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DRAFT VERIFICATION PLAN – ROUND TWO December 2007 – January 2008

Product Verification Committee

I. PURPOSE AND CONTENTS OF THIS DOCUMENT

This Plan will describe the verification process to be used in the second EPEAT Verification Round, including the criteria that will be verified, the number of products to be verified for each criterion, and the method of verification for each.

The products and subscribers to be verified will not be specifically identified. The intention is for the PVC to be blind to the specific product and subscriber that they are making decisions on. This information will be known by the staff and the Qualified Verifier, but will not be provided to the PVC until after completion of the conformance/non-conformance findings of the Round. However, when subscribers present specific information to the PVC regarding a decision, the subscriber and product will be revealed to the PVC in order to resolve any issues.

II. PRODUCT VERIFICATION COMMITTEE

Following are the members of the PVC:

Patty Dillon, Dillon Environmental Associates

Jack Geibig, Director, Center for Clean Products,
University of Tennessee

Jim Arnold, Retired from Motorola Labs

III. QUALIFIED VERIFIERS

Following are the members of the Qualified Verifier (QV) team:

Pamela Brody-Heine
EcoStewardship Strategies

Stephen Greene, Principal
Howland Green Consulting
Formerly Product Stewardship Manager,
Polaroid Corporation

Ming-Shen Lai, President
LMS Consulting Ltd.

Anne Peters, President
Gracestone, Inc.

IV. SPECIAL CHARACTERISTICS OF ROUND TWO

With the broad success of EPEAT as a purchasing standard, there has been increasing market pressure on subscribers to claim optional points in order to achieve higher tiers. Round Two is specifically targeted to assure the credibility of the EPEAT Registry by verifying, in part, declarations of particular criteria that are difficult to meet and are being declared by subscribers with increasing frequency in order to achieve higher tiers.

Since IEEE interpretations and amendments processes are being performed simultaneously with this verification, Round Two will exclude those criteria or portions of criteria that are subject to such reconsideration.

Verification Round One was intended to be a pilot round. There was a one-time exception in reporting verification outcomes from Round One whereby the specific products and subscribers determined to have a non-conformance were not identified. These special conditions will not apply to Round Two and full reporting, as stated in the adopted EPEAT Verification Plan¹, will be used.

V. REPORTING OF NON-CONFORMANCES

Not all non-conformances are equal. One may come from a relatively minor failure of administrative record keeping and another from outright failure to meet the requirements of a criterion. The PVC will have the option of making such distinctions, at its own discretion, in the reporting of non-conformances in the Round Two Outcomes Report. In addition, due to the use of x-ray fluorescence (XRF) technology as a screening tool for the detection of restricted substances in Round Two, the PVC will reserve the right to identify some non-conformances as “suspected”. Such suspected non-conformances, if they cannot be definitively resolved during the Round, will not be publicly reported. In such a case, and depending on the characteristics of the individual case, every effort will be made to work with the subscriber to develop a plan to resolve the suspected non-conformance.

Based on the experience of this Round, this section on reporting of non-conformances may be modified and included in the generic EPEAT Product Verification Plan.

VI. DELAYS IN PROVIDING VERIFICATION DATA

During Round One, delays were encountered when subscribers failed to provide the requested verification data within the allotted 30 day time period. Subscribers state that it is especially difficult for companies with Asian headquarters to obtain the data in a timely manner.

The Standard states that subscribers must provide data within 30 days upon request. It is important to keep the verification process timely. However, some flexibility is in order.

Currently there are no consequences for being tardy or uncooperative in providing data, except for the threat of a non-conformance finding. To provide an incentive for subscribers to be timely and cooperative in providing data, the PVC shall have the option to employ the following practice:

1. Per the Standard, verification data requested by QVs shall be provided by the subscriber within 30 days.
2. Upon request of the subscriber, and with good cause, the QV is authorized to extend this time period up to a maximum of 45 days.
3. Any subscriber that provides verification data more than one week after the 30 day period, or after the time period agreed to in advance with the QV, shall be placed on a “Tardy Provider List” to be included in the Verification Round Outcomes Report.

VII. SELECTION OF PRODUCTS AND CRITERIA FOR VERIFICATION

Selection Principles

Round Two will be focused on, but not limited to, specifically targeted products/criteria that represent one or more of the following:

- Particularly difficult to achieve optional criteria and products that have declared to those criteria.

¹ This reference is to the overall EPEAT Verification Plan that governs all verification rounds, versus this plan which is for an individual round.

