ULE 880—Interim Sustainability Requirements—Manufacturing Organizations

http://www.ulenvironment.com/ulenvironment/eng/pages/offerings/standards/organizations/

Comments and suggested revisions submitted on behalf of BizNGO

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23.2 EPP Policy

Comments

The EPP Section needs to specify areas that should be addressed. For example, Catholic Healthcare West's EPP guidelines state:

> "CHW prefers products and services that address environmental impacts throughout the lifecycle. These products and services should:
> - Use **greener chemicals**, chemicals that are inherently less hazardous and release little to no toxic by-products across their lifecycle.
> - Promote the use of **renewable materials** by increasing the use of sustainable, bio-based materials and reducing the use of fossil fuel-based materials.
> - Support **healthy food systems** by sourcing food products that are local, seasonal, nutritious, and produced in a way that minimizes degradation to human and environmental health and vitality.
> - Promote **land stewardship** by cultivating healthy ecosystems and protecting natural resources.
> - Promote **sustainable energy** by using renewable energy sources and reducing energy use.
> - Protect **clean air** by minimizing pollutants.
> - Contribute to the availability of **clean water** by minimizing water use and pollution, and avoiding bottled water products.
> - **Minimize waste** by implementing the three "Rs": reduce, reuse and recycle.
> - Use **environmentally sound waste disposal** technologies where reuse, reduction and recycling cannot be achieved."

Suggested Revisions [in bold and underlined]

Applicant shall earn five points for providing documentation of an established organization-wide EPP policy for general operations and maintenance that is integrated into organizational operating procedures. **The EPP policy must address at least the following three issues: chemical content (such as chemicals of concern to human health or environments), material content (such as recycled content or renewable content) and energy (such as renewable energy or energy efficiency).**

23.3 EPP Program

Comments

Corporate EPP programs are addressing the use of chemicals of concern in products. This should be reflected in ULE 880.

Suggested Revisions [in bold and underlined]

23.3.1 Applicant shall earn 10 points for demonstrating that its EPP program covers consumable and durable materials and addresses the criteria listed below, if identified as applicable in the baseline verification process.

a) Consumable purchases contain at least 30% postconsumer or 20% postindustrial material (e.g. paper, motor oil, carpets, plastic lumber);
b) Durable equipment is ENERGY STAR labeled (for product categories with developed specifications);
c) Durable products are designed to be readily recoverable (recyclable, reusable, compostable);
d) Purchases contain at least 50% rapidly/renewable materials – certified forests, renewable energy resources (LEED-EBOM 9/08, MR Credit 1.1 – 1.3 Sustainable Purchasing); and
e) Purchases specify unbleached or chlorine free manufacturing processes.
f) Purchases of applicable electronic products shall be EPEAT registered.
g) Purchases specify products that do not contain at least five of the following chemicals: lead, mercury, cadmium, hexavalent chromium, bisphenol A, phthalates, polyvinyl chloride or brominated or chlorinated flame retardants.
g) Purchasers specify that products list the presence of any chemicals listed under California Proposition 65.

23.4 EPP Performance

Comments

ULE 880 should include references to EPEAT and RoHS Directive. EPEAT is the leading purchasing standard for electronics and all electronic products should be RoHS compliant.

Suggested Revisions [in bold and underlined]

23.4.5 Applicant shall earn four additional points for documenting a purchasing program that includes independent 3rd party product certifications for sustainability attributes for 60% or more of total purchases (by cost) over the performance period. Verification procedures may rely upon existing product certifications **or government regulations** including: Green Seal, Environmental Choice, ENERGY STAR, **EPEAT, and European Commission Restriction of Hazardous Substances in Electrical and Electronic Equipment (RoHS Directive)** for durables or demonstrating that Applicant purchases products for which the US EPA has established minimum requirements under the U.S. EPA Comprehensive Procurement Guidelines, such as those for printing paper, office paper, janitorial paper, construction, landscaping, parks and recreation, transportation, vehicles, miscellaneous, and non-paper office products.

