

**Minutes** (tentative as of 11-22-17)

GBI Consensus Body Meeting #33

BSR/GBI 01-2016

Webinar

Thursday, August 24<sup>th</sup>, 2017, from 1:00 PM to 4:00 PM ET

**Attendance:**

No	Name	Organization(s)	5-17-17	5-18-17	5-19-17	7-10-17	8-24-17	
1	Gregg Bergmiller	S/L/A/M Collaborative	X	X	Absent	X	X	
2	Paul Bertram	PRB Connect	X	X (by proxy)	X (by proxy)	X	X	
3	Allan Bilka	International Code Council	X	X	X	X	X	
4	Jeff Bradley	American Wood Council	X	X	X (by proxy last 2 hours)	X	X	
5	William Carroll	American Chemistry Council	X	X	Absent	X	X	
6	John Cross	American Institute of Steel Construction	X	X	X	X	X	
7	Mike Cudahy	Plastic Pipe and Fittings, Association	X	X	X	X	X	
8	Chris Dixon	NBBJ (rep. self)	X	X (by Proxy)	X (by Proxy)	X	X	
9	Nicole Dovel-Moore	CTA Architects Engineers	X	X	X	X	X	
10	David Eldridge	Grumman/Butkus Assoc.	X	X	X	X	X	
11	William Freeman	Resilient Floor Covering Institute	X	X	X	X	Absent	
12	Susan Gitlin	U.S. EPA	X	X (partial proxy)	X (partial proxy)	X	X	
13	Don Horn	GSA	X	X	X	X	X	
14	Josh Jacobs	UL Environment	X	X	Absent	X	X	
15	Greg Johnson	Johnson Consulting Services,	X	X	X	X	X	

		Greenscape Alliance						
16	Karen Joslin	Joslin Consulting	X	X	X	X	X	
17	Malee Kaolawanich	NIH (rep. self)	Absent	Absent	Absent	Absent	resigned	
18	Rachel Minnery	AIA	X	X (partial proxy)	X (partial proxy)	X (by proxy)	X	
19	Charles Kibert	University of Florida	X (Chair)	X	X (Chair for part of the meeting)	X	X (by proxy)	
20	Gary Keclik	Keclik Associates	X	X	X	X	X	
21	Thomas Pape	Alliance for Water Efficiency	X	X	Absent	X	X	
22	Tien Peng	National Ready Mix Concrete Assn.	X	X	X	X	X (by proxy)	
23	Jane Rohde	JSR Assoc. Inc., Vinyl Institute	X (by Proxy)	X (by Proxy)	X (by Proxy)	X	X (partial proxy)	
24	Gord Shymko	G.F. Shymko & Associates, Inc.	X	X	X	X	X	
25	Kent Sovocool	Southern Nevada Water Authority	X	X	X	X	X	
26	Steve Strawn	JELD-WEN	Absent	Absent	Absent	Absent	Absent	
27	George Thompson	Chemical Compliance Systems, Inc.	X (by Proxy)	X (by Proxy)	X (by Proxy)	X	X	
28	Angela Tin	American Lung Assn.	X	X	X	Absent	X	
29	Douglas Tucker	Misubishi Electric Cooling & Heating	X	X	X	X	X	
<b>Voting Alternates</b>								
	Abby Brokaw	American Lung Assn. (voting Alternate for Angela Tin)						

	Paul Karrer	AIA (Alternate for Rachel Minnery)						
	Bill Hoffman	UL Environment (Voting Alternate for Josh Jacobs)						
	Lance Davis	GSA (Voting Alternate for Don Horn)						
	D’Lane Wisner	D’Lane Wisner (Voting Alternate for William Carroll)						
<b>TOTALS</b>			27/29	27/29	23/29	26/29	26/28	
<b>Visitors</b>								
	Martha VanGeem	Self (Principal Engineer)	X	X	X	X	X	
	Ric Doedens	Logison			X			
	Richard Willis	NAPA	X	X				
	Kyle Thompson	IAPMO	X			X		
	Niklas Moeller	LogiSon			X			
	David Panning	BIFMA				X		
	Allison Kinn Bennet	U.S. EPA				X		
	Emily Lorenz	Self					X	
<b>Staff/Consultants</b>								
	Michael Lehman	Chair	Absent	X	X	X	X	
	Vicki Worden	Executive Director, GBI				X		
	Emily Randolph	Secretariat Asst., GBI	X	X	X	X	X	
	Micah Thomas	Staff, GBI	X	X	X	X	X	
	Maria Woodbury	Secretariat, GBI	X	X	X	X	X	
	Kim Goldsworthy	Roberts-Rules Consulting	X	X	X	X	X	

## **Thursday, August 24, 2017**

### **Welcome & Roll Call**

Secretariat, Maria Woodbury welcomed participants and conducted roll call to establish quorum. The anti-trust statement and code of conduct were reviewed and participants were requested to comply with both fully.

Woodbury reminded members that all are welcome to participate in the discussion provided participants raise their hands. Hands will be called on in order. In-person participants were asked to restate their name before speaking each time to make it easier for remote participants to follow along. Woodbury informed the Consensus Body that Malee Koawlanek resigned from her position bringing the Consensus Body membership to 28.

At this meeting, no members voted using voting alternates and 3 members voted using a proxy (Josh Jacobs for Charles Kibert, Rachel Minnery for Tien Peng, and Jeff Bradley for Jane Rohde for part of the meeting).

### **Administrative Items**

Chair Michael Lehman made his opening comments, thanking everyone for their time and expertise. Lehman provided an overview of the agenda for the day and reminded members that discussion will be lead in the order hands are raised.

**MOTION: The Motion was made, seconded, and carried to approve the minutes from Meeting #30 on April 10 and 11, 2017.**

**No Objections**

**MOTION: The Motion was made, seconded, and carried to approve the minutes from Meeting #31 on May 17<sup>th</sup>, 18<sup>th</sup>, and 19<sup>th</sup>, 2017**

**No Objections**

**MOTION: The Motion was made, seconded and carried to approve the minutes from Meeting #32 on July 10, 2017.**

**Discussion took place on the Motion:**

- It was pointed out that there was an error in the attendance for this meeting. The Secretariat noted the error and will fix it to reflect Josh Jacobs' attendance.