- Criteria, whether required or optional, where declared conformance has been observed to be questionable for several product declarations.
- Specific criteria declarations that have been questioned by other subscribers or other stakeholders.
- A specified set of criteria will be selected for in-depth verification, such as by x-ray fluorescence (XRF) analysis or disassembly. A small number of products will be selected randomly for this verification.
- On January 22 all products that are compliant to ENERGY STAR 3.0 must be upgraded to ES 4.0 or be removed from the EPEAT Registry. In order to ensure that products being verified in this Round do not disappear from the Registry mid-round, products will be selected that are declared to ES 4.0, or to the Early Adopter criterion, unless such products are not available for a given subscriber.²

Selection Process

1. The Verification Round Plan will list the criteria that will be verified, the rules for selecting the subscribers and products, and the method of verification that will be used.
2. Staff will select the subscribers and products according to these rules. The Registry will be searched according to these rules and a spreadsheet will be created including the subset of qualifying products for each criterion. A random number generator will be used to select products for verification where random selection is desired.
3. Individual subscribers will be notified of the products, criteria, and method of verification that have been selected for their products.

Possible Out-of-Sequence Selections

In the event of special circumstances, the PVC may, at its prerogative, decide to schedule an additional investigation(s) at any time, including while Round Two is in progress. If the PVC determines that such investigation should be included as a part of Round Two, this Verification Round Two Plan will be amended and reissued without disrupting the timing of the other verification investigations.

VIII. USE OF XRF IN PRODUCT VERIFICATION

XRF (x-ray fluorescence) is a commonly used technology to screen materials for the presence of selected elements, such as the elemental substances restricted in various 4.1 criteria. The EPEAT QV team is expected to have access to the technology.

XRF is a screening tool. The tool can identify the presence of elements, but methodologies of XRF use have not been defined to the degree necessary to provide definitive proof of presence.

Therefore, the EPEAT verification will use the technology to identify potential problems. Depending on the findings, the PVC will either have further lab tests conducted, or refer the suspicion of a non-conformance to the subscriber for further testing and demonstration of conformance or non-conformance.

IX. REGISTRY STATISTICS AT THE BEGINNING OF ROUND TWO (as of 12/20/07)

Products on the Registry: 725

Number of active subscribers: 24

Gold products on the Registry: 29

² This Round is initiated during the “grandfather” window of time established in criterion 4.5.1.1, whereby products have a six month period to come into compliance with the new ENERGY STAR 4.0 specification. Thus some products now on the Registry are expected to disappear when that window closes on January 22, which will be in the middle of the Round.

X. ROUND TWO INVESTIGATIONS

Criterion		Verification Selection and Process (#s as of 12/16/07)	Invstgs
XRF Investigations			
Required 4.1.1.1	Compliance with provisions of EU RoHS directive	399 declarations to 4.1.2.1. 486 declarations to 4.1.5.1. 59 declarations to 4.1.3.3 by 9 subscribers, including 56 notebooks and 3 monitors. <ul style="list-style-type: none"> • Purchase 2 notebooks declared to 4.1.2.1, 4.1.5.1 and 4.1.3.3, from two randomly selected subscribers. • Disassemble and test to the criteria that can be tested using an XRF, including 4.1.1.1, 4.1.2.1, and 4.1.5.1. • Inspect and determine the lamp technology to assure no mercury in accord with 4.1.3.3. <p>Note that a main purpose of this verification is to gain experience with XRF and to develop an XRF verification protocol.</p> <p>Note also that XRF only detects chromium and can't differentiate species of chromium (e.g., trivalent vs. hexavalent). If no chromium is detected, then we can assume no hex chrome is present. If chromium is detected then laboratory testing for hex chrome is needed. Depending on the application/material, some deduction based on process knowledge might make the presence of hex chrom more or less likely.</p> <p>Note that an IEEE Interpretation is being developed for several 4.1 criteria that clarifies the subscriber verification requirements to provide analytical and/or empirical data. However, this Interpretation will not effect this verification because the PVC will not call for subscriber verification data.</p>	8 (2 products for 4 criteria)
Optional 4.1.2.1	Elimination of intentionally added cadmium		
Optional 4.1.5.1	Elimination of intentionally added hexavalent chromium		
Optional 4.1.3.3	Elimination of intentionally added mercury used in light sources		
Optional 4.1.3.3	Elimination of intentionally added mercury used in light sources	This is a broader verification of 4.1.3.3 than above. 59 products are declared to 4.1.3.3 by 9 subscribers, including 6 gold products by 2 subscribers. <ul style="list-style-type: none"> • Select one product from each subscriber, taking the gold product where possible. • Do not select the two subscribers verified to this criterion in the XRF investigations. • Perform a level one verification. <p>This verification will focus on a confirmation that the backlight technology in the product does not utilize Hg, not on, for example, supplier assurance that Hg is not used in their LED bulbs.</p>	7 (incl. 2 gold)
Optional 4.2.1.2	Minimum content (10%) of postconsumer recycled plastic	12 products by 7 subscribers are declared to 4.2.1.2 or 4.2.1.3 or 4.2.2.2. The following verification will only be conducted on products that have an enclosure that is made principally from plastic or that otherwise include substantial amounts of plastics. <ul style="list-style-type: none"> • 1) Select one product for each subscriber declared to 4.2.2.2 (total of 3 subscribers) then • 2) Of those not declared to 4.2.2.2, select one product for each subscriber declared to 4.2.1.3 (total of 4 since one of those declared to 4.2.2.2). • Perform a level one verification. • Include queries of the supply chain to assure that the recycled plastic does not include RoHS restricted substances above thresholds. <p>We are doing an Interpretation affecting one rather arcane aspect of the definition of "postconsumer", namely whether resin from old CDs that have not been distributed to consumers constitute postconsumer. So this Round will not distinguish between pre- and post consumer for this type of source.</p>	7
Optional 4.2.1.3	Higher content (25%) of postconsumer recycled plastic		
Optional 4.2.2.2	Product shall contain on average a minimum of 10% renewable/biobased plastic, measured as a percentage of total plastic (by weight) in the product.		
Optional 4.5.2.1	Renewable energy accessory available	68 products are declared to 4.5.2.1 by 6 subscribers. 8 are Gold by 5 subscribers. <ul style="list-style-type: none"> • Select one product from each of the subscribers, a Gold product when possible. 	6

