



**TO:** Joint Committee on Water Sustainability – Treatment Chemicals  
**FROM:** Mr. Paul Olson, Chair of the Joint Committee  
**DATE:** September 23, 2022  
**SUBJECT:** Proposed revision to NSF/AWWA/ANSI 416: *Sustainability Assessment for Water Treatment Chemical Products* (416i5r1.1)

Revision 1.1 of NSF/ANSI 416, issue 5 is being forwarded to the Joint Committee for consideration. Please review the proposal and **submit your ballot by October 14, 2022** via the NSF Online Workspace <[www.standards.nsf.org](http://www.standards.nsf.org)>.

Please review all ballot materials. When adding comments, please include the section number applicable your comment and add all comments under one comment number whenever possible. If additional space is needed, you may upload a word or .PDF version of your comments online via the browser function.

### **Purpose**

This ballot will update normative references and make minor revisions to bring language more in line with NSF's policies.

### **Background**

As part of a regular review of the standard, it was noted that normative references needed updating, as well as opportunities for revising language to increase clarity.

Please note that this ballot was sent to the Joint Committee earlier in the year, but the ballot did not receive enough responses to meet our requirements for consensus. Inactive and unreachable members were removed from the roster, and the ballot is now being recirculated.

If you have any questions about the technical content of the ballot, you may contact me in care of:

Mr. Paul Olson  
Chair, Joint Committee on Water Sustainability – Treatment Chemicals  
c/o Jason Snider  
Joint Committee Secretariat  
Tel: (734) 418-6660  
Email: [jsnider@nsf.org](mailto:jsnider@nsf.org)

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[Note – the recommended changes to the standard which include the current text of the relevant section(s) indicate deletions by use of ~~strikeout~~ and additions by **grey highlighting**. Rationale Statements are in *italics* and only used to add clarity; these statements will NOT be in the finished publication.]

## NSF/AWWA/ANSI Standard for Sustainability –

# Sustainability Assessment for Water Treatment Chemical Products

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## 1 General

### 1.1 Purpose

The purpose of this Standard is to provide a framework for collecting data and communicating information on the sustainable attributes of a water treatment chemical product, whether repackaged, relabeled, and/or distributed and can be from one or more facilities (locations). Such information is expected to encourage the demand for and supply of water treatment chemical processes that have a reduced impact on the environment and society, thereby stimulating the potential for market-driven continuous improvement.

*Rationale: avoid use of “and/or”*

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## 2 Normative references

~~The following documents contain provisions that, through reference, constitute provisions of this NSF/ANSI Standard. At the time this Standard was balloted, the editions listed below were valid. All documents are subject to revision, and parties are encouraged to investigate the possibility of applying the recent editions of the documents indicated below. The most recent published edition of the document shall be used for undated references.~~

The following documents contain requirements that, by reference in this text, constitute requirements of this standard. At the time of publication, the indicated editions were valid. All of the documents are subject to revision and parties are encouraged to investigate the possibility of applying the recent editions of the documents indicated below. The most recent published edition of the document shall be used for undated references.

*Rationale: updated boilerplate language*

Age Discrimination in Employment Act of 1967<sup>1</sup>

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<sup>1</sup> EEOC Headquarters, U.S. Equal Opportunity Commission, 131 M Street, NE, Washington, DC 20507  
<www.eeoc.gov>

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Civil Rights Act of 1991<sup>1</sup>

CML, Leiden University Institute of Environmental Sciences, *Chain Management by Life Cycle Assessment (CMLCA)*<sup>2</sup>

Equal Pay Act of 1963<sup>1</sup>

Global Reporting Initiative (GRI)<sup>3</sup> ILO C29 Forced Labour Convention, 1930<sup>4</sup>

ILO C105 *Abolition of Forced Labour Convention*, 1957<sup>4</sup>

ILO C182 *Worst Forms of Child Labour Convention*, 1999<sup>4</sup>

International Organization for Standardization (ISO) 9001: 2000/2015, Quality management systems – Requirements<sup>5</sup>

International Organization for Standardization (ISO) 14025: 2006, Environmental labels and declaration – type III environmental declarations – principles and procedures<sup>5</sup>

International Organization for Standardization (ISO) 14044: 2006, Environmental management – Life cycle assessment – Requirements and guidelines<sup>5</sup>

ISO 14001, 2004/2015, *Environmental management systems – Requirements with guidance for use*<sup>5</sup>

ISO 14040, 2006, *Environmental management – Life cycle assessment – Principles and framework*<sup>5</sup>

ISO 14064:1, 2006/2018, *Greenhouse gases – Part 1: Specification with guidance at the organization level for quantification and reporting of greenhouse gas emissions and removals*<sup>5</sup>

ISO 14064:2, 2006(E)/2019, *Greenhouse gases – Part 2: Specification with guidance at the project level for quantification, monitoring and reporting of greenhouse gas emission reductions or removal enhancements*<sup>5</sup>

ISO 14064:3, 2006/2019, *Greenhouse gases – Part 3: Specification with guidance for the validation and verification of greenhouse gas assertions*<sup>5</sup>

