ICC 825 Private Sewage Disposal Systems
Standard Consensus Committee (IS-PSDS)

Meeting #14 Minutes – May 7, 2024

The fourteenth meeting of the ICC 825 Private Sewage Disposal Systems Standard Consensus Committee (IS-PSDS) was held on May 7, 2024, in virtual format. The meeting was conducted in accordance with ICC's Consensus Procedures. https://www.iccsafe.org/wp-content/uploads/ICC-Consensus-Procedures-ANSI-approved-8_2_21-BOD-apprvd-8_27_21.pdf

1. Welcome –Chairman, Shaun May, convened the meeting and welcomed attendees at 3:08 CDT (4:08pm EDT)* along with Staff Secretariat, Ramiro Mata. Mata reviewed the ICC Code of Ethics and the Anti-Trust Policy, both of which can be found in the ICC 825 webpage. Mata also announced that the meeting will be recorded for internal reference only and that recording by anyone other than ICC staff is prohibited.
   **NOTE: Working group sessions were held from 1pm – 3pm CST (2pm – 4pm EST). Unless the committee elects otherwise, future meetings will follow this format.*
2. Roll Call and Committee Introductions – May called the meeting to order, and Mata took roll call of committee members – ☑ indicates present.

Regulator		User		Manufacturer		SDO/Test Lab	
☑	Shaun May	☑	Esber Andiroglu PhD, PE	☑	Bob Carpenter	☑	Derek DeLand
☐	Paula Kehoe	☐	Tunzyaan Griffin	☑	Ray Kennedy		
		☑	Albert (Bob) Rubin PhD				
		☐	Robert Schutz, PE				

3. Interested Parties and Guests
   a. Interested Parties – Dr. Bronwyn Humpries, Austin Perry, Charlotte Peele
   b. ICC Staff – Tom Roberts
4. Membership and Quorum – Mata indicated that with 6 out of 9 members in attendance, quorum was achieved.
   a. Membership Review –
      i. John Kaiser is stepping down but recommended Charlotte Peele also from Infiltrator Water Technologies as his replacement. Ms. Peele's committee membership is pending ICC Board approval.
      ii. Rashid Istambouli, from Miami-Dade County, will replace Carlos Hernandez pending ICC Board approval.
   b. Interested Parties – Marc Jensen from TM Consulting Engineers and Gareth Williams from GW Consulting Engineers were added.

5. Approval of April 9, 2024, Minutes – Motion by Carpenter and seconded by Rubin. Motion approved.
6. Approval of May 7, 2024, Agenda – Motion by Carpenter and seconded by Andiroglu. Motion approved.
7. Presentation – Dr. Humphries made a presentation on the New Zealand Onsite Wastewater Research.
    a. Discussed the on-site wastewater situation in New Zealand, where over 1 million people rely on it for household waste management. He mentioned a large compiler vector outbreak in 2016 and highlighted the ongoing journey to improve drinking water and wastewater management, including on-site wastewater.
    b. Provided an overview of research conducted in Canterbury, New Zealand. He explained that prior to 2000, most on-site wastewater systems were deemed permitted activities without requiring government permission for installation. This led to a lack of knowledge about the location of older systems, accounting for about 75% of national on-site wastewater stock.
    c. Discussed how geospatial analysis enabled them to estimate the location and attributes of on-site wastewater systems within properties' boundaries. The analysis separated older, yellow-coded systems from newer, blue-coded ones, providing insights into potential risks to public health associated with older systems.
    d. presented density maps showing areas with high densities of onsite wastewater systems within Canterbury. These hotspots indicated potential implications for groundwater quality due to concentrations ranging from six up to twenty-two systems per one-hectare grid.
    e. Detailed field experiments enabling monitoring at various stages from primary treatment level up to potentially chlorinated effluent products using Vadosone samples manufactured by ESR (Environmental Science & Research). The site facilitated testing for nitrates, pathogens (bacteria, viruses), emerging organic contaminants like pharmaceuticals and personal care products (PPCPs), as well as antimicrobial resistance.
    f. Confirmed that their research directly informs planning and policy decisions related specifically towards addressing issues around drinking water protection zones impacted by onsite wastewater systems not meeting regulatory standards.
    g. The discussion delved into researching pathogen survival within saline environments' impact on onsite wastewater systems. Additionally, microbial risk assessment tools were mentioned as part of ongoing work assessing viral impacts on drinking water wells down gradients from multiple onsite wastewater systems.
    h. A committee member expressed interest in microbial risk assessments due to varying infective doses among different organisms found in wastewater systems. The conversation emphasized understanding organism behavior differences during risk assessments based on restrictive organisms' characteristics.
8. Review Outline
    a. May discussed the need to broaden the scope of the outline to address emerging technologies generating reclaimed quality water for indoor use.

b. DeLand expressed concerns about the lack of advanced treatments or innovative systems in existing codes, emphasizing the necessity to catch up with technology over several decades.
c. Rubin and others agreed on the importance of determining existing standards for emerging technologies and potentially developing new ones.
d. May mentioned a working draft with an outline including a water reuse section and climate change topics. He suggested citing existing standards for advanced treatment, such as NSF, BNQ, and international standards. The discussion highlighted that more significant changes might be needed as they progress through outlining sections.

