NSC 373 Joint Committee Meeting
Face to Face Meeting
January 28, 2018

Participating Members & Observers:

1. Duke Pointer
2. Kianda Franklin
3. Eric Osterhout
4. Greg Osterhout
5. Bernard Buster
6. Todd S
7. Jack Geibig
8. Mark Rodgers
9. Bill Halquist
10. John Mattke
11. Kathy Spanier
12. Cari May
13. Dan Rea
14. Josh Levinson
15. Allison Skinner
16. Aaron Hicken
17. Michael Schumacher
18. Dennis Buechel

Referenced documentation:
- NSC373 Materials – Vegas Packet

Mark Rodgers, JC Chair called the meeting to order
Roll call and Anti-Trust – Kianda Franklin

SUMMARY

Mark welcomed the group to the meeting and provided an overview of the agenda. The group was able to reach quorum.

Proxy
- Kathy S. proxy for Katie Fernholz
- Todd S. proxy for Bill Browne
- Allison S proxy for Amber D
- John M. proxy for Darrell P.

Jack Geibig, JC vice Chair provided an overview of the meeting packet summary with issue papers and possible solutions.
Open Issue Papers

5.2.1 – Recycled Water – Change approach of 5.1 to a plan, and 5.2.1 to exempt quarry only
5.2.2 – Recycled Water (Optional) – Adjust scale up to start at 80%, Adjust optional points
5.3.1 – Enhanced Water Treatment (Optional) – Change to required.
5.3.2 – Enhanced Sludge Management (Optional) – Create additional thresholds
5.3.3 – Water Reuse (optional) - Create additional thresholds
7.2.1 – Ecosystem Boundaries – Combined into one required criterion
7.2.2 - Environmental Impact Assessment - Combined into one required criterion
7.3 – Verification of Site Management Plan (optional) – No change
9.5 – Social Accountability (optional) – Relevant sub-bullet only to apply to public companies
10.2.2 – Total Energy Reduction (optional) – Adjusted scale upward
10.4 – Renewable and Alternative Energy Sourcing (optional) – Adjusted scale upward
11.3 – Demonstrated Process Reduction of Excess Process Materials (optional) – No action proposed
12.1 Chemical Inventory – No immediate action taken

ISSUE PAPER 5.2.1/5.2.2

Eric O. provided an overview of the issue paper. Jack provided an overview of the recommendation for the 5.2.1/5.2.2 issue paper. Allison S. provided an overview of the calculation of recycled water. How this is audited on an onsite audit. Discussion on recycled water. It appears more clarification on recycled water should be calculated. I was suggested to add a term “makeup” water. John M. Suggested to add a calculation for recycle water. Adding an 80% calculation piece should wait until we decide.

5.1 Water Reduction Planning (Required): The facility operator shall establish and implement a documented program with a goal to systematically improve water consumption and recycling practices. The facility operator shall develop and maintain an annual inventory of water consumption organized by water source (e.g., municipal potable, direct rainwater captured for reuse, on-site wells, or reclaimed grey water) and purpose of consumption (e.g., manufacturing, dust suppression, landscape watering, or office use). The program shall also identify opportunities and methods for decreasing water use, minimizing water loss and increasing water recycling, establish target goals, quantify changes, and monitor progress. This program shall cover but not be limited to the following topics:
- Sourcing of water (e.g., rain water, grey water, naturally occurring ground water, or other non-potable sources)
- Capture and Recycling of water (e.g., holding and settling ponds, and filtering and recirculation systems)
- Discharge and end-use of water (e.g., use for dust suppression, and discharge into natural drainage area)
- Conservation of potable water (e.g., water-efficient taps with aerators or flow restrictors, low-flow toilets, signage, employee education)
- Conservation of landscaping water (e.g., creation of climate-appropriate or non-irrigated landscapes, use of native plants, efficient watering)
- Create an inventory loss, evaporation

MOTION TO VOTE: - Jack G.
SECOND: John M.
Affirmative: 10
Negative: 0
Abstain: 0
PASSED
The Group decided to hold off on credit 5.2 Recycled water discussion until after the meeting

5.2.1 Required – A minimum of 80% of the water accounted for in the water inventory in 5.1 for fabrication operations shall be captured and recycled. Quarry operations are exempted from this requirement.

Group discussion: Should dust suppression be included or on a case by case. Excluding dust suppression, should change required criteria be changed to optional.

