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## **OUTCOMES REPORT EPEAT VERIFICATION ROUND THREE**

### **0. Summary of Verification Round Three**

This report provides the detailed results of the third full round of EPEAT verifications.

**Background** – To assure the credibility of the Registry, verification must be rigorous, independent and transparent. Verification is conducted strictly according to policies and procedures described in the Standard and in documents provided on [www.epeat.net](http://www.epeat.net). Subscribers have no forewarning that their products will be verified and must be prepared to demonstrate that all units of their products meet the declared criterion.

In verification, subscribers are required to provide detailed and accurate information in a timely manner that demonstrates conformance, such as supply chain management records. EPEAT also conducts independent product investigations and testing.

The consequences of a non-conformance are first that the subscriber must un-declare the criterion for the product, and for any other products for which the non-conformance applies. If the non-conformant 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, until the non-conformance is corrected. If it is a required corporate criterion, all their products must be archived until corrected.

A second, and serious, consequence of non-conformance is the publication in this report of the companies and products that received non-conformances.

**Round Three Details** – In Round Three, EPEAT conducted a smaller number of investigations than in previous rounds. The intent is to be able to begin and end verification rounds in a timelier manner, such that more rounds can be conducted each year. It is intended that a fourth round will be initiated soon.

Due to the rapid growth on the EPEAT Registry of the number of subscribers, and the fact that several of those subscribers had not been previously verified, Round Three focused on products registered by subscribers that had not been subject to verification previously, or had not been subject to as many investigations as other subscribers.

Additionally, Round Three targeted certain difficult-to-meet criteria, especially those that had only rarely been declared but are now being more frequently declared.

As a consequence, like Rounds One and Two, Round Three involves focused investigation based on PVC priorities, and are probably not statistically representative of a random sampling of the full Registry. In future rounds the PVC may chose to conduct a statistical random sampling of the products and subscribers on the Registry.

Section 3.1 provides an overview of the outcomes of Round Three. Highlights include:

- Of 21 completed investigations, 2 non-conformances were identified, both of optional criteria.
- One non-conformance was an administrative error, specifically an unintended declaration to a criterion, that was quickly corrected by un-declaring that criterion.

- Another non-conformance resulted, apparently, from a subscriber not understanding the requirements of criterion 4.2.1.2, specifically, the requirements for post-consumer recycled content. The subscriber was not able to provide any evidence of the presence of such content. The subscriber undeclared 4.2.1.2 for 8 products and changed the percentage of recycled content declared in 4.2.1.1 for those products.
- The overall impact on the Registry was:
  - 0 products left the Registry.
  - 9 products lost points.
  - 4 products dropped from Silver to Bronze.

One cause of non-conformance stands out: that a subscriber did not understand the requirements for post-consumer recycled content. This points to the need for subscriber training or additional guidance so that product requirements and requirements for verification data are well understood.

### ***Looking Forward***

1. ***Plans for Future Verification Activities:*** As stated, the future will see some shorter, more tightly focused and more frequent verifications, but also some larger random sampling of the Registry.
2. ***Investigation Protocols:*** A draft set of verification protocols are now being reviewed by subscribers and will be finalized in February 2009. The draft protocols were used in Round Three, and when finalized they will be the basis for all future verification rounds. They will also provide greater clarity and certainty to subscribers about what is required to achieve and to demonstrate conformance.
3. ***Conformance and Verification Training Workshop:*** EPEAT staff intends to develop and deliver a training workshop for subscribers, potential future Verifiers, individuals who wish to provide conformance consulting services to subscribers, and others. This workshop, based on verification protocols, will cover questions of conformance assurance for declaration and demonstration of conformance for verification. This will be an in depth examination of how to assure conformance for all criteria and how verification is performed.