**No Objections**

### **Subcommittee Updates**

#### **Site Subcommittee**

presented by Subcommittee Chair Gregg Bergmiller

Bergmiller presented the Site Subcommittee's recommendation for the reallocation of points within the Site Assessment Area.

**Subcommittee Recommendation:**

- 7.1.1.1 Urban Infill and Urban Sprawl increased from 6 to 14 points
- 7.1.2.1 Greenfields, Brownfields, and Floodplains increased from 12 to 14 points
- 7.1.2.3 language moved, added to 7.1.2.2 points remain the same at 6 for 7.1.2.2
- New number 7.1.2.3 (previously 7.1.2.4, the language has not changed only the numbering) Floodplains increased from 8 to 9 points
- 7.2.1.3 Alternative re-fueling facilities reduced from 3 to 2 points
- 7.2.1.4 Entrance near shared use path reduced from 3 to 2 points
- 7.3.4.2 Hardscape reduced from 6 to 5 points
- 7.4.1.1.4 Stormwater Management report was increased from 14 to 17 points
- 7.6.2.2 Exterior lighting reduced from 5 to 3 points

**MOTION: The Motion was made and seconded to accept the changes to the points.**

**VOTE: The Motion carried with 23 in favor, none opposed, and none abstained.**

None Opposed

None Abstained

Bergmiller presented New Business proposed by the Site Subcommittee to add "Not Applicable" to the following criteria:

- 7.3.1 Erosion and Sedimentation Control: Not applicable for interior-only projects
- 7.3.2.1 Site Disturbance: Not applicable for interior-only projects
- 7.3.4.1 Roof Heat Island Effect: Not applicable for interior-only projects
- 7.4.1 Stormwater Management: Not applicable
- 7.5.1.5 On-site agriculture: Not applicable

**MOTION: The Motion was made and seconded to accept the Subcommittee's recommendation to add the "Not Applicable".**

**Discussion took place on the Motion:**

- A question was raised whether "Not Applicable" for 7.1.4 and 7.5.15 is for interior only. It was stated that the Subcommittee discussed the issue and decided that if the site is very small, or in an urban area etc. then the criteria in question may be counted as N/A even if the project is not an interior only project.
- Concern was expressed that if a criterion is "Not Applicable" in the Standard, it should be defined as to when it is not applicable. The speaker stated on-site agriculture needs a clarification and that Stormwater management is a challenge but should be not applicable for interior only.
- Another speaking against the motion stated that there needs to be qualifications on what makes 7.4.1 and 7.5.1.5 Not Applicable. It was stated that the assessor shouldn't have to determine whether it applies or not if there's no guidance in the language. The sentiment was echoed that 7.4.1 and 7.5.1.5 need to be "indoor projects only".

**AMENDMENT: The Amendment was made and seconded to add "for interior-only projects" to N/A on 7.4.1 and "Not applicable where no vegetated site exists" on 7.5.15.**

**There were Objections to the Amendment.**

**Discussion took place on the Amendment:**

- One participant expressed support for the first part of the amendment but stated the second part is problematic. The speaker stated that both interior AND exterior projects may lack the

necessary control over onsite agriculture to make it possible. The mover of the amendment expressed their agreement with the speaker.

**MOTION TO DIVIDE THE QUESTION: The Motion was made and seconded to divide the question.**

**Discussion took place on the Motion:**

- Concern was raised that dividing the question is an unnecessary step.
- Another member stated disagreement as the two sections of the amendment have different meanings.

**VOTE: The Motion to divide the question carried with 15 in favor, 6 opposed, and 3 abstained.**

Opposed: Rachel Minnery, Tien Peng, Nicole Dovel-Moore, Karen Joslin, Kent Sovocool, Thomas Pape

Abstained: Susan Gitlin, Josh Jacobs, Charles Kibert

**Question One: The Amendment was made and seconded to add qualifying language “for interior only projects” in 7.4.1.**

**There were no Objections to the Amendment and the Amendment carried.**

**Question Two: The Amendment was made and seconded to add “not applicable where no vegetated site exists on 7.5.1.5.**

**There were Objections to the Amendment.**

**Discussion took place on the Amendment:**

- One participant speaking against the motion stated that assuming that just because vegetation is present that there is opportunity to do agriculture is shaky correlation.
- It was stated that The goal of this Standard is to encourage forward thinking on actions that have not been easy to act on in the past.
- Another speaker was in support of leaving the amendment as proposed, stating that the criterion is question isn’t worth very many points, so it’s not a potential for “gaming” the Standard.
- A speaker against the amendment stated that if the amendment does not pass, the message will be “never applicable”.

**MOTION TO REPLACE THE AMENDMENT: The Motion was made and seconded to replace the amendment by adding “for interior projects only” to the Not Applicable language.**

**There were no Objections to the Replacing the Amendment.**

**Discussion took place on the Replacement Amendment:**

- A speaker expressed support of the amendment, but said having no qualifications would be better.
- It was stated that from an assessment perspective this is different than the stormwater aspect. The speaker felt that language written provides enough guidance in principal to determine if the criterion is not applicable.

**VOTE: The Replacement Amendment carried with 9 in favor, 8 opposed, and 5 abstained.**

Opposed: Susan Gitlin, Jane Rodhe, John Cross, Allan Bilka, Kent Sovocool, Gord Shymko, Greg Johnson, Jeff Bradley

Abstained: George Thompson, Paul Bertram, Doug Tucker, Josh Jacobs, Charles Kibert.

**Discussion took place on the Amended Motion:**

- It was clarified that all the discussed criteria will now have N/A language that states “Not applicable for interior-only projects”.

**VOTE: The Amended Motion carried with 20 in favor, 1 opposed, 4 abstained.**

Opposed: Kent Sovocool

Abstained: Thomas Pape, Allan Bilka, Jeff Bradley, Paul Bertram.

### **Materials Subcommittee**

Presented by Subcommittee Vice Chair Josh Jacobs

#### **22 – 48. Substantive. 10.6.1.2:**

- **Comment:** A final waste management ~~is a~~ summary report is completed after construction ~~that documents~~ documenting the results of the project that includes all waste and recycling/reuse materials, their weight/volume, recycling rate for each line item on the plan, and an overall recycling rate for the project.

