EPEAT, Inc.

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VERIFICATION PLAN – ROUND 2011-05
October 2011

Product Verification Committee

I. PURPOSE AND CONTENTS OF THIS DOCUMENT

This plan describes the verification process to be used in the fifth EPEAT Verification Round for 2011, 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 are not specifically identified. The intent is for the PVC to be blind to the specific product and subscriber about which they are making decisions. 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, Technical and Program Management Consultant, Rissa Studios

III. QUALIFIED VERIFIERS

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

Patricia Atherton
Consultant

Stephen Greene, Principal
Howland Greene Consulting

Kelley Keogh
Sin Fronteras Consulting

Carson Maxted
Consultant

Dresden Skees-Gregory
Sustainable Environmental Services

Dawn Van Seggen
Consultant

IV. CHARACTERISTICS OF ROUND 2011-05

Round 2011-05 will investigate a large number of criteria for a small number of products. The criteria are:

4.1.1.1 Required – Compliance with provisions of European RoHS Directive.

4.1.2.1 Optional – Elimination of intentionally added cadmium.

4.1.4.1 Optional – Elimination of intentionally added lead in certain applications.

4.1.5.1 Optional – Elimination of intentionally added hexavalent chromium.

4.1.8.1 Optional – Large plastic parts free of PVC.

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 – Reduced number of plastic material 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.

4.5.1.1 Required – Energy Star.

4.8.2.1 Required – Separable packing materials.

4.8.2.2 Optional – Packaging 90% recyclable and plastics labeled (look at plastics labeled only).

This Round is conducted under the revised IEEE 1680 and 1680.1 standard including the international registry representing 41 countries. This verification round will include Level 1, Level 2 and Level 3 investigations.

V. SELECTION OF PRODUCTS AND CRITERIA FOR VERIFICATION

Round 2011-05 will investigate the list of criteria in section IV for 6 products in 3 geographic regions. Products declared on the Registry after January 1, 2011 will be downloaded for each of three geographic regions: U.S., Europe, and Asia. This list will be further sorted into three product types: desktops, notebooks and monitors. Finally, two products from each product type will be chosen. If one subscriber's product is selected twice, another subscriber's product will be randomly chosen. The goal is to have 6 products of 3 types that are sold in the 3 geographic regions for 6 different subscribers as depicted below.

	U.S.	Europe	Asia
Desktop	S1	S3	
Monitor		S4	S5
Laptop	S2		S6

The criteria were selected because they lend themselves to Level 2 and Level 3 investigations. These investigations will lead to a deeper body of knowledge for EPEAT. A total of up to 90 investigations will be conducted. The decisions on the criteria to verify for each product will be based on applicability and cost. The number of products that are declared to each of the optional criteria subject to verification will not be known until after product selection. Only products that declare to a criterion will be verified to that criterion. Further, budgetary constraints might limit the number of investigations for each criterion that we undertake using XRF analysis.

1. A snapshot will be taken of the Registry prior to the start of the Verification Round.

2. This Verification Round Plan lists the criterion that will be verified and the method of verification that will be used.
3. This Verification Round will begin directly after the snapshot of the Registry is taken. At that time, the product for investigation for each subscriber will be selected by EPEAT staff and Qualified Verifiers will immediately begin the investigation.

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 this Verification Round is in progress. If the PVC determines that such investigation should be included as a part of this Verification Round, this Verification Round Plan will be amended and reissued without disrupting the timing of the other verification investigations.

VI. INVESTIGATION ASSIGNMENTS

The following Qualified Verifiers will investigate the criteria:

- Carson Maxted
- Dawn Van Seggen

VII. ROUND 2011-05 INVESTIGATIONS

Criterion		Verification Selection and Process	Number of Investigations
4.1.1.1	Required – Compliance with provisions of European RoHS	This criterion has not been verified for several years.	Up to 6
4.1.2.1	Optional – Elimination of intentionally added cadmium.	This criterion has not been verified via lab testing however a desk review was done in 2010.	Up to 6
4.1.4.1	Optional –Elimination of intentionally added lead in certain applications.	This criterion has never been verified.	Up to 6
4.1.5.1	Optional – Elimination of intentionally added hexavalent chromium.	This criterion has not been verified for several years.	Up to 6
4.1.8.1	Optional – Large plastic parts free of PVC.	This criterion has never been verified.	Up to 6
4.3.1.2	Required – Elimination of paints or coatings that are not compatible with recycling or reuse.	Testing has never been conducted to verify this criterion.	Up to 6
4.3.1.4	Required –Marking of Plastic components.	This criterion is easy to check while performing level 2 and level 3 investigations.	Up to 6
4.3.1.5	Required – Identification and removal of components containing hazardous materials.	This criterion is easy to check while performing level 2 and level 3 investigations.	Up to 6
4.3.1.6	Optional – Reduced number of plastic material types.	It does not appear that this criterion has ever been verified.	Up to 6
4.3.1.7	Optional – Molded / glued in metal eliminated or removable.	This criterion is easy to check while performing level 2 and level 3 investigations.	Up to 6
4.3.2.1	Optional – Manual separation of plastics.	This criterion is easy to check while performing level 2 and level 3 investigations.	Up to 6