## **1. Overview**

### **1.1. Report Purpose and Contents**

The Round Three verification procedures followed those defined in the document “EPEAT Product Verification Plan”, which is available on the Product Verification page – <http://www.epeat.net/ProductVerification.aspx> – as “Generic Verification Plan”. Also linked on the Product Verification page are the Round Three Plan and other documents, issued in advance of the Round.

This Outcomes Report describes the results of Round Three – the investigations undertaken, the non-conformances found, and corrective actions undertaken. In addition, this report includes observations by the EPEAT staff, Qualified Verifiers, and the Product Verification Committee (PVC) regarding two specific criteria for which conformance raises substantial issues. These will be addressed in the Verification protocols and in recommendations for the update of the 1680.1 computer Standard.

***Subscribers are advised to consider the findings and recommendations of this report relative to***

*their products' registrations, especially those highlighted in the final section.*

## 1.2. Round Three Verification Results with Subscribers and Products Identified

The specific results of the Round Three verifications, with the manufacturers and products identified are included in Table 2 of this report. This follows the policy adopted by the EPEAT Board of Advisors, which reads:

Purchasers and other parties who specifically request will be notified of the specific verification decisions and actions. Verification results, clearly noting de-registrations, will be provided on the website.

## 2. Round Three Investigations

### 2.1. Background

See the Round One Outcomes Report for general background on verification personnel and procedures. The team is the same, except that one Qualified Verifier, Ms. Anne Peters, is no longer a member of the team.

### 2.2. Strategic Selection of Investigations

#### 2.2.1. Objectives of Round Three

Following are the objectives that were achieved in selection of criteria and products for verification:

1. To verify product declarations for subscribers that have either not previously been verified, or have been verified considerably less than typical for the Registry at large.
2. To verify some criteria not previously verified.
3. To verify declarations to the Energy Star criterion – 4.5.1.1 – where the product does not appear on the ENERGY STAR list of qualified products. The 1680 standard allows subscribers to meet 4.5.1.1 either by being qualified to ENERGY STAR – that is, being listed on the ENERGY STAR web site – or being compliant to the ENERGY STAR specifications – that is, meeting the product specifications of ENERGY STAR even though the product has not been registered with ENERGY STAR. In the latter case, the subscriber must provide the test data to the EPEAT Verifier to demonstrate compliance.
4. To verify a set of declarations to a criterion for which concern has been expressed by stakeholders, especially recyclers. Required criterion 4.3.1.5 – Identification and removal of components containing hazardous materials – requires that such components “shall be safely and easily identifiable and removable”. Some recyclers have expressed concern that CCFL bulbs (mercury containing fluorescent backlights) are difficult to remove from flat panels and often break during removal, dispersing the hazardous substance.

See section 3.3 and 3.4 below for significant findings and recommendations from these investigations.

#### 2.2.2. Selection Process

The PVC determined the guidelines for the investigations to be performed in Round Three. They established principles for the selection of criteria to be investigated, and identified specific criteria for investigation based on these principles. The PVC also defined the number of and rules for selecting subscribers and products to be investigated for each criterion. The Round Three Verification Plan provides details on the product selection process.

EPEAT staff, following these PVC rules, then selected the specific products for investigation.

The PVC was not aware of the specific products nor the manufacturers being verified until and unless it was necessary in the final verification steps for the PVC to interact with the subscriber, or to review their product-specific information, in order to reach a final decision. *As a general EPEAT policy, the PVC is blind to the subscribers and products they are making decisions about.*

Since IEEE interpretations and revisions processes are being performed simultaneously with this verification, Round Three excluded those criteria or portions of criteria that are currently subject to such reconsideration by stakeholders.

At the time Round Three was initiated there were 975 products on the Registry from 31 manufacturers. The PVC targeted 21 investigations, all for Level One verifications.

The criteria selected, and the number of investigations for each criterion, are outlined in the Appendix.

### **3. Outcomes of Round Three Investigations**

#### **3.1. Overview of Round Three Outcomes**

Of the 21 completed investigations, 2 non-conformances were identified, for a non-conformance rate of 9.5%.