The Summary Report will also includes:

- ~~An overall recycling rate for the project;~~
- ~~Material categories;~~
- ~~Amounts of materials salvaged, reused, recycled, donated, sold or returned to manufacturers with takeback programs, as well as the achieved recycling rate for each line item;~~
- Names of take back programs, recyclers, salvage and reuse companies and/or material exchanges that were used;
- Records of donations, sales, recycling and landfill/incinerator manifests, weight tickets, hauling receipts, and invoices;
- For each recycling facility used, it should be noted whether the recycling operation is certified through a state, local, or a third-party independent certification.

~~The report includes~~ Include a separate average recycling rate . . .

~~Include the name and contact information for the person(s) responsible for developing and implementing the waste management plan, the person responsible for the off site facility recycling rate and the person responsible for the content of the final waste management report.~~

- **Reason:** The requirements for 10.6.1 have become too complicated, especially for the number of points achieved. The items proposed to be struck from the summary report are already listed in the first paragraph.
- **Recommended Response (From Task Group):** Thank you for your comment. Your comment has been accepted with modification and changes have been implemented in the draft Standard. Whether or not the facility is certified the additional contact information is necessary.

Staff reminded Consensus Body members of prior action on the comment made at Meeting #31:

- The Motion was made and seconded to accept the changes as recommended by the Subcommittee.
- The Motion was made to postpone discussion of 22-48 until the next Consensus Body to allow members to review the changes to the language.

**MOTION: The Motion was made and seconded to accept the task group recommendation.**

**Discussion took place on the Motion:**

- A speaker in favor of the motion stated that the modification makes the criterion easily understood.

**VOTE: The Motion carried with 21 in favor, 1 opposed, 2 abstained.**

Opposed: Susan Gitlin

Abstained: Kent Sovocool, Don Horn

### **Objections and Negative Reasons on the Letter Ballot**

#### **52-39. Substantive. 10.2.1.1 and 10.2.1.2**

**Comment:** The third party Multiple Attribute Product Certification option should be given greater weight than the other options in these credits.

**Reason:** EPDs, LCAs, and Multiple Attribute Product

Certifications are not equal tools. EPDs and LCAs are tremendously important disclosure tools; however, having one doesn't necessarily mean that the product is better than the industry average in terms of environmental performance. Generally speaking, however, a third party Multiple Attribute Product Certification will indicate a product has demonstrated actual measured, relevant and meaningful environmental preferability better than the other cohorts cited within these sub-sections

**Consensus Body Response:** Reject. EPDs and Multi-attribute standards are not the same, however they both have strengths and weaknesses and the committee's goal is transparency.

**Nature of Objection:** The response from the CB indicates that environmental performance is not the major driver behind the CB's decision-making. Also, the response does not address all of the concerns raised in the comment.

**Action or Inaction at Issue:** The CB's reason for rejecting this comment was that "EPDs and Multi-attribute standards are not the same, however they both have strengths and weaknesses and the Consensus Body's goal is transparency. This response fails to address the emphasis in the comment that a multi-attribute sustainability assessment standard is a better indicator of improved environmental performance than is an EPD. The CB's response indicates instead that its goal is transparency and not environmental performance improvement.

**Remedial Action that would Satisfy:** Accept the comment and value certification to a multi-attribute sustainability assessment standard more than the submittal of disclosure tools, like EPDs

**Action Taken:** A discussion took place to resolve the objection in accordance with GBI procedures Section 4.11.

**New Proposed Response:** Thank you for your comment. Your comment has been rejected. While the Consensus Body appreciates your input, your proposed change was not implemented in draft Standard for the stated reason: The Consensus Body agrees that EPDs and Multi-attribute standards are not the same, however the Consensus Body believes that Multi-attribute standards should not be weighted above credible EPD resources since a clear technical/scientific basis for this distinction was not provided. Furthermore, 10.2.1.1 and 10.2.1.2 award points for the number of products evaluated for cradle-to-gate and cradle-to-grave product life cycles not for the environmental performance of the product. At



this point the Consensus Body does not feel it has received sufficient technical/scientific evidence to be able to weight one approach over the other as suggested by your comment.

**Status: TBD**

**MOTION: The Motion was made and seconded to accept the proposed new response.**

**Discussion took place on the Motion:**

- The commenter was present on the call and stated that the proposed response doesn't address the objection. It's an inadequate to respond by stating the commenter did not provide sufficient information. This response does not address the objection and it will remain unresolved. The commenter stated their desire for an explanation of why approaches with environmental performance aren't the preferred choice.
- One member stated they were uncomfortable with the last sentence of the response. They stated that EPDs are about transparency and for the Consensus Body to state that it doesn't have the official technical information to decide this is to say the Consensus Body didn't look at the research. The speaker was in favor of removing the concerning language.
- The question was posed whether the Consensus Body is proposing to weigh one over the other. It was clarified that the credit has been thoroughly discussed and that the current motion regards changing the response to the commenter. It was reiterated that the criterion language is not being voted on.
- It was stated that certification and documentation are not the same. Whether they should be equal points or not is a separate discussion, but the Consensus Body should be discuss them separately.

**AMENDMENT: The amendment was made and seconded to strike the last sentence of the response.**

**There were no Objections to the Amendment.**

**Discussion took place on the Amendment:**

- A question as to whether the sentence related to "Science wasn't provided" should be removed was raised.

**AMENDMENT TO THE AMENDMENT: The amendment was made and seconded to strike "since a clear technical/scientific basis for this distinction was not provided".**

**There were no Objections to the Amendment.**

**Discussion took place on the Amendment:**

- The sentiment was raised by multiple speakers that the amendment does not adequately provide a response to the commenter. .

**AMENDMENT: The Amendment was made and seconded to change the text to strike the following language from the response: "the Consensus Body believes that Mutli-attribute standards should not be weighted above credible EPD resources. Furthermore,".**

**There were no Objections to the Amendment.**

**Discussion took place on the Amendment:**

- It was stated that the amended response says the points system does not take environmental performance into consideration. speaker stated that is how the Consensus Body is responding because that it what this criterion describes.

**VOTE: The Amended Motion carried with 15 in favor, 5 opposed, and 5 abstained.**

Opposed: Thomas Pape, Susan Gitlin, Nicole Dovel-Moore, John Cross, Kent Sovocool

Abstained: Bill Carrol, Allan Bilka, Josh Jacobs, Charles Dixon, Don Horn

**Discussion took place after the Vote:**

- A question posed whether there is any place else in the Standard that risk or hazard could be addressed instead of Product Lifecycle. It was clarified that all are addressed and it's a question of separating them out as separate questions.
- Whether this should be addressed as New Business or submitted as a comment during the third round of comments was discussed. One member clarified it could be brought up during continuous maintenance.