24.5 Chemical Feedstocks Inventory

Comments

The Business-NGO Working Group (see www.bizngo.org) applauds ULE-880's directly addressing the issue of manufacturers' use of toxic chemicals and encouraging reductions in toxic chemical use and evaluation of safer alternatives. We further support ULE-880's reliance on the principles of green chemistry to provide the foundation for these endeavors.

BizNGO has developed a set of four "Guiding Principles for Chemicals Policy" endorsed by an array of small and large businesses, investors, and NGOs. The four principles emphasize knowing and disclosing product chemistry, assessing and avoiding hazards, committing to continuous improvement, and supporting public policies and industry standards that advance these approaches (see attachment).

We suggest that the inventory should include chemicals that are manufactured by the applicant as well as those that are purchased. We do not agree that the quartile volume of consumption is comparable to the hazard score. A chemical that is in the bottom quartile of consumption but receives a hazard ranking of 4 may be more important to replace than a high volume chemical with hazard ranking of only 1. With some chemicals of concern potent at very small quantities, relative volume of use is not a good measure of urgency of replacement. The quartile volume can be useful as a secondary ranking system for chemicals with the similar hazard ranking, but should not necessarily bring a lower rank hazard up past a higher rank hazard.

Further, the Priority Score formula proposed will not necessarily capture carcinogens and other chemicals of concern for chronic human health endpoints. The HMIS system scores acute toxicity, not chronic toxicity. Therefore a chemical that has no acute toxicity but significant chronic effects would get a zero priority score. Furthermore, the HMIS system does not address ecotoxicity measures, such as persistence, bioaccumulation and aquatic toxicity.

We suggest that you replace both the HMIS based Hazard Score and the Hazard Multiplier with a chemical hazard benchmarking system that incorporates and prioritizes chemicals of concern for chronic and acute human health endpoints as well as ecosystem effect into its benchmarking. Clean Production Action's Green Screen for Safer Chemicals is an excellent example of a benchmarking system which integrates and ranks all of these chemical hazard issues. The Green Screen is a free, publicly accessible screening tool to promote the design, manufacture and use of safer chemicals. It is being deployed by companies and governments to substitute safer alternatives to hazardous chemicals. The Green Screen is designed to facilitate commercial adoption of safer alternatives via a simplified benchmark score from 0 (bad) to (4) applied to each chemical. The score is derived from evaluation of a broad array of human and environmental health end points and evaluation of authoritative lists of chemicals of concerns compiled by government and scientific authorities.

The Green Screen can be used to communicate product or material targets and even set contractual requirements with suppliers. The value of the Green Screen to businesses is shown through its adoption at several companies, such as Hewlett-Packard (HP), to inform material selection. HP's pilot studies of the Green Screen have found that alternatives assessments can be structured in ways that are not only compatible with modern business practices but also significantly reduce the impact to businesses of future chemical restrictions.

The Green Screen has been used by the states of Washington and Maine to evaluate chemical alternatives and by Wal-Mart to structure its evaluation of chemical intensive products. The Green Screen has also been referenced by the US EPA's Design for Environment (DfE) program. The US EPA DfE is a

voluntary program with industry that uses Chemical Alternatives Assessments to evaluate hazards posed by chemicals during relevant phases in product life-cycles and provides a basis for informed decision making about alternatives through careful comparison of potential human health and environmental hazards. ULE-880 currently includes DfE as a "normative reference" (Sec. 7). US EPA's Design for the Environment, which is in the midst of public comment on a Program Alternatives Assessment Criteria for Hazard Evaluation, uses a chemical assessment approach that is very similar to the Green Screen (although it does not develop a final benchmark).