Note that a non-conformance means that the subscriber was unable to adequately prove that the declaration on the EPEAT Registry accurately reflects the environmental characteristics of the product. A non-conformance may be inadvertent (an administrative error), result from misunderstanding of the requirements, or indicate a lack of adequate supply chain controls.

The Round Three non-conformances seem to divide along these lines:

- 1 non-conformance was claimed to be an administrative error in declaration, with supporting evidence that bore this out to the PVC's satisfaction.
- 1 non-conformance seemed to be a misunderstanding of the standard's requirements, and of the requirement to provide data that demonstrates conformance.

Both non-conformances involved optional EPEAT criteria, and not required criteria.

By the close of the verification round, both products with a non-conformance decision were brought into conformance by the subscriber un-declaring the non-conforming criterion.

#### **3.2. Outcomes of Verification of 4.5.1.1 – ENERGY STAR**

Seven of the 21 investigations in Round Three were selected to verify that products on the EPEAT Registry, but not listed as qualified to ENERGY STAR, do indeed conform with 4.5.1.1. In some cases the subscriber was not listed as an ENERGY STAR partner, and so had no products qualified to ENERGY STAR. In other cases, the subscriber was an ENERGY STAR partner, but the individual product was not included on the ENERGY STAR qualified product list.

Consistent with the wording in the standard, subscribers could provide one, or both, of the following in demonstration of conformance:

1. Demonstration that the product is, in actual fact, listed on the ENERGY STAR qualified product list, and the listing was effective as of the date that it was declared in conformance to EPEAT, or
2. Test data that demonstrates compliance with the product specifications of ENERGY STAR.

In all investigations the subscribers were able to provide evidence and test data that demonstrated compliance with ENERGY STAR specifications. That is, there were no Non-Conformances. In most cases the product was, in actual fact, included on the ENERGY STAR qualified list. There were different reasons that staff did not find the product on the ENERGY STAR list in the initial selection process:

- In three cases the product was added to the ENERGY STAR qualified list after the verification began. Since the products were not ENERGY STAR qualified when verification began, nor were they ENERGY STAR qualified when they were declared to the criterion on the EPEAT Registry, the subscriber was required to provide test data demonstrating compliance.
- In two cases the products had different names on the two lists.
- In two cases the products were in different product categories on the two lists, i.e. workstations versus desktops.

Though in no cases was there cause to recommend a Non-Conformance, the Verifier expressed considerable concern in some cases about the test data provided in demonstration of conformance. In some cases, the Verifier was concerned that test data was not provided quickly and that when it was provided, it appeared that data had been assembled after the request. This raises suspicion that the subscriber may not have adequately tested the product for ENERGY STAR compliance before registering it with EPEAT.

Also, in only one case was the data provided from an accredited, independent laboratory. ENERGY STAR allows manufacturers to provide test data from in-house and unaccredited laboratories. Thus EPEAT has no basis for EPEAT to require independence or accreditation of laboratories. The Verifier expressed concern that data provided from an in-house and unaccredited lab does not rise to the level of independent conformance assurance that other EPEAT verification activities expect.

Finally, it was apparent that not all configurations of a product are tested for compliance with the ENERGY STAR specifications. New components are often added to products on an ongoing basis. The manufacturer is required by ENERGY STAR to test the highest power consuming configuration. However, given the ever-changing nature of configurations, and that energy testing is not conducted on all configurations, this does not provide a high level of confidence that a product may not “drift” out of compliance as new and different components are added in new configurations.

### 3.3. Outcomes of Verification of 4.3.1.5 – Identification and removal of components containing hazardous materials

Eleven of the 21 investigations in Round Three were selected to verify that products are designed appropriately such that hazardous materials can be readily identified and removed per required criterion 4.3.1.5. The primary concern was that mercury-containing lamps could be properly removed from notebooks – six of the products were notebook computers – and monitors – four of the products were flat panel monitors. The other product was a desktop computer for which the primary concern was circuit boards, button cell batteries and cables.