### 52 - 48. Substantive. 10.3

**Comment:** Green building standards should incentivize an approach based in Green Chemistry addressing the intrinsic hazards of materials and chemicals. Here is some proposed text: Safer Chemicals – Avoidance of Chemicals with Specific Hazard Endpoints

Credit shall be given for the specification and installation of products in the following building product categories - paints, coatings, adhesives, sealants, elastomers, binders, spray and extruded polyurethane, polyisocyanurate, and polystyrene foams, pressed wood, plywood, and wallboard –that upon completion of a hazard assessment where chemical hazard(s) have been identified, the safer available alternative(s) is used in the manufacture of the product. If alternative safer chemicals are not available, consider use of alternative products or processes. Document any findings regarding the availability and choice of using safer alternatives, including any additional market assessments performed.

#### Carcinogenicity

Demonstrate that the product inventory does not contain any constituents deemed to be known or probable human carcinogens.

If the product does contain a known carcinogen, the manufacturer must demonstrate that it is present at a concentration that corresponds to a very low risk (e.g.  $< 10^{-6}$  individual lifetime risk) under expected exposure conditions for specific uses/application.

Consult the following sources to identify carcinogens and accepted guidelines for assessing carcinogenic risk. Carcinogens listed in any of the following sources must meet the requirements of this practice.

- National Toxicology Program: Known to be Human Carcinogens, Reasonably Anticipated to be Human Carcinogens:  
<http://ntp.niehs.nih.gov/?objectid=035E57E7-BDD9-2D9B-AFB9D1CADC8D09C1>
- EPA Integrated Risk Information System (IRIS): “Carcinogenic to Humans,” “Likely to Be Carcinogenic to Humans:” <http://www.epa.gov/IRIS/index.html>
- International Agency on the Research of Cancer (IARC): “Carcinogenic to Humans,” “Probably carcinogenic to humans:” <http://monographs.iarc.fr/ENG/Classification/index.php>
- Guidelines for Carcinogen Risk Assessment (2005). <http://epa.gov/cancerguidelines/>
- Guidelines for Exposure Assessment.  
<http://www.epa.gov/raf/publications/guidelines-for-exposure-assessment.htm>

#### Reproductive Toxicity

Demonstrate that the product inventory does not contain any constituents that are deemed to be reproductive toxicants.

If the product does contain a known reproductive toxicant, the manufacturer must demonstrate that it is present at a concentration that corresponds to a very low risk (e.g. Hazard Quotient < 1) under expected exposure conditions for specific use/application.

Consult the following sources to identify reproductive toxicants and accepted guidelines for assessing reproductive risks. Toxicants listed in any of the following sources must meet the requirements of this practice:

- California Safe Drinking Water and Toxic Enforcement Act of 1986 (Prop. 65):<http://oehha.ca.gov/prop65/law/P65law72003.html>
- EU Risk Phrases (R60: May impair fertility; R62: Possible risk of impaired fertility;
- EU Hazard Statements (H360 May damage fertility or the unborn child; H361 Suspected of damaging fertility or the unborn child; H362 May cause harm to breast-fed children).
- Guidelines for Reproductive Toxicity Risk Assessment. <http://www.epa.gov/raf/publications/guidelines-reproductive-tox-risk-assessment.htm>

#### Developmental Toxicity

Demonstrate that the product inventory does not contain any constituents that are deemed to be developmental toxicants.

If the product does contain a known developmental toxicant, the manufacturer must demonstrate that it is present at a concentration that corresponds to a very low risk (e.g. Hazard Quotient < 1) under expected exposure conditions for specific use/application.

Consult the following sources to identify reproductive or developmental toxicants and accepted guidelines for assessing developmental risks. Toxicants listed in any of the following sources must meet the requirements of this practice.

- California Safe Drinking Water and Toxic Enforcement Act of 1986 (Prop. 65):<http://oehha.ca.gov/prop65/law/P65law72003.html>
- EU Risk Phrases ( R61: May cause harm to the unborn child; R63: Possible risk of harm to the unborn child; and R64: May cause harm to breast-fed babies);
- EU Hazard Statements (H360 May damage fertility or the unborn child; H361 Suspected of damaging fertility or the unborn child; H362 May cause harm to breast-fed children).
- Guidelines for Developmental Toxicity Risk Assessment. <http://www.epa.gov/raf/publications/guidelines-dev-toxicity-risk-assessment.htm>

#### Persistence, Bioaccumulation, and Toxicity (PBT)

Demonstrate that the product inventory does not contain any constituents deemed to be persistent, bioaccumulative, and toxic chemicals (PBTs).

If the product does contain a known PBT, the manufacturer must demonstrate that it is present at a concentration that corresponds to a very low risk under expected exposure conditions for specific use/application.

Consult the following sources to identify PBTs. PBTs listed in any of the following sources must meet the requirements of this practice.

- Stockholm Convention on Persistent Organic Pollutants:<http://chm.pops.int/Convention/tabid/54/Default.aspx>
- Canada - U.S. Great Lakes Binational Toxics Strategy:<http://www.epa.gov/greatlakes/p2/bnsintro.html>

- EPA Toxic Release Inventory (TRI) known persistent, bioaccumulative, and toxic chemicals and compounds: [http://www.epa.gov/tri/trichemicals/pbt%20chemicals/pbt\\_chem\\_list.htm](http://www.epa.gov/tri/trichemicals/pbt%20chemicals/pbt_chem_list.htm)
  - Waste Minimization Priority Chemicals: <http://www.epa.gov/osw/hazard/wastemin/priority.htm>
- Additional information and guidance available at: <http://www.epa.gov/opptintr/newchems/pubs/pbtpolicy.htm>

#### Criteria for Specific Chemicals and Uses

Paints, coatings, plastics, rubbers and seals shall be free from flame retardants and / or softeners containing SCCPs [short-chained chlorinated paraffins] (not more than 0.1 percent by weight), 10 carbon atoms to 13 carbon atoms, minimum 48 percent chlorine by weight, unless it can be shown that the SCCPs are present above this threshold due to the use of recycled content.