9. Review Project Timeline - The group briefly reviewed project timelines during which it was indicated that it would be more useful to revisit this agenda item later in their progress when significant changes may be necessary.
10. Working Group Updates
    a. May discussed progress made by various work groups, including septic tank-related topics like pressure distribution calculations. Ray expressed willingness to contribute expertise in areas related to septic tanks but noted his limited familiarity with pit latrines.
    b. May shared his progress on reviewing Florida's administrative code regarding mound systems and proposed making substantial changes within the next month before formal meetings take place.
    c. Open Defecation/Unimproved Facilities, Update – Perry
        i. The submitted draft is complete and needs to be reviewed by the committee.
    d. WG 2, Improved Limited OWTS Update – DeLand
        i. The working group met just prior to the committee meeting and discussed the dividing the working group further to better manage the work. See item (e) below.
        ii. Mata clarified that each working group should complete their sections, submit them to him, after which he would compile everything into one document for review by the full committee. This process would allow for revisions if needed or sending back sections to the working groups for further work.
        iii. Rubin emphasized the importance of managing water as a resource, suggesting that the standard should encompass aspects such as drip irrigation and water reuse, catering to diverse global needs from rural villages to urban areas. This suggestion was acknowledged by DeLand, who confirmed that sections related to water management and reuse were already included in the agenda for future discussions.
        iv. DeLand suggested working chairs take ownership of making changes in line with the comments, including striking out and highlighting text.
        v. Detailed discussions took place regarding septic tank design considerations such as single vs double compartment tanks, material choices like polymer plastic or steel/concrete, load distribution concerns, coatings like polyurea for concrete tanks' chemical resistance, adhesion testing requirements, and accommodating varying resources available globally.

vi. The team agreed that the septic tank section was close to completion pending final adjustments, with plans for further review before the next meeting. They also briefly touched on holding tank design similarities and maintenance requirements.
vii. DeLand presented an overview of their approach in developing pit latrine guidelines based on existing documents from different sources due to lack of standardization in this area. Rubin suggested involving experts Francis De Los Rios at NC State and Jim Helsick at University of South Florida for reviewing this section through email correspondence.
viii. Design considerations for pit latrines were discussed, mentioning variations in dimensions observed across different regions. The importance of considering risk factors associated with pit size and depth were also highlighted, citing examples from other countries such as Rwanda. The discussion also touched upon the impact of groundwater levels on pit dimensions and potential risks related to wider pits. Additionally, there was a mention of cylindrical pits and their width limitations to prevent cave-ins.
ix. Speakers discussed incorporating language that acknowledges basic human rights without making it overly prescriptive or straying from technical code requirements. They also considered adding general language referring to compliance with local cultural and religious norms. Mata suggested including preface language indicating that the standard is intended to work with local requirements while respecting regional variations and additional jurisdictional regulations. This was seen as a way of demonstrating sensitivity towards diverse cultural norms without compromising technical standards.
x. The group deliberated on integrating climate change impacts into various sections of the standard and considered whether to have a standalone section or incorporate climate change considerations throughout the document. Emphasis was placed on making it an integral part of the standard rather than an add-on.

e. New Working Groups
i. Collection – Septic and Holding Tanks – Schutz (Chair), Perry, Kennedy, Peele
ii. Pit Latrine – DeLand (Chair), Humphries, Perry, Rubin, Roberts
iii. Conventional Soil Absorption – Peele (Chair), May, DeLand, Roberts
iv. Pressure Distribution Systems – Kennedy (Chair), Rubin, Schutz, Roberts, Carpenter
v. Mound Systems – May (Chair), Cherniayeff, Griffin, Roberts, Istambouli
vi. Other OWTS – Humphries (Chair), Weaver, Perry, Rubin, May (Co-chair), Roberts, Kehoe

11. Poll results of In-Person Meeting at ICC Annual Business Meeting and Conference, October 18, 2024.
    a. Mata reported that only 10 responses were received with 7 affirmative. The potentially low attendance will not warrant an in-person meeting this year.
12. Action Items
    a. Arrange breakout rooms for working group meetings – Mata

    b. Create working document for assigned section and prepare for working group meetings – Working Group chairs
    c. Report on ICC Board approval of committee candidates - Mata
13. Next Meeting – June 4, 2024
    a. Working Groups: 1pm – 3pm Central (2pm – 4pm Eastern)
    b. Full Committee: 3pm – 5pm Central (4pm – 6pm Eastern)
14. Meeting adjourned at 4:38pm Central (5:38pm Eastern) – Motion by Carpenter, seconded by DeLand. Motion passed unanimously.