ISO/DIS 26000, Guidance on social responsibility<sup>5</sup>

National Renewable Energy Laboratory, US Life Cycle Inventory Database<sup>6</sup>

National Association of Chemical Distributors Responsible Distribution®<sup>7</sup>

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<sup>2</sup> Leiden University Institute of Environmental Sciences (CML), P.O. Box 9518, 2300 RA Leiden, The Netherlands <[www.leidenuniv.nl/interfac/cml/ssp/index.html](http://www.leidenuniv.nl/interfac/cml/ssp/index.html)>

<sup>3</sup> Global Reporting Initiative, PO Box 10039, 1001 EA, Amsterdam, The Netherlands. <[www.globalreporting.org](http://www.globalreporting.org)>

<sup>4</sup> International Labour Office, 4 route des Monillons CH-1211 Geneva, Switzerland <[www.ilo.org](http://www.ilo.org)>

<sup>5</sup> International Organization for Standardization, ISO Central Secretariat, 1, ch De la Voie-Cruese, CP 56, CH-1211 Geneva 20, Switzerland [www.iso.org](http://www.iso.org)

<sup>6</sup> National Renewable Energy Laboratory, 901 D. Street, S.W. Suite 930, Washington, DC 20024-2157

<sup>7</sup> National Association of Chemical Distributors Responsible Distribution®, <<http://www.nacd.com/rd/>>

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Occupational Health and Safety Administration (OSHA)<sup>8</sup>

Rehabilitation Act of 1973<sup>1</sup>

Responsible Care®<sup>9</sup>

Social Accountability International, SA 8000:2008<sup>14</sup>, *Social Accountability*<sup>10</sup>

Titles I and V of the Americans with Disabilities Act of 1990 (ADA)<sup>1</sup>

Title VII of the Civil Rights Act of 1964<sup>1</sup>

United States Environmental Protection Agency (USEPA) *Tool for the Reduction and Assessment of Chemical and Other Environmental Impacts (TRACI)*<sup>11</sup>

United States Environmental Protection Agency (USEPA) *Toxics Release Inventory (TRI) Program*<sup>12</sup>

United Nations, *Globally Harmonized System for Classification and Labeling of Chemicals (GHS)*, ~~Third~~ **Ninth** Revised Edition, 2009~~2009~~<sup>13</sup>

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### **3 Definitions**

**3.13 manufacturer:** Entity that creates products by transforming organic and/or inorganic raw materials with chemical or non-chemical processes into different chemical products.

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**3.22 top supplier (repackager/relabeler):** Organization that provides materials toward packaging, and/or relabeling of the chemical product at the highest percentage by weight (see table below).

*Rationale: avoid use of “and/or”*

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<sup>8</sup> Occupational Health and Safety Administration (OSHA), U.S. Department of Labor  
Occupational Safety and Health Administration, 200 Constitution Avenue, Washington, DC 20210 <[www.osha.gov](http://www.osha.gov)>

<sup>9</sup> International Responsible Care Initiative, ICCA c/o Cefic Avenue E. Van Vieuwenhuysse 4, box 1, B-1160 Brussels, Belgium <[www.responsiblecare.org/](http://www.responsiblecare.org/)>

<sup>10</sup> Social Accountability International, 15 West 44<sup>th</sup> Street, 6<sup>th</sup> Floor, New York, NY 10036 <[www.sa-intl.org](http://www.sa-intl.org)>

<sup>11</sup> U.S. Environmental Protection Agency, PA Office of Research and Development National Risk Management Research Laboratory (TRACI), Sustainable Technology Division – Systems Analysis Branch (MS-466), 26 West Martin Luther King Drive, Cincinnati, OH 45268 <[www.epa.gov/nrmrl/std/traci/traci.html](http://www.epa.gov/nrmrl/std/traci/traci.html)>

<sup>12</sup> U.S. Environmental Protection Agency, National Center for Environmental Assessment, Office of Research and Development, Washington, DC 20460 <[www.epa.gov/trinter/lawsandregs/pbt/pbtrule.html](http://www.epa.gov/trinter/lawsandregs/pbt/pbtrule.html)>

<sup>13</sup> United Nations, 1<sup>st</sup> Ave. & E 44<sup>th</sup> St. New York, NY 10017 <[www.unece.org/](http://www.unece.org/)>

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## 4.2 Procedures for labeling and reporting

### 4.2.1 Basic principle

The methodology for assessing whether a chemical product and its manufacturing processes as well as the distribution, repackager and/or relabeler conform to the environmental, economic, and social responsibility criteria and for verifying ongoing conformance shall be documented and be of sufficient detail to provide consumer confidence that this Standard has been correctly applied.

*Rationale: avoid use of “and/or”*

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## 4.4 Prerequisite – Drinking water chemicals

For drinking water chemicals, they shall be independent third party certified to NSF/ANSI/CAN 60.