Consistent with the wording in the standard, subscribers could provide one, or both, of the following in demonstration of conformance:

1. A list of commonly available tools required to remove the components and instructions that demonstrate the components can be easily identified and removed, or
2. A statement from a minimum of three recyclers confirming that the components with

hazardous materials are safely and easily identifiable and removable.

The final result was that in all investigations the subscribers were able to provide evidence that demonstrated compliance with the criterion. However, this was only the case based on the interpretation of the standard by the PVC. This issue is explained in the following paragraphs.

EPEAT Staff's original belief was that conformance would mean that the subscriber could show how the product could be disassembled safely and easily down to the level of the mercury-containing bulb. This interpretation was based on the belief that it is necessary to perform bulb-level disassembly in order to properly manage the mercury as a hazardous material. However, seven subscribers provided instructions only on panel-level disassembly, that is, removal of the panel from the notebook as a whole unit. Two of those provided bulb-level disassembly upon request, but five did not. Based on staff's interpretation this would have resulted in 5 Non-Conformances. However, clearly many subscribers interpret the criterion to require only panel-level disassembly.

This question was presented to the PVC. The PVC interpreted the criterion to require only panel-level disassembly. The criterion reads that "components" containing hazardous materials must be safely and easily removable, and that the panel is such a component. Moreover, panels have a value for sale into a reuse market, and so can be viewed as a "recyclable" component as a whole. The PVC finding was that even though the panel-level disassembly does not fully prepare the product for management of the mercury-containing bulb as a hazardous material, the wording of the criterion is met by panel-level disassembly.

The PVC recognizes that this is likely not the intention of many stakeholders in the development of this criterion. Therefore the PVC recommends that this criterion be carefully reviewed when the 1680.1 Standard is updated, so that the language accurately reflects the intention of the stakeholders.

#### 3.4. Non-conformances, Corrective Actions, and Impact on EPEAT Registry

As discussed above, 2 non-conformances were found. Table 1 identifies the criteria for which non-conformances were found and Table 2 identifies the products for which those non-conformances were found.

#### 3.5. Recommended Actions from this Round

1. EPEAT staff will explore adding a field to the Registry in which manufacturers will provide the name of the product as it is listed on the ENERGY STAR qualified product list. If it is not on that list, the subscriber will so note. This will provide greater transparency and ease of cross referencing between the two programs.
2. The verification protocols shall specifically require, at least in the case of 4.5.1.1 and perhaps certain other criteria, that evidence be provided that the product was known to be in conformance at the time of its declaration to the criterion. This evidence may include dated test data.
3. ENERGY STAR has been considering requiring that test data be provided from accredited, independent laboratories. The experience of EPEAT in this verification round would support this requirement.
4. EPEAT verification staff will discuss with ENERGY STAR staff the need for more frequent and thorough testing of different and evolving configurations of products.
5. When IEEE 1680.1 is updated, criterion 4.3.1.5 should be carefully reviewed by manufacturers, recyclers, and hazardous materials managers to determine what the

appropriate level of disassembly is for flat screens or other devices using mercury lamps – to the panel level or to the bulb level.

### 3.6. Investigation Tables

**TABLE 1**  
**Criteria Involving Non-Conformance Findings**

Criterion		# of Initial NCs	Total # of Invstgs
4.1.3.3	Optional—Elimination of intentionally added mercury used in light sources	1	2
4.2.1.2	Optional—Minimum content (10%) of postconsumer recycled plastic	1	1

It is especially notable that in Round Two, Non Conformances were also identified for both 4.1.3.3 and 4.2.1.2. These are clearly difficult criteria and should be watched closely.

Table 2 identifies the subscribers and products for which non-conformances were determined, the actions taken, and the final outcomes.