Several levels of engagement are available for companies not yet ready to do full Green Screen toxicological assessments on all chemicals. Clean Production Action and Washington State Department of Ecology are developing tools to provide a simpler way of doing an initial screening to place chemicals on the Green Screen benchmark set. CPA's Quick Screen is based on authoritative list screening while Washington State's QCAT (Quick Chemical Assessment Tool) incorporates some toxicological assessment but less than the full Green Screen. Both tools are planned for public release in summer 2011. CPA's Quick Screen will be supported by the Healthy Building Network's Pharos Project Chemical Library tool. The Pharos Project tool developed by the Healthy Building Network utilizes a chemical hazard prioritization protocol similar to the Green Screen.

Section 24.5.5 Hazard Multiplier is unnecessary because it is integrated into the Green Screen framework.

Revisions [in bold and underlined]

24.5.1 Applicant shall earn 14 points for providing an inventory of its chemicals purchased **or created** for the manufacture of products, ranked by hazard and volume on a scale from 0 to ~~32~~**12**. This inventory shall cover both R&D and operations. The rank or priority score of each chemical shall be calculated ~~using the following formula: **Volume Quartile + Hazard Score = Priority Score**~~ **as follows:**
If Green Screen Benchmark 4 then Priority Score = 0
If Green Screen Benchmark 3 then Hazard Score = 0+Volume Quartile
If Green Screen Benchmark 2 then Hazard Score = 4+Volume Quartile
If Green Screen Benchmark 1 then Hazard Score = 8+Volume Quartile

24.5.4 Hazard Score: Defined by using the~~: HMIS Acute Toxicity Rating criteria and the Chemical Ratings Guide available for no charge online at: http://www.jjkeller.com/webapp/wcs/stores/servlet/content____hmisdownloads_10151_-1_10551_pc-32447~~ Green Screen benchmark system available from Clean Production Action at no charge at http://www.cleanproduction.org/Greenscreen.php; Clean Production Action's quick screen approach; or Washington State Department of Ecology's Quick Chemical Assessment Tool (QCAT).

~~24.5.5 **Hazard Multiplier**: An assigned value of 2 if the chemical is identified as a Persistent Organic Pollutant (POP) or Persistent Bioaccumulative and Toxic (PBT)11, a carcinogen12, or an endocrine disruptor. Otherwise, assigned a value of 1.~~

24.5.6 Applicant shall provide a list of Priority Score ~~2~~ **5** and higher chemicals. The chemical inventory shall include the priority score.

24.5.7 Assessing the chemical inventory:

- Applicant shall earn an additional four points for having no chemical in the inventory with a Priority Score greater than 8 ~~provided that the Hazard Multiplier =1~~.
- Applicant shall earn an additional eight points for having no chemical in the inventory with a Priority Score greater than 8.

- Applicant shall earn an additional twelve points for having no chemical in the inventory with a Priority Score greater than 4.
- Applicant that has not yet done a Green Screen or QCAT assessment of the inventory may earn two points for having no chemical in the inventory which is listed on any of the authoritative body Lists in the Red List Chemicals of High Concern developed by Clean Production Action and Healthy Building Network and available at www.cleanproduction.org.

~~Applicant shall earn all eight points for having no chemical in the inventory with a Priority score higher than 4 provided that the Hazard Multiplier = 1 and the Hazard Score is not > 2. See Appendix AB24.5 for additional information.~~

24.5.8 If the Applicant obtains the inventory of chemicals in supplied chemicals, chemical mixtures, materials and articles supplied by its Tier 1 suppliers (including intentionally added chemicals and impurities) as described below in 35.3.3, the applicant may obtain the following additional points for assessment and reduction of hazard.

- **Applicant shall earn an additional eight points for having no chemical in the supplied article inventory with a Priority Score greater than 8.**
- **Applicant shall earn an additional twelve points for having no chemical in the article inventory with a Priority Score greater than 8.**
- **Applicant shall earn an additional sixteen points for having no chemical in the inventory with a Priority Score greater than 4.**
- **Applicant that has not yet done a Green Screen or QCAT assessment of the article inventory may earn four points for having no chemical in the inventory which is listed on any of the authoritative governmental health hazard lists in the Red List Chemicals of High Concern list developed by Clean Production Action and Healthy Building Network and available at www.cleanproduction.org.**

Sustainable Supply Chain (Sec. 35)

Comments

BizNGO recommends adding to Sustainable Supply Chain measures: 1) to secure information from the supply chain about the chemical content and toxicity of the chemical formulations, materials, and articles that they procure; and 2) taken, beyond the development and enforcement of restricted substances lists, to encourage suppliers to provide less toxic materials and to rely on less toxic chemicals in their own production processes.