		<ul style="list-style-type: none"> • Search for the accessory on the web site and attempt to purchase it. Cancel the order when assured that it is available as declared. <p>An IEEE Interpretation is being considered that will address the degree to which an accessory must provide all, or a substantial portion, of the power requirements of the product. (The Standard provides no guidance. Literally “all” seems unreasonable since most renewable energy sources (wind, solar) are by nature interrupted.) The PVC verification will test the commercial availability of the power supply for purchase with the product. The PVC will also be asked to comment on the adequacy of the power supply, but not to be verified on this element in this Round.</p>	
Optional 4.7.3.2	Corporate report based on GRI	<p>542 declarations to 4.7.3.2 by 15 subscribers – Note this is a corporate criterion.</p> <ul style="list-style-type: none"> • Perform a level one verification for each of the 15 subscribers <p>This verification was requested by a purchaser.</p>	15
Optional 4.8.4.1	Provision of take-back program for packaging	<p>118 products are declared to 4.8.4.1 by 9 subscribers. 18 are Gold by 5 subscribers</p> <ul style="list-style-type: none"> • Select one product from each of the subscribers, a Gold product when possible. • Perform a level one verification. 	9
Optional 4.8.5.1	Documentation of reusable packaging	<p>82 products are declared to 4.8.4.1 by 9 subscribers. 18 are Gold by 7 subscribers</p> <ul style="list-style-type: none"> • Select one product from each of the subscribers, a Gold product when possible. • Perform a level one verification. <p>Only verify that the major packaging elements meet the criterion. Do not verify small, internal packing material elements.</p> <p>A subscriber has asked if the criterion applies only to the external package, or if it also applies to the internal packing material. The standard is silent. Presumably then it would apply to all of the packaging, not matter how small the pieces. We shall limit the verification in this Round to the major packaging elements, and ask for a standard revision (just like with “All plastics” from last time). The core purpose for this verification will be achieved by only verifying the major packaging elements.</p>	9
Total number of investigations			61

QV #	Criterion		No. of Invstgtns
1	4.1.3.3	Elimination of intentionally added mercury used in light sources	9
1	4.5.2.1	Renewable energy accessory available – US subscribers	~3
1	4.8.4.1	Provision of take-back program for packaging – US subscribers	4-5
1	4.8.5.1	Documentation of reusable packaging – US subscribers	4-5
2	4.1 criteria	XRF investigations	8
3	4.5.2.1	Renewable energy accessory available – CN subscribers	~3
3	4.8.4.1	Provision of take-back program for packaging – CN subscribers	4-5
3	4.8.5.1	Documentation of reusable packaging – CN subscribers	4-5
4	4.2 criteria	Postconsumer and biobased content	7
4	4.7.3.2	Corporate report based on GRI	15

#	Verifier
1	Pamela Brody-Heine
2	Stephen Greene
3	Ming-Shen Lai
4	Anne Peters