Paints, coatings, plastics, rubbers and seals shall be free from flame retardants and / or softeners containing PBDEs and HBCD.

Perfluorochemicals used in surface coating and protectant formulations for paper and cardboard packaging products; carpets; leather products; and textiles that repel water, grease, and soil. PFCs have also been used in fire-fighting foams and in the production of nonstick coatings on cookware and some waterproof clothes. etc.

Coatings shall not contain long-chain perfluorinated chemicals (<http://www.epa.gov/oppt/existingchemicals/pubs/actionplans/pfcs.html>).

Textiles, paints, printing inks, and paper shall be free of benzidine and benzidine congener-based dyes. Note that EPA has proposed a rule regarding formaldehyde and composite wood products > <http://www2.epa.gov/formaldehyde/formaldehyde-emission-standards-composite-wood-products#proposedrule>

**Reason:** An intrinsic hazard is the potential for harm based on the chemical structure and properties that define its ability to interact with biological molecules. A hazard-based approach, grounded in Green Chemistry principles, can reduce the use of hazardous substances, and lower overall risk to people and the environment. Key to this approach is an understanding of the potential hazards of chemicals in products and availability of safer alternatives. Generally speaking, “hazardous chemicals” are those which have a human or environmental toxicity profile such that exposure to people or flora/fauna in the environment could lead to adverse health impacts. Consistent with Green Chemistry principles and established methods for risk assessment and management, green building and product standards should lower overall risk to people and flora/fauna present in the environment. Key to this approach is to understand how the reduction of human and ecological health hazards can contribute to overall risk reduction. Steps can then be taken to decrease the hazards of product ingredients through: ingredient substitution; alternative design approaches; and/or reducing relevant exposures to people using products or flora/fauna present in the environment. Green building and product standards should also assess the potential trade-offs associated with alternatives/substitutes elsewhere in a product's lifecycle and impacts on the functional ("fitness for use") performance of the product. Consider the following hierarchy of controls principles (as mandated by OSHA) for worker exposures:

- Elimination of hazard
- Substitution – replace high hazard with low hazard
- Engineering – ventilation and/or enclosure
- Administrative – training, job rotation, procedures, and policy
- Protective Clothing and Equipment – use of respirators, ear plugs, gloves

Several of the hazard endpoints proposed for criterion list information sources to consult. These are by no means a comprehensive list of all possible sources. Please also consider the following information sources when attempting to identify if a particular chemical has the potential to be a hazard endpoint:

- The Toxic Substance Control Act Test Submission Database (TSCATS): <http://www.ntis.gov/products/ots.aspx> and <http://yosemite.epa.gov/oppts/epatscat8.nsf/ReportSearch?OpenForm>
- Hazardous Substances Data Bank (HSDB): <http://toxnet.nlm.nih.gov/>
- Integrated Risk Information System (IRIS): <http://www.epa.gov/IRIS/>
- The National Toxicology Program (NTP): <http://ntp.niehs.nih.gov/>
- US EPA HPV Challenge Program: <http://www.epa.gov/hpv/>
- The Distributed Structure-Searchable Toxicity Database Network (DSSTox): <http://www.epa.gov/ncct/dsstox/>
- Registry of Toxic Effects of Chemical Substances (RTECS): <http://accelrys.com/products/databases/bioactivity/rtecs.html>
- International Uniform Chemical Information Database (IUCLID): [http://www.oecd.org/document/46/0,3746,en\\_2649\\_34379\\_2501870\\_1\\_1\\_1\\_1,00.html#InternationalUniform](http://www.oecd.org/document/46/0,3746,en_2649_34379_2501870_1_1_1_1,00.html#InternationalUniform)
- Acute Exposure Guideline Levels (AEGLS): <http://www.epa.gov/oppt/aegl/pubs/chemlist.htm>
- The Agency for Toxic Substances & Disease Registry (ATSDR) Toxic Substances Portal: <http://www.atsdr.cdc.gov/substances/index.asp>
- US EPA: Public Databases Routinely Searched for Hazard Information: <http://www.epa.gov/hpvis/hazardinfo.htm>
- U.S. Environmental Protection Agency's (EPA) Safer Choice Program - DfE's Alternatives Assessment Criteria: <http://www2.epa.gov/saferchoice/design-environment-alternatives-assessments>
- GreenScreen® for Safer Chemicals: <http://www.cleanproduction.org/Greenscreen.php>
- SUBSPORT Restricted and Priority Substances Database: <http://www.subsport.eu/list-of-lists-database>

**Consensus Body Response:** Thank you for your comment. Your comment has been rejected. While the Consensus Body appreciates your input, your proposed change was not implemented in the draft Standard for the stated reason. The Consensus Body has decided to incorporate a risk-based approach versus a hazard-based approach.

**Nature of the Objection:** The CB's response is inconsistent with GBI's claim of supporting sustainability and it fails to respond to the comment.

**Action or Inaction at Issue:** The reason for the CB's rejection of this comment was the following: "The Consensus Body has decided to incorporate a risk-based approach versus a hazard-based approach." In response, we note that risk assessment and hazard assessment are both useful tools that help EPA fulfill its human and environmental health protection mission. EPA uses risk assessment in a regulatory setting to manage chemical risks by setting levels at which exposure to a given chemical poses an acceptable risk. Risk assessment is, in effect, a regulatory floor. In voluntary programs that aim to encourage environmental leadership and improved environmental performance, as the Green Building Initiative and its Green Globes claim to strive for, hazard assessment should be incentivized in order to identify the safest chemicals that can satisfy a functional need. EPA believes this higher bar is appropriate for recognizing top performers in chemical safety. This approach would allow GBI to incentive use of the safest products available, promote innovation, and help project teams identify safer products.

Moreover, the response from the CB does not respond to the technical arguments in the comment.

**Recommended Revision to Response from Staff** (*Note: this recommendation was drafted solely from documented discussion that took place at the Subcommittee and Consensus Body level and does not*

*reflect the opinions of GBI or GBI Staff*): Thank you for your comment. Your comment has been rejected after considering all points. While the Consensus Body appreciates your input, your proposed change was not implemented in the draft Standard for the stated reason. The Consensus Body has decided to incorporate a risk-based approach versus a hazard-based approach. After extensive discussion, the Consensus Body believes that the world is heading in the direction of risk-based assessment.

**MOTION: The Motion was made and seconded to accept the new response.**

**Discussion took place on the Motion:**

- Concern was raised whether all aspects of the comment were considered by the Consensus body. It was stated that there needs to be a clear reason why the Consensus Body won't consider allowing points for reducing risk by removing hazard.
- One member stated their discomfort with the last sentence of the response, expressing concern that it doesn't add anything to the paragraph.

**AMENDMENT: The Amendment was made and seconded to strike the last sentence.**

**There were no Objections to the Amendment and the Amendment carried.**

**VOTE: The Amended Motion carried with in 16 favor, 2 opposed, and 4 abstained.**

Opposed: Susan Gitlin, Thomas Pape

Abstained: Kent Sovocool, Josh Jacobs, Charles Kibert, Don Horn

**Discussion took place after the Vote:**

The commenter was present on the call and stated that their objection is not resolved by this action taken. Woodbury stated that she will follow-up with the commenter following the conclusion of Meeting #33.

### **52 – 58. Substantive. 10.3**

**Comment:** Hazard Communication Plan

A comprehensive hazard communication plan shall be developed. The plan shall address the hazard communication methods that shall be used across the supply chain, including specifiers and other decision-makers and procedures to be followed during construction, operation, occupancy, maintenance, renovation, and demolition of a facility. The plan shall be consistent with the Occupational Safety and Health Administration (OSHA)'s hazard communication requirements found in Code of Federal Regulations (CFR) 29, Part 1900.1200 (or forthcoming requirements under the global harmonized system of classification and labeling of chemicals (GHS), anticipated to be adopted and codified by OSHA" see [www.osha.gov/dsg/hazcom/ghs.html](http://www.osha.gov/dsg/hazcom/ghs.html)) and other federal, state, and local requirements.

Credit should be given to project teams that promote and communicate safe practices during the installation and use of chemical products known to possibly contain sensitizers and irritants.

Safe work practices shall be in place in order to protect workers and building occupants from exposure to chemicals sensitizers and irritants during and after installation of products that contain these hazardous chemicals

Safe work practice may include:

Preparation

- Review label and product information for ingredients, hazards, directions and precautions
- Applicators and helpers should be trained on technique and importance of personal protective equipment (PPE)
- Vacate building occupants and other trade workers who are unprotected

During and After Application

- Anyone in the work site should wear protective equipment (skin/eye protection, respirator, etc.)

- Isolate and ventilate the work sites

**Reason:** Green building standards should encourage practices to relay hazard communication across the supply chain (from the manufacturer through the architect, installer, building owner/ tenant).

**Consensus Body Response:** Thank you for your comment. Your comment has been rejected. While the Consensus Body appreciates your input, your proposed change was not implemented in draft Standard for the stated reason: The OSHA hazard communication program regulations are sufficient.

**Nature of the Objection:** The decision and response are inconsistent with other decisions and fail to take into consideration the technical arguments provided in the comment.

**Action or Inaction at Issue:** The CB rejected the comment with the reason that “The OSHA hazard communication program regulations are sufficient.” The OSHA hazard communication program is, as noted, a regulatory floor. The comment 52-58 is supporting transparency which is a stated goal in a previous Consensus Body decision. The rejection reason stated does not explain why the Consensus Body decided that it was okay for a green building standard to not be transparent about chemical hazards in a building, given deficiencies in safety data sheet (SDS) reporting for issues such as:

- Hazard and exposure control information, which varies widely;
- Recommendations on respiratory protection, which vary significantly;
- The possible need for respiratory protection for “adjacent workers,” which few SDS mention;
- Adequate ventilation information, which while needed frequently provides no guidance or suggestions on ventilation methods or what constitutes adequate ventilation
- Dermal (skin) contact concerns, for when contact may cause an allergic reaction through sensitization, and
- Hazards are identified as “mechanical irritation” but do not mention the possible presence of hazardous substance.

**Recommended Revision to Response from Staff** (*Note: this recommendation was drafted solely from documented discussion that took place at the Subcommittee and Consensus Body level and does not reflect the opinions of GBI or GBI Staff*): Thank you for your comment. Your comment has been rejected. While the Consensus Body appreciates your input, your proposed change was not implemented in draft Standard for the stated reason: The Consensus Body believes that the OSHA hazard communication program regulations are sufficient and this does not need to be further enforced by the Standard. Construction sites are already required to do what the comment suggests adding and the Standard’s goal is to go beyond what is required by law. **Status: TBD**

**MOTION: The Motion was made and seconded to accept the recommended response.**

**Discussion took place on the Motion:**

- It was stated that what the comment originally recommended goes beyond what OSHA requires.

**VOTE: The Motion carried with 18 in favor, 2 opposed, and 5 abstained.**

Opposed: Susan Gitlin, Don Horn

Abstained: Karen Joslin, Gord Shymko, Josh Jacobs, Charles Kibert, Nicole Dovel-Moore

### **52 – 59. Substantive. 10.3**

**Comment:** Credit should be given for the use of EPA Safer Choice (formerly known as Design for the Environment or “DfE”) labeled products.

**Reason:** [www.epa.gov/saferchoice](http://www.epa.gov/saferchoice) Safer Choice is now required for federal purchasing per EO 13693.

**Consensus Body Response:** Thank you for your comment. Your comment has been rejected. While the Consensus Body appreciates your input, your proposed change was not implemented in draft Standard

for the stated reason: The EPA Safer Choice labeled products are based on hazard assessment and are not based upon types of usage and exposure levels that are inherent in the risk based approach utilized in this Standard.

**Nature of the Objection:** The CB's response is inconsistent with GBI's claim of supporting sustainability.

**Action or Inaction at Issue:** The reason for the CB's rejection of this comment was the following: "The EPA Safer Choice labeled products are based on hazard assessment and are not based upon types of usage and exposure levels that are inherent in the risk based approach utilized in this Standard." In response, we note that risk assessment and hazard assessment are both useful tools that help EPA fulfill its human and environmental health protection mission. EPA uses risk assessment in a regulatory setting to manage chemical risks by setting levels at which exposure to a given chemical poses an acceptable risk. Risk assessment is, in effect, a regulatory floor. In voluntary programs that aim to encourage environmental leadership and improved environmental performance, as the Green Building Initiative and its Green Globes claim to strive for, hazard assessment should be incentivized in order to identify the safest chemicals that can satisfy a functional need. EPA believes this higher bar is appropriate for recognizing top performers in chemical safety. This approach would allow GBI to incentive use of the safest products available, promote innovation, and help project teams identify safer products.