BizNGO's draft guide for manufacturers for implementing safer chemicals principles identifies the types of actions manufacturers might take to engage their supply chain in reducing chemical toxicity. These include, for example:

- Require suppliers to disclose specified chemicals of high concern (such as those on a company-wide restricted substances list).
- Ask suppliers if they know all the chemical ingredients intentionally added to their product and all residuals of high concern that are present in the product (this means asking if the suppliers have the data, not requesting that they provide it).
- Requiring suppliers to provide information to a third party.

They can go even farther and earn additional points by validating supplier claims regarding chemicals, and asking suppliers for "process chemistry"—the chemicals used in and byproducts created during the manufacture of the chemicals contained in the product. Manufacturers also get credit for establishing a system for collecting and managing chemical ingredient data in products.

In The Green Chemistry and Commerce Council's February 2011 report, Meeting Customers' Needs for Chemical Data: A Guidance Document for Suppliers (http://www.greenchemistryandcommerce.org/downloads/GC3_guidance_final_031011.pdf), author Monica Becker concisely summarizes seven key reasons for manufacturers to seek chemical data from their suppliers:

- "Compliance with retailer requirements to disclose chemical ingredients in products
- Compliance with regulations that restrict the use of certain chemicals or require disclosure of chemical content in formulations or articles
- Compliance with a voluntary corporate program restricting certain chemicals in their products
- Evaluation and scoring of chemical environmental, health, and safety attributes prior to selection for use in formulations or the production of articles
- Elimination or substitution of toxic materials in components with safer alternatives
- Participation in third party green certification programs
- Execution of voluntary efforts to disclose chemical ingredients to customers."

Conversely, she enumerates the benefits to suppliers of providing chemical information to manufacturers:

- "Companies such as Nike and Method have stated that they prefer suppliers with a chemical collection and reporting process in place.
- Some retailers, such as Wal-Mart, are requiring suppliers to provide chemical ingredient data as a prerequisite for selling their products
- Suppliers that have not been forthcoming about the presence of chemicals of concern in the materials that they supply have been dropped by fabricators/formulators who previously purchased their products.

Other benefits to suppliers include:

- The ability to deliver a safer and more attractive product to customers….
- Suppliers with knowledge of the chemical content of their materials are able to be proactive and reformulate if and when legislation or corporate policies restrict the use of these chemicals.
- Suppliers can market themselves as providing safer chemicals and products and work with customers to become preferred suppliers."

Ms. Becker notes that Material Safety Data Sheet (MSDS) disclosures are insufficient vehicles for chemical data disclosure. MSDSs are riddled with limitations that are widely-acknowledged by supply chain experts. These include, e.g., their being governed by Occupational Safety and Health Administration guidelines focusing only on worker health, their incomplete disclosure of chemicals and hazard and toxicity information, and variations in MSDS quality among manufacturers.

Given the above, we have crafted suggested additions to Section 35 Supply Chain Sustainability. The proposed additions are consistent with ULE 880's Statement of Principles, as outlined in Section 3. For example, with respect to 3.1(a) Aspirational and Achievable, the additions are based upon the current practices of leading sustainability firms that are members of the BizNGO and have contributed to the drafting of the documents described above. Furthermore, in order to adopt a precautionary approach, as described in the principle articulated in Section 3.1(e) of ULE880, manufacturing firms need chemical data from their suppliers.