Editorial updated: POTW – Need to spell out in the standard

5.3.1 Optional - enhanced water treatment (required)
Demonstrate on-site systems that result in enhanced treatment of discharge water. If water is discharged, the facility operator shall meet one of the following:

   a) Management of wastewater on-site resulting in no direct discharge of water from site (1 point); or
   b) Quality of discharged water, either to POTW or directly to the environment, is demonstrated to meet State drinking water standards (1 point); or

   OR

   c) Where no permits or regulations are applicable, the facility operators demonstrate that the quality of water discharged to the environment from their facility meets the US EPA’s NPDES (National Pollutant Discharge Elimination System) requirements. (1 point);

If no water is discharged then this criterion is met. Facility Operators that do not utilize water in their manufacturing operations shall qualify for 1 point under this criterion.

Add definition for Discharge (in definition section)

VOTE:
Proposed Action – Change the criterion from optional to required.

MOTION: Jack G.
Affirmative – 9
Negative   -1
Abstain – 1
PASSED
Overview of EPD by Kathy Spanier and Jack Geibig
Jack provided an overview – provided a prospective of 373 and power point presentation. (Slides are attached).

11.3 Optional – Demonstrated Process Reduction of Excess Process Materials
The facility operator shall demonstrate, over a 6-year timeframe, the successful reduction of excess process material generated per unit processed. Methods for reducing such materials shall include but are not limited to, process modification, operational changes, efficient use of materials, and use of more sustainable materials (estimated or measured as ton of scrap per unit of dimension stone produced).

a) Achieved reduction of 10 - 24% of excess process material inventory (1 point);

b) Achieved reduction of 25 - 50% of excess process material inventory (2 points total); or

c) Achieved reduction of greater than 50% of excess process material inventory (3 points total).

All reductions shall be measured relative to total excess process material (e.g., ton of excess material/ton of stone product produced), as determined in section 11.1 and shall be measured or estimated to receive credit. If estimated, operator shall provide method of estimation and documented data on which the estimation is based to receive credit.

Achieved reductions shall be calculated by comparing the total excess material for the most recent completed year to that of the baseline year, and calculating the percent of total excess material reduction achieved. The baseline year shall be the year 6 years prior, providing that a complete inventory meeting the requirements of section 11.1 exists for that year. Otherwise, the baseline shall be the most recent year for which a complete inventory meeting section 11.1 exists. Under no circumstances shall data from more than 6 years prior be used as a baseline in this criterion.

Group Discussion: Kianda explained that will need to provide a response to the issue paper proponent. The JC Chairs will write a response to Living Building. Kathy will set up a meeting to discuss plan.

Proposed Action: Not to change the current language, but provide a response to Living Building

MOTION: Jack Geibig, SECOND – John M.
Affirmative: 10
Negative: 0
Abstention – 0
PASSED

Criteria 9.5 – Social Accountability (optional)
The facility operator shall develop and implement a social accountability plan that shall address the following:

a) demonstration of fair hiring practices;

b) education for applicable employees social accountability issues or practices;

c) corporate ethics;
d) receipt of gifts; and

e) prohibitions against engaging in insider trading, in cases where a company is publicly traded.

To qualify, the facility operator shall demonstrate through documentation the implementation of each aspect of the plan, including demonstration of training to all employees. (1 point)

**Proposed Action:** Update credit 9.5 with the language above

**MOTION:** Jack Geibig.

**Affirmative:** 10

**Negative:** 0

**Abstention –** 0

**PASSED**

### 7.2 Required – Enhanced Site Management

The facility operator shall demonstrate conformance to one of the two enhanced site management planning activities listed below. Two points are earned if both options are demonstrated.

#### 7.2.1 – ecosystem boundaries

The facility operator shall establish ecosystem boundaries to promote conservation (e.g., in a site preservation plan, keep disturbed area as small as possible and ensure vehicles keep to designated paths, research local wildlife populations, mitigate downstream effects from surface water diversion, minimize removal of native vegetation).

**Proposed Action:** Update credit 7.2 with the language above

**MOTION:** Jack Geibig.

**Affirmative:** 9

**Negative:** 0

**Abstention –** 1

**PASSED**

#### 7.2.2 - environmental impact assessment

The facility operator shall conduct an independent assessment of environmental impacts of current and planned quarrying operations. The plan shall identify any potential impacts on biodiversity, endangered species, and critical habitats, as well as any other impacts anticipated to human health or the Environment. To qualify for the points, the results of the impact assessment shall be used to inform other aspects of the site management plan, which shall describe how the plan acts to minimize or prevent identified impacts. Impact assessments performed as part of the site acquisition process meet this requirement, so long as it was performed by an independent third party (e.g., environmental professional engineer, or accredited organization) and within the past 20 years.