**TABLE 2**  
**Initial Non-Conformance Findings**  
**Showing Corrective Actions Taken and Outcomes**

Invest #	Subscriber	Product	Criterion	Explanation of Initial NC Finding	Corrective Actions Taken and Outcomes
R2-2	Hyundai	Monitor X93W	4.1.3.3	Subscriber claimed the criterion had been inadvertently declared to through an administrative error.	Subscriber un-declared the criterion bringing the product into Conformance. <b>Therefore, a Final Decision of Conformance is rendered.</b> Product remains Silver.
R2-3	Arquimedes Automacao e Informatica Ltda	Corporativo B NO1	4.2.1.2	Subscriber did not provide evidence of conformance and apparently did not understand the requirements of the criterion or what information is required to demonstrate conformance.	Subscriber un-declared the criterion bringing the product into Conformance. <b>Therefore, a Final Decision of Conformance is rendered.</b> Product dropped from Silver to Bronze. The criterion was also un-declared for 7 other products, three of which also dropped a tier.

*Explanation of table 2* – The findings are based on the product declaration on the Registry when the round is begun. Nothing prevents subscribers from changing their declaration or even removing the product during the round, but verification decisions reference the declaration as it stood when the



round began. When a declaration is found to be in non-conformance the subscriber is required to take corrective action to return their declaration to conformance. They may un-declare the non-conforming criterion or may change the product to bring it into conformance with the declaration. A Final Decision of Conformance is rendered in that case, however, the Initial Non-Conformance Finding is still recorded.

**Product archiving** – If the non-conformance is not corrected by a given date, the product is archived by EPEAT staff. If the declaration or product is later changed to resolve the non-conformance, the product can be reactivated.

EPEAT policy is that the subscriber, not EPEAT staff, performs edits on product declarations by changing a criterion declaration, even when non-conformances must be corrected. If such edits are not performed by the deadline, EPEAT staff archive the product. No archiving was necessary in this Round.

#### 4. Key messages for subscribers

Following are key messages learned from Round Three that we urge subscribers to attend to.

1. Conformance means that ***the product must be in conformance when it is declared*** to the standard, not only when it is selected for verification. In the case of one criterion – 4.5.1.1 Required— ENERGY STAR – and perhaps others which will be identified in the Verification Protocols, it will be necessary to demonstrate that testing that provides assurance of conformance had been done prior to registering the product.
2. One non-conformance was due to subscriber administrative error, e.g. unintentionally checking a criterion. The errors were shown not to be intentional. ***All declarations should be carefully double-checked.***

**APPENDIX TABLE I  
Criteria Selected for Verification**

<b>Criterion</b>		<b>Selection Principle</b>	<b># of Invstgs</b>
Optional 4.1.3.3	Elimination of intentionally added mercury used in light sources	Select two products for this difficult to meet criterion from two different subscribers that have not been verified to date or have been verified less frequently than most others. Perform a level one verification.	2
Optional 4.2.1.2	Minimum content (10%) of postconsumer recycled plastic	1 product was selected for this difficult to meet criterion from a single subscriber that has not been verified to date or has been verified less frequently than most others. Perform a level one verification.	1
Required 4.3.1.5	Identification and removal of components containing hazardous materials	<p>Select products from all subscribers that have not previously been verified to this criterion, and who have registered products with mercury-containing lamps. 11 products were selected from 11 subscribers.</p> <ul style="list-style-type: none"> <li>• Notebooks and monitors with mercury-containing back lights represent 10 of the 11 products selected, with the intent to determine that the bulbs could be safely and easily removed.</li> <li>• The other product was a desktop selected for a subscriber that has not previously been verified.</li> <li>• Perform a level one verification.</li> </ul>	11
Required 4.5.1.1	ENERGY STAR	Select one product from each subscriber that has products registered on EPEAT but for which that same product has not been listed on the ENERGY STAR qualified products list.	7
<b>Total number of investigations</b>			<b>21</b>