FURTHER PUBLIC COMMENT / SUBMISSION NO. 8

A safety standard must prevent foreseeable harm — not simply formalise existing protocols

DR AS 3633:2026 — Residential and public pools: Water quality

To: Standards Australia public-comment process — Technical Committee CS-061
Project: MC-000342-01
From: Watertech Services International Pty Ltd / Enviroswim
Date: 20 October 2026
Status: Further public comment, supplementary to Enviroswim submissions 1–7

DECISION REQUESTED

Require demonstrable public-health performance and whole-of-system chemical-risk reduction, assess all approved treatment pathways to the same independent evidentiary standard, and record a reasoned response to these requested changes before ballot or publication.

1. Purpose and basis of this additional comment

Enviroswim supports a rigorous national standard for residential and public pool water quality. We submit this further comment because two serious, recent aquatic-centre chemical events bring an important issue into immediate focus: a standard intended to protect public health should not simply codify long-standing chlorination practices without adequately testing whether the combined microbiological and chemical-exposure risks can be reduced.

The draft is a water-quality standard, not a replacement for work health and safety, hazardous-chemical storage, building-services or emergency-management laws. Its scope nevertheless directly influences treatment choices, chemical inventories, dosing arrangements and the health risks experienced by bathers and workers. Those interfaces should be explicit. This comment supplements, rather than replaces, our earlier evidence and clause-specific submissions.

2. Recent incidents: the public-health issue is wider than a residual reading

- **Dublin, Ireland — 15 October 2026.** At the Clayton Hotel Liffey Valley swimming pool, a chemical incident during swimming lessons sent toxic fumes from the plant-room area into the pool environment. Early reports said ten children and one adult were hospitalised; updated reporting on 16 October referred to twelve children and one adult. Dublin Fire Brigade's chief officer described an apparent overmixing of chemicals. The final cause and responsibility remain matters for investigation. [1]
- **Seymour, Victoria — 16 October 2026.** Emergency services responded to a leak from a large tank at the Seymour Sports and Aquatic Centre. The ABC reported that the substance was understood to be sodium hypochlorite (liquid chlorine), that the area was declared safe after approximately 90 minutes, and that WorkSafe Victoria was investigating. The eventual findings have not yet been reported. [2]

These were different reported events: an apparent incompatible-chemical or mixing-related fume release, and a bulk-chemical leak. Neither incident proves that DR AS 3633 caused the event or that chlorine cannot be used effectively. Both illustrate foreseeable hazards attached to the storage, generation, dosing and handling of pool-treatment chemicals. A chlorine residual measurement, by itself, cannot demonstrate the safe management of those hazards.

3. Preventive risk reduction must be part of the standard's logic

Fire and Rescue NSW warns that accidental mixing of pool chemicals can produce poisonous fumes or fire. The US Centers for Disease Control and Prevention recommends segregation of incompatible chemicals, secondary

containment, suitable ventilation and automatic interlocks to reduce pool-chemical incidents. Australian WHS guidance requires consideration of eliminating or minimising hazardous-chemical risks using the hierarchy of controls, including substitution and engineering measures where reasonably practicable. [3–5]

We therefore ask the Committee to distinguish two complementary questions: (a) Does a treatment pathway reliably provide the necessary microbiological protection in the conditions in which it will be used? and (b) Does the whole system minimise foreseeable chemical and airborne-exposure hazards so far as reasonably practicable? Neither question displaces the other. The objective cannot be to reduce chemical use at the expense of sanitation; equally, satisfactory microbial readings must not become an excuse to disregard chemical exposure risks.

A standard that prescribes a familiar treatment method without an equally rigorous examination of its evidence, hazard profile and safer alternatives risks entrenching existing practice rather than demonstrating that it best meets the intended health outcome.

4. The danger of a de facto "pseudo-law"

Standards Australia itself explains that standards are voluntary in their own right, but may become mandatory when referenced in legislation. They can also exert practical influence through procurement specifications, insurer requirements, contracts, guidance and professional training. [6]

That is why the Committee's decisions must be independently defensible. A voluntary technical document should not acquire quasi-regulatory force in practice while resting on inherited assumptions, opaque evidence selection or unequal evidentiary demands. The final text should state its intended performance outcomes, identify the supporting science, preserve compliance with applicable law and allow technically credible pathways to be demonstrated on equal terms.

5. Specific changes requested from Committee CS-061

- **A. Outcome-based microbiological safeguards.** For each permitted disinfection pathway, require clearly defined organism-specific efficacy targets, contact times, validation methods and operating conditions. The assessment should cover credible variations in pH, stabiliser concentration (where used), bather load, water temperature, filtration and equipment performance. A prescribed concentration or ORP reading should not be represented as proof of microbial performance without supporting evidence.
- **B. Whole-of-system hazard assessment.** Require or expressly cross-reference a documented assessment of foreseeable treatment-system hazards, including bulk storage, chemical transfers, incompatible mixing, accidental releases, process faults, indoor-air exposures, maintenance and emergency response. The assessment should also examine the practicability of reducing hazardous-chemical inventories and handling frequency without compromising microbiological safety.
- **C. Engineering controls and fail-safe protections.** Where hazardous chemicals are stored or dosed, specify or cross-reference appropriately applicable controls such as segregated storage, effective secondary containment, dosing/recirculation interlocks, alarms, ventilation separation and safe shutdown. These matters should not be left solely to administrative instructions where higher-order engineering controls are feasible.
- **D. Equal treatment of alternatives.** Permit credible integrated or multi-barrier treatment approaches to be assessed against the same independent microbial-performance and safety criteria as chlorine-based systems, subject to any applicable legal approvals and mandatory residual requirements. No treatment system—conventional or alternative—should gain acceptance solely from historical prevalence, a registration number, or an unexamined product claim.
- **E. Evidence transparency.** Publish or identify a traceable evidence schedule for the draft's preferred chlorine operating conditions, including the impact of cyanuric acid where relevant. In particular, explain the independent validation supporting the operating range in Table 3.1.2(B), and the basis on which alternative systems are compared. This builds on Enviroswim's prior clause-specific comments.

- **F. Incidents, monitoring and learning.** Provide clear guidance on incident detection, response, recordkeeping, reporting where required by law, root-cause review and periodic reassessment of treatment-system hazards. Include near misses involving chemical mixing, leaks, loss of containment and failure of dosing or ventilation safeguards as learning triggers.
- **G. Scope and legal status.** Include an explicit statement that compliance with AS 3633 does not replace statutory WHS, public-health, dangerous-goods or other applicable obligations, and that adherence to a water-quality target alone does not establish whole