*Rationale: updated reference to include CAN designation*

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## 5.2 Prerequisite – Environmental consideration in chemical product design

The manufacturer shall implement an environmental assessment program within the chemical product design and development system. The program shall consider the environmental attributes and impacts of its chemical product, packaging and delivery including issues such as designing for efficacy, longevity, reusability, recyclability and/or compostability. The environmental assessment program shall consider environmental attributes and impacts of the chemical product, packaging, and delivery across the entire product life cycle (e.g., raw material extraction, transportation, manufacturing, use, and end-of-life).

*Rationale: avoid use of “and/or”*

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## 7.2 Chemical efficacy

The manufacturer shall earn 2 points for documenting that their chemical product is designed and manufactured for improved efficacy under conditions of intended use. This shall be supported by quality control testing documentation such as required by AWWA Chemical Standards or NSF/ANSI/CAN 60. The testing documentation may be from the manufacturer or independent third party.

*Rationale: updated reference to include CAN designation*

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## Annex B<sup>14</sup> (informational)

### B.1 General

Declaring conformance to this Standard identifies that a manufacturer designs, develops, and creates products in a manner that is considered to be in some measure sustainable and/or environmentally preferable and that the distributor, repackager, relabeler meet sustainability criteria for the chemical product. Conformance to this Standard alone does not imply certification. The manufacturer, distributor, repackager, and relabeler can provide additional public confidence regarding the attainment of these goals by undertaking independent conformity assessment (certification).

*Rationale: avoid use of “and/or”*

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<sup>14</sup> The information contained in this Annex is not part of this American National Standard (ANS) and has not been processed in accordance with ANSI's requirements for an ANS. As such, this Annex may contain material that has not been subjected to public review or a consensus process. In addition, it does not contain requirements necessary for conformance to the Standard.

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**Annex E<sup>15</sup>**  
(informational)

**Table E.1 - Common elements of Environmental Management Systems**

Management system	Components addressed	Program elements	Common elements
1. Responsible Care Management System (RCMS)	Environmental, health, safety, and security (environmental not quite as stringent as for ISO 14001 or RC 14001); auditing required once every three years	<ul style="list-style-type: none"> <li>— adhering to the Responsible Care Guiding Principles</li> <li>— implementing the Responsible Care Product Safety Code, Process Safety Code, and Security Code</li> <li>— measuring and publicly reporting performance, using the Responsible Care Performance Measures</li> <li>— applying the Modern Responsible Care Management system to achieve and verify results.</li> </ul>	<p>Environmental policy is defined by top management. It is appropriate to the nature, scale and environmental impacts of the organization's activities, products and services.</p> <p>Planning includes identifying the environmental aspects of its activities, products and services within the defined scope of the EMS that it can control and those that it can influence; also includes procedures for legal requirements and establishing, implementing and maintaining documented environmental objectives and targets.</p> <p>Implementation and Operation includes ensuring resources to establish, implement, maintain and improve the EMS. It also includes ensuring employee competence, training and awareness. It also includes establishing implementing and maintaining a procedure for internal and external communication. Documentation and document control of the EMS are necessary. Operation control and emergency preparedness and response are also aspects of this area.</p> <p>Checking includes monitoring and measurement; evaluation of compliance; nonconformity, corrective action and preventive action; control of records; and internal audit.</p>

<sup>15</sup> The information contained in this Annex is not part of this American National Standard (ANS) and has not been processed in accordance with ANSI's requirements for an ANS. As such, this Annex may contain material that has not been subjected to public review or a consensus process. In addition, it does not contain requirements necessary for conformance to the Standard.

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Table E.1 - Common elements of Environmental Management Systems

Management system	Components addressed	Program elements	Common elements
			Management Review includes top management review of the EMS at intervals to ensure its continuing suitability, adequacy and effectiveness. Reviews shall include assessing opportunities for improvement and needed changes.
2. ISO 14001	Environmental	Sets the basis of how to manage the environmental aspects of business activities more effectively, while taking into consideration environmental protection and pollution prevention. A valid ISO:14001 certificate shows an organization follows the most internationally recognized EMS principles. This standard is being revised (see footnote).	
3. RC 14001	Environmental, health, safety, and security	Incorporates elements of RCMS and ISO 14001	



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Table E.1 - Common elements of Environmental Management Systems

Management system	Components addressed	Program elements	Common elements
4. Responsible Distribution	Environmental, health, safety, and security	13 codes cover: Senior Management Commitment & Risk Management; Compliance Review & Training; Carrier Selection & Private Fleet; Handling & Storage; Job Procedures & Training; Waste Management & Resource Conservation; Emergency Response & Public Preparedness; Community Outreach; Product Stewardship; Internal Audits; Corrective & Preventive Action; Document & Records Control; and Security	Evidence of Conformance, similar to Checking in above row, is a major area of focus in the Responsible Distribution Specifications and Guidance Document.
NOTE — The International Organization for Standardization is working to revise the ISO 14001 standard, a final draft version is planned to be available during the summer of 2014, with final publication expected for January, 2015 < <a href="http://www.iso.org">www.iso.org</a> >			

*Rationale: ISO 14001 has been updated to the 2015 version in the Normative References section.*