Note that BizNGO defines "chemicals of high concern" as substances that have the following properties: 1) persistent, bioaccumulative and toxic (PBT); 2) very persistent and very bioaccumulative (vPvB); 3) very persistent and toxic (vPT); 4) very bioaccumulative and toxic (vBT); 5) carcinogenic; 6) mutagenic; 7) reproductive or developmental toxicant; 8) endocrine disruptor; or 9) neurotoxicant. "Toxic" (T) includes both human toxicity and ecotoxicity.

Endocrine disruptors should be identified based upon the European Union's list of endocrine disruptors developed through a process of scientific committee and stakeholder consultation. The EU lists three categories of endocrine disruptors: Category 1 **-** evidence of endocrine disrupting activity in at least one species using intact animals**;** Category 2 **-** at least some in vitro evidence of biological activity related to endocrine disruption; Category 3 - no evidence of endocrine disrupting activity or no data available. The EU list development process is described here:
http://ec.europa.eu/environment/endocrine/strategy/substances_en.htm#report3

Revisions [in bold and underlined]

35.3 Sustainable Supply Chain Inventory

35.3.1 Applicant shall earn up to 14 points for demonstrating that it maintains a baseline inventory of its Tier 1 suppliers, defined as direct suppliers of materials used in products. This inventory shall be ranked according to the supplier's anticipated ability to disrupt the Applicant's supply chain according to the following concepts:

a) Applicant shall earn four points for providing evidence that it tracks its suppliers' adherence to the Code of Conduct elements referenced in 35.2;
b) Applicant shall earn an additional four points for providing evidence that it measures the extent to which any dramatic shortage of the raw materials provided by the supplier, or used by the supplier in the manufacture of the product provided by the Tier 1 supplier to the Applicant, could disrupt the Applicant's supply chain; and

c) Applicant shall earn up to six points for providing evidence of the following:
   1) Four points for demonstrating that it tracks sustainability baselines and benchmarks for its suppliers that include the following indicators: energy usage, GHG measurement and reporting, ~~and~~ transportation fuel efficiency **and chemicals**; and
   2) Two additional points for demonstrating that that it addresses two out of the following four measures in evaluating its Tier 1 suppliers: water usage, use of renewable energy, existence of an EMS, and the amount of generated waste / waste material that is recycled, reused, and/or recovered.

35.3.2 This indicator corresponds with the following standard: Social accountability, Control of Suppliers/Subcontractors and Sub-suppliers, SA 8000: 9.7 – 9.10.

35.3.3 Applicant shall earn points for demonstrating that it addresses the following in evaluating the chemical content and toxicity of the chemicals, chemical mixtures, materials and articles supplied by its Tier 1 suppliers:

a) Two points for requiring suppliers to disclose to them the presence and quantity of a defined list of chemicals of high concern (such as those on a company-wide restricted substances list) in items supplied; or
b) Four points for requiring suppliers to disclose to them the identity and quantity of all chemicals of high concern in items supplied (applicant may specify a set of authoritative lists such as the CPA/HBN Red List of Lists http://www.bizngo.org/pdf/CPA-HBN_Red_List_26jan09.pdf); or
c) Eight points for requiring suppliers to disclose to them all chemicals intentionally added to items supplied; or
d) Six points for requiring suppliers to disclose to a third party for review all chemicals intentionally added to items supplied; or
e) Twelve points for requiring suppliers to disclose to them all chemicals in items supplied (including intentionally added chemicals and impurities); or
f) Ten points for requiring suppliers to disclose to a third party for review all chemicals in items supplied (including intentionally added chemicals and impurities);
g) Five points for asking suppliers for evidence that chemical ingredient content information provided is routinely validated through an internal process or by a third party;
h) Five points for requiring suppliers to conduct and report to them the results of alternative assessments for chemicals of high concern in items supplied (see definition of alternatives assessment in 24.6);
i) Five points for asking suppliers if they have a process to track chemicals used in and byproducts created during the manufacture of chemicals contained in the items they supply; and
j) Five points for making public full chemical ingredient lists for their products, either on product labels or websites.