**Proposed Action:** Update credit 7.2 with the language above

**MOTION:** Jack Geibig.

**Affirmative:** 9

**Negative:** 0

**Abstention –** 1

**PASSED**
Criteria 7.3 – Verification of Site Management Plan (Optional)

Proposed Action – Propose that no action be taken. Comment was offered the Living Building Challenge, a group that did not require conformance to this criterion in its approval of NSC373. 

MOTION: Jack Geibig.

Affirmative: 10  
Negative: 0  
Abstention – 0  
PASSED

Criteria 12.1 – Required – Chemical Inventory

Initial Comment – 12.1 is good – but we think there should also be a credit that ties back to the LBC redlist – now an industry standard – that would allow for consistent chemical screening for our projects. This would increase specification of Natural Stone

Proposed Action – Leave as is. Chemical list are covered in credit 12.4 (Response to LBC) 

MOTION: Jack Geibig.

Affirmative: 9  
Negative: 0  
Abstention – 0  
PASSED

Criteria 10.2.2 – Total Energy Reduction (max 3 Points)

Proposed Action – Leave as is. Adding more percentage would be unachievable. This will be monitored on a regular basis. 

MOTION: Jack Geibig.

Affirmative: 10  
Negative: 0  
Abstention – 0  
PASSED

Criteria 10.4 – Renewable and Alternative Energy Sourcing (max 2 3 Points)

Proposed Action:

10.4 Optional – Renewable and Alternative Energy Sourcing (maximum 2 3 points)
The facility operator shall demonstrate the use of renewable energy in its operations. Renewable energy sources include energy derived from water, wind, and solar sources, as well as the use of renewable fuels such as biodiesel and those derived from sources such as switch grass.

a) 1-10% of total energy use derived from renewable sources (1 point); or 
b) 11-100% of total energy use derived from renewable sources (2 points total).
a) Demonstrate 10% or greater of total energy use is derived from renewable sources (1 point); or
b) Demonstrate 25% or greater of total energy use is derived from renewable sources (2 points total).
c) Demonstrate 40% or greater of total energy use is derived from renewable sources (3 points total).

All contributions of renewable energy are measured relative to total energy use for entire operation, as determined in section 10.1, and shall be measured and documented to receive credit.

Need to add a definition for “Renewable Energy”
Proposed Action – 10.4 new language above
MOTION: Jack Geibig.

Affirmative: 10
Negative: 0
Abstention – 0
PASSED

5.3.2 Optional – Enhanced Sludge Management
More discussion is needed to determine whether this credit should be a requirement or optional. Also if there is a need to stratify.
A Task Group was created to discussion and research recommendation for the JC.
Members included: Bernard B and Todd S.

5.3.3 – Water Reuse (Optional)
A Task Group was created to review and analyze the current credit usage. To determine if this credit needs stratification.
Members: Kathy, Bernard, Todd

13.2 - Issue Paper Review:
Cari May provided an overview of the issue paper explaining the DARTRATE.

Proposed Action – Table discussion for now.
MOTION: Jack Geibig.

Affirmative: 7
Negative: 0
Abstention – 0
PASSED

Other items need to review: Review of point weighting of changes

Meeting Adjourned
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Natural Stone Council Meeting

Mandalay Bay – Las Vegas

January 29, 2018
NSC373 Recognition

• Recognized in LEED v4.
  – NC-v4 MRc3: Building Product Disclosure and Optimization Sourcing
    • LEED Interpretation #10455
    • Raw material source and extraction reporting (option 1)
    • Requires NSC 373 certification, public disclosure of scorecard, and conformance to 7.2.1 or 7.2.2.
  – Recognized in Living Building Challenge v3.1
    • Responsible Industry Imperative
    • Must advocate for all stone to be sourced from certified NSC373 operators.
Environmental Product Declaration

• Profile of the Environmental and Technical performance of a product

• Technical Content
  – LCA-based outcomes
  – Key parameters
  – Context of analysis

• Marketing Document
  – Company Specific Branding
  – Other Key Info/Claims
The EPD Process

- **Product Category Rule (PCR)** – Defines specific rules for creating EPDs for a product category (e.g. flooring)
- **Life Cycle Assessment (LCA)** – Evaluation of the health and environmental impacts of a product system
- **Environmental Product Declaration (EPD)** – summary of the LCA results reported following the rules of the PCR
LEED v4- EPDs

Building Product Disclosure and Optimization Credit
Option 1. Environmental Product Declaration (1 point)

Use at least 20 different permanently installed products sourced from at least five different manufacturers that meet one of the disclosure criteria below.

