declarations as they are in the database at the time the round begins.

In Level one verification investigations, subscribers are required to provide detailed and accurate information in a timely manner that demonstrates conformance, such as supply chain management records. In Level two and three investigations EPEAT buys products without the manufacturer’s knowledge and disassembles them, and possibly conducts detailed analytical testing if needed. Investigations are performed by expert technical contractors who are free of conflicts of interest, and their recommended decisions are reviewed and finalized by a 3-person panel of independent technical experts (called the Product Verification Committee or PVC) who are also contractors free of conflicts of interest and are blind to the identity of the products and companies they are judging. This panel makes a conformance/non-conformance decision on each investigation, based on evidence collected and analyzed by Qualified Verifiers. A serious consequence of receiving a non-conformance is that it is published publicly in this report, for purchasers, competitors, and others to see.

Subscribers must correct findings of non-conformance, either by bringing the product into conformance or by un-declaring the criterion until conformance is recovered, and they must do so for



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all products that are similarly incorrectly declared, not only the product(s) that were investigated. If they correct the non-conformance by un-declaring the criterion and the criterion is an optional criterion, they lose a point, and possibly the product drops a tier. If it is a required criterion, they must archive the product. If it is a required corporate criterion, all their products must be archived.

6. Definitions of Investigation Levels.

- Level 1 Investigation:
 - Desk inspection of manufacturer-provided verification evidence
 - Most commonly used investigation level

- Level 2 Investigation:
 - Investigation of empirical evidence
 - Interviews with 3rd parties (contract recyclers, suppliers, purchasers, technical experts, etc.)
 - Product/packaging examinations possibly with partial disassembly
 - Etc.
 - May also include level one investigation

- Level 3 Investigation:
 - Investigation of empirical or analytical evidence
 - Destructive disassembly
 - Lab tests
 - Etc.
 - May also include level one and level two investigations