Criterion		Verification Selection and Process	Number of Investigations
4.3.2.2	Optional – Marking of plastics.	This criterion is easy to check while performing level 2 and level 3 investigations.	Up to 6
4.5.1.1	Required – Energy Star.	Testing has never been conducted to verify this criterion.	Up to 6
4.8.2.1	Required – Separable packing materials.	This criterion is easy to check while performing level 2 and level 3 investigations.	Up to 6
4.8.2.2	Optional – Packaging 90% recyclable and plastics labeled (look at plastics labeled only).	This criterion is easy to check while performing level 2 and level 3 investigations.	Up to 6
		Total number of investigations	**Up to 90**

VIII. ROUND 2011-05 TEST PLANS

Criterion	Subject	Investigation Level	Requirement	Investigation method
4.1.1.1	Compliance with provisions of European RoHS directive	Level 3	Homogeneous materials must not contain restricted substances in excess of threshold levels per Directive 2002/95/EC	XRF screening of high risk parts. See IEEE 1680.1 for applicability.
4.1.2.1	Elimination of intentionally added cadmium	Level 3	Homogeneous materials must not contain Cadmium > 50ppm.	XRF screening of high risk parts. See IEEE 1680.1 for applicability.
4.1.4.1	Elimination of intentionally added lead in certain applications	Level 3	Homogeneous materials must not contain lead > 50ppm.	XRF screening of high risk parts. See IEEE 1680.1 for applicability.

Criterion	Subject	Investigation Level	Requirement	Investigation method
4.1.5.1	Elimination of intentionally added hexavalent chromium	Level 3	Homogeneous materials must not contain hexavalent chromium > 500ppm.	XRF screening of high risk parts. See IEEE 1680.1 for applicability. Since XRF only detects total chromium, if chromium is detected about 500 ppm, a Level 1 investigation will be performed to determine the source of chromium and if it is hexavalent chromium.
4.1.8.1	Large plastic parts free of PVC	Level 3	Plastic parts > 25 g must not contain PVC.	XRF screening of high risk parts. See IEEE 1680.1 for applicability.
4.3.1.2	Elimination of paints or coatings that are not compatible with recycling or reuse	Level 2	Paints and coatings on parts > 100 g must be compatible with recycling or reuse.	Visual inspection during disassembly of product. If paints/coatings are detected, follow up with Subscriber for IZOD Impact results.
4.3.1.4	Marking of Plastic components	Level 2	Parts greater than 100 g must be marked per ISO 11469:2000.	Visual inspection during disassembly of product.
4.3.1.5	Identification and removal of components containing hazardous materials	Level 2	All hazardous components including circuit boards > 10cm2, batteries and other hazardous components must be easily identifiable and removable.	Visual inspection during disassembly of product.
4.3.1.6	Reduced number of plastic material types	Level 2	All plastic enclosure parts > 100 g must contain only one plastic type.	Visual inspection during disassembly of product.
4.3.1.7	Molded / glued in metal eliminated or removable	Level 2 / Level 3	Molded / glued in metal inserts must be easy to remove by one person with commonly available tools.	Physical inspection during disassembly of product.
4.3.2.1	Manual separation of plastics	Level 2 / Level 3	Parts greater than 25 g shall be manually separable by one person with commonly available tools.	Physical inspection during disassembly of product.

Criterion	Subject	Investigation Level	Requirement	Investigation method
4.3.2.2	Marking of plastics	Level 2 / Level 3	Parts greater than 25 g must be marked per ISO 11469:2000.	Visual inspection during disassembly of product. Similar to 4.3.1.4.
4.5.1.1	Energy Star	Level 3	Compliance with current version of Energy Star	Use tests appropriate for product type
4.8.2.1	Separable packing materials	Level 2	Non-reusable packaging components > 25 g shall be separable without use of tools.	Physical inspection during disassembly of product.
4.8.2.2	Packaging 90% recyclable and plastics labeled.	Level 2 / Level 3	All plastics shall be marked and 90% of packaging by weight shall be recyclable in region where product was purchased.	Visual inspection during disassembly of product.