• Environmental Product Declarations which conform to ISO 14025, 14040, 14044, and EN 15804 or ISO 21930 and have at least a cradle to gate scope.

  – **Industry-wide (generic) EPD** -- Products with third-party certification (Type III), including external verification, in which the manufacturer is explicitly recognized as a participant by the program operator are valued as *one half (1/2) of a product*

  – **Product-specific Type III EPD** -- Products with third-party certification (Type III), including external verification in which the manufacturer is explicitly recognized as the participant by the program operator are valued as *one whole product*
LEED v4- EPDs (cont)

Option 2. Multi-attribute optimization (1 point)

Use products that comply with one of the criteria below for 50% by cost of the value of installed projects.

• Third party certified products that demonstrate impact reduction below industry average in at least 3 categories are valued at 100% (1 point)
  – Global warming potential
  – Deletion of stratospheric ozone
  – Acidification
  – Eutrophication
  – Formation of tropospheric ozone
  – Depletion of non-renewable resources

Can be demonstrated by comparison of an EPD to an industry product benchmark!
Factors Influencing Design and Construction Decisions
(Current and Expected Future by Player)


<table>
<thead>
<tr>
<th></th>
<th>2014</th>
<th>2016</th>
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<tr>
<td>Owners</td>
<td>59%</td>
<td>67%</td>
</tr>
<tr>
<td>Architects</td>
<td>63%</td>
<td>79%</td>
</tr>
<tr>
<td>Contractors</td>
<td>41%</td>
<td>56%</td>
</tr>
</tbody>
</table>
Concrete Industry

• Concrete Sustainability Council (CSC) – Responsible Sourcing Certification
  - Awarded first certification in June 2017
  - Suppliers can participate and get recognized.

• Engaged in PCR development since 2012
  - Multiple PCRs already established in key categories, including Concrete, countertops, concrete masonry, and precast
  - PCRs registered in both N America and Europe.

• NPCA released 3 industry-wide EPDs
  - Structural Precast
  - Underground Precast, and
  - Architectural & Insulated walls
Other Concrete Industry Activity

• EPD development tool can create on demand EPDs for industry members
  - Created and managed by BASF, independently verified
  - Dozens of EPDs created in 2016-2017, in multiple countries.
  - Capable of creating EPDs to specific mixtures
  - Tools for both poured concrete and concrete masonry products

• Precast Concrete companies are offering on-demand EPDs for specific projects

• Concrete and Precast companies are participants in the Health Product Declaration (HPD) program

• NRMCA Detailed Guide of specific instructions for achieving multiple credits in LEED v4. – many of these things apply to stone
PCRs for Competitive Products

• Concrete PCRs
  – ASTM PCR for Manufactured Concrete and Concrete Masonry Products (2014)
  – Carbon Leadership Forum NA PCR for ISO Type III Declarations for Concrete (2013)
  – ASTM PCR for Precast Concrete (2015)
  – Environdec PCR for Cement (2015)
  – NSF PCR for Residential Countertops (2013)
  – UL PCR for Cladding Systems

• Engineered Stone
  – NSF PCR for Residential Countertops (2013)
Applicable PCRs – Natural Stone

• Existing PCRs specifying stone
  – NSF PCR for Residential Countertops (2013)

• PCRs needing modification
  – NSF PCR for Flooring (2014)

• Other categories would need a PCR first
Value Proposition for Stone

- EPD program will qualify stone products for new LEED credits
  - Restores balance in market with competitors
  - Positions stone to respond to emerging whole building analysis benchmarks
- 3rd party validation of PCR will give credibility to LCA’s/EPD’s generated for stone products
- EPDs will compliment, not invalidate, industry’s continued efforts towards certification.
- EPDs will inform decision makers about the environmental benefits of stone-based products
- EPD’s are in demand for LEED, Green Globes, IGCC, and other green building projects
- EPDs program is cost-effective.... Will leverage combined resources with direct benefit to individual companies.
Next Steps

• Planning phase to determine scope and structure
  – Industry priority categories
  – Appropriate EPD Approach – Each has pros/cons
    • Industry-wide EPD
    • EPD tool
    • Individual
  – Product categories
    • Are existing PCRs sufficient?
    • Do desired PCRs need modification, or need to be created?
  – Specifics/costs of system implementation

• Develop recommendations/proposal for broader consideration.