**Recommended Revision to Response from Staff** (*Note: this recommendation was drafted solely from documented discussion that took place at the Subcommittee and Consensus Body level and does not reflect the opinions of GBI or GBI Staff*): Thank you for your comment. Your comment has been rejected after considering all points. While the Consensus Body appreciates your input, your proposed change was not implemented in draft Standard for the stated reason: The EPA Safer Choice labeled products are based on hazard assessment and are not based upon types of usage and exposure levels that are inherent in the risk based approach utilized in this Standard.**Status: TBD**

**MOTION: The Motion was made and seconded to accept the proposed revised response.**

**VOTE: The Motion carried with 15 in favor, 3 opposed, and 5 abstained.**

Opposed: Thomas Pape, Susan Gitlin, Don Horn

Abstained: Gregg Bergmiller, Kent Sovocool, Charles Kibert, Nicole Dovel-Moore, Josh Jacobs

## **Indoor Environmental Quality Subcommittee**

Presented by Subcommittee Vice Chair Chris Dixon

### **Points Discussion:**

Dixon present the IEQ Subcommittee's proposal for point reallocation:

- 11.2.1.3 Interior products comply with VOC limits reduced from 8 to 7 points
- 11.4.1.1 Thermal zoning reduced from 15 to 14 points
- 11.4.2.1 Thermal comfort reduced from 10 to 9 points
- 11.5.2.1 Sound Masking (new criterion) add 1 point (was 4 points in previous proposal)
- 11.5.2.2 Measured overall level (new criterion) add 1 point
- 11.5.2.3 Measured spectrum conforms (new criterion) add 1 point
- Editorial change: Language in 11.5.2.2 and 11.5.2.3 moved into bullets under 11.5.2.1.3 Language and points remain the same.

**MOTION: The Motion was made and seconded to accept the recommendation.**

**Discussion took place on the Motion:**

- It was clarified that the motion pertains to the specified criterion under the IEQ Assessment Area.



- A participant speaking in opposition to removing points from Product Emissions stated this is one of the few parts in the Standard that addresses Human Health and there are only a few places in the Standard that address this.
- It was stated that there needs to be consideration for acoustic comfort whether this is as important as chemical health/chemical risk etc. Concern was raised that 3 points is a lot of points to provide for Sound Masking.

**VOTE: The Motion carried with 18 in favor, 4 opposed, and 3 abstained**

Opposed: Thomas Pape, Charles Kibert, Josh Jacobs, Don Horn

Abstained: Susan Gitlin, Greg Johnson, Paul Bertram

**Objections and Negative Reasons on the Letter Ballot**

The Secretariat stated that if the objections for 52-63 and 52-64 are not resolved , the Consensus Body will see these objections with the re-circulation letter ballot. If they are resolved the Consensus Body will be notified.

**Energy Subcommittee**

Presented by Subcommittee Chair David Eldridge.

**43 – 22. Substantive. 5.1**

**Comment:** Modify as follows: renewable energy: energy that is continuously replenished on the Earth, such as wind, solar thermal, solar electric, geothermal, and hydropower, and various forms of biomass.

**Reason:** Biomass is not renewable energy. It is burned just like fossil fuels and creates CO2 and other toxic emissions just like fossil fuels. Wood and biomass are renewable materials, not renewable energy. Deleting this does not prohibit biomass or waste-to-energy as an energy source.

**Consensus Body Response:** Thank you for your comment. Your comment has been rejected. While the Consensus Body appreciates your input, your proposed change was not implemented in draft Standard for the stated reason: Various forms of biomass are considered renewable.

**Nature of the Objection:** Disagree with rejection and reasoning. This response is not consistent with compromise made with Comment No. 43-4 where “biomass from recovered waste” was included in on-site renewable energy (comment was accepted with modification), so not all biomass is renewable. In fact the response agrees with this position: “Various forms of biomass are considered renewable.” This implies that not all forms of biomass are renewable.

**Action or Inaction at Issue:** Disagree with rejection and reasoning. This response is not consistent with compromise made with Comment No. 43-4 where “biomass from recovered waste” was included in on-site renewable energy (comment was accepted with modification), so therefore not all biomass is renewable. In fact the response agrees with this position: “Various forms of biomass are considered renewable.” This implies that not all forms of biomass are renewable. Biomass is not renewable energy. It is not comparable to the other renewable energy sources listed in this section. “Biomass from recovered waste” is a reasonable compromise to this issue. There are significant environmental issues that should be considered when evaluating the environmental impact of biomass when combusted. This includes the immediate release of sequestered CO2 as well as the following emissions that affect human health:

- Fine particulate matter (PM2.5)
- Carbon monoxide (CO)
- NOx, VOCs, PAHs, black carbon
- Heavy metals (arsenic, lead, mercury)

Air toxics such as benzene

**Remedial Action that would Satisfy:** Delete biomass from this definition entirely as requested in this comment or say “various form of biomass from recovered waste sources” to be consistent with the response to Comment No. 43-4.

**MOTION: The Motion was made and seconded to add “various forms of biomass from recovered waste sources” to be consistent.**

**Discussion took place on the Motion:**

- One member stated that biomass specifically grown as an energy crop is omitted from the ongoing discussion around biomass and is not waste biomass.
- A participant speaking against the motion stated this is limiting what biomass is within the Standard.
- Speaking in favor of being consistent the question was posed whether the Consensus Body wants to be consistent with the fact that it’s renewable or that there are other environmental consequences. It was stated that the Standard could eventually come around to allowing all biomass.
- It was stated this question has been debated for a long time and that the ultimate question comes down to whether biomass is renewable. If it’s non-renewable, then the biomass is a depleting resource with un-sequestered CO<sub>2</sub>. It was stated that there needs to be language around renewal of the burning crop.
- One speaker read the definition of biomass from Columbia University and it was restated that technically it is renewable energy. Another member stated the definition does not include biomass.
- Confusion was expressed as to why there is apparent discrepancy in renewable energy. It needs to be in fact renewed, and re-sequestration is key. The comment and rationale for the motion were restated.
- It was stated that in 2018 the EPA was going to assess the impacts of biomass burning.
- The point was raised that this isn’t a question as to whether there are impacts. This is a question around whether it’s renewable, and it is.
- Another stated that in a strict form, it is renewable but we shouldn’t ignore the secondary impacts. i.e. releasing sequestered CO<sub>2</sub>. It’s a question as to whether that crop is actually renewed.

**VOTE: The Motion carried with 10 in favor, 7 opposed, 4 abstained.**

Opposed: John Cross, Greg Johnson, Allan Bilka, Karen Joslin, Kent Sovocool, Jeff Bradley, Jane Rohde.

Abstained: Gord Shymko, Josh Jacobs, Charles Kibert, Gregg Bergmiller.

## Points

Eldridge presented the Consensus Body with the Subcommittee’s proposal for reallocating points within the Energy Assessment Area:

- 8.2.1.1: Change the baseline to 35% and strike the first bullet
- 8.3: Change total points for Path C to 111 points by reducing points as follows:
  - 8.3.1.1.1: Change from 20 to 10 points and strike the points opportunities for using 2012 IECC or 90.1 – 2010
  - 8.3.2.1.1: Adjust points so the base is 5 points with one additional point earned for each 2% beyond the requirements and strike the points opportunities for using 2012 IECC or 90.1-2010

- 8.3.2.2.1: Change from 3 to 2 points
- 8.3.2.3.1: Change from 5 to 3 points
- 8.3.2.3.2: Change from 5 to 3 points
- 8.3.2.4.1: Change from 5 to 3 points
- 8.3.2.5.1: Change from 5 to 3 points
- 8.3.2.6.1: Add a bullet so that 2 points are earned where LPDs are 20% below 90.1-2013 and change existing bullet from 2 to 1 point where 90.1-2013 is met and strike bullet giving points for 90.1-2010
- 8.3.3.1.1: Change from 2 to 1 point
- 8.3.3.1.2: change from 3 to 1 point
- 8.3.3.2.1: Change from 10 to 5 points and strike point opportunity for 90.1-2010
- 8.3.3.3.1: Change from 10 to 5 points and strike point opportunity for 90.1-2010
- 8.3.3.4.1: Change from 2 to 1 points and strike point opportunity for 90.1-2013
- 8.3.3.5: Strike criteria
- 8.3.3.6: Change from 10 to 6 points and from 90.1-2010 to 2013
- 8.3.3.7.1: Change from 10 to 6 and from 90.1-2010 to 2013
- 8.3.3.8: Change from 5 to 3 and from 90.1-2010 to 2013
- 8.3.3.9.1: Change from 10 to 6 points and change percentage in second bullet to 10% from 5%
- 8.3.3.9.2: Change from 6 to 3
- 8.3.3.9.3 and 8.3.3.9.4: Strike criteria
- 8.3.4.1: Change from 15 to 8 points
- 8.3.4.2: Change from 10 to 5 points

**MOTION: The Motion was made and seconded to change the Energy Path points according to the listed proposal.**

**Discussion took place on the Motion:**

- It was clarified that the proposal is not changing the baseline to 35% but instead changing to a 35% reduction under 8.2. It was stated that the intent is to synchronize the scales, with a goal towards lowering the entry point.
- There was further clarification provided on the pathways and the rationale on how this method helps further energy efficient buildings gain points just as easily as a less efficient building.

**VOTE: The Motion carried with 18 in favor, 2 opposed, and 1 abstained.**

Opposed: Jeff Bradley, Jane Rodhe

Abstained: Susan Gitlin

### **Negative Reason**

#### **Neg. Shymko. 8**

**Reason or Comment:** Further analysis is required to assess the relative equity of Paths A, B, and C in terms of points awarded/available – currently 260 for all three paths. Would the same building scored under all three paths achieve similar scores? Is it intended that they achieve similar scores? How would an “advanced” building versus a “simple” building fare under each of the paths? Is it conceivable that a simple building could score higher under Path C (prescriptive) than an advanced building under either of the other two paths (performance), yet use more energy? These questions are unanswered and must be resolved in deference to the integrity of the Standard.

**Revision Requested:** Conduct at least high-level archetype analyses of the scoring of different building types under the three available scoring paths. Adjust scoring scales and/or points allocation and/or points distribution as warranted.

**Action Taken:** Analysis was completed and presented to the Subcommittee. The Subcommittee proposal includes an adjustment in points.

**Status:** TBD

**Note:** The commenter was present on the call and provided verbal verification that their negative reason was resolved based on the action taken to reallocate points.

### **Review Schedule**

Woodbury updated the Consensus Body with the schedule moving forward:

- In October, this CB will have been working on this process for 3 years (started Oct 2014)
- GBI will launch a pilot while this process is concluding, this will allow us to keep the Standard reflective of the market.
  - By contrast, further delay will just mean that the Standard will continue to misalign with changes in the market
- Preparing changes to the Second Comment Draft for public comment. (either 30 or 45 days)
- Letter ballots as needed
  - Non-persuasive ballot (15 days)
  - Re-circulation ballot (15 days)
- Secretariat staff are preparing for ANSI audits.
- When this revision is done, GBI will immediately file its procedures to continue review of the standard under Continuous Maintenance – this means another revision can occur within 18 to 24 months
  - GBI has already had Continuous Maintenance procedures approved by ANSI but was later informed because of not being able to complete the CM process within 5 years (2010-2015) it needed to use periodic maintenance
  - We will gain approval for use of CM immediately after completing this version of the Standard

Woodbury stated that next steps include sending responses to public comments to the commenters, there will be a 15 day period for commenters to submit objections to the responses. GBI will begin preparing the Standard for a third ANSI public comment period. After action taken at this meeting, there are negative reasons from the last letter ballot that remain unresolved, procedures require a Non-persuasive letter ballot. GBI will launch a pilot of the Standard in parallel with the third public comment period. Staff will continue to work with objectors and negative voters on the Standard per GBI procedures.

### **New Business:**

There was no new business proposed at Meeting #33.

**MOTION:** The Motion was made, and seconded to send the draft to Third Public Comment Period.

**VOTE:** The Motion carried with 20 in favor, 2 opposed, and none abstained.

Opposed: Susan Gitlin, Jeff Bradley

None abstained.

**MOTION: The Motion was made, seconded, and carried to adjourn the meeting.**

**Meeting ended at 3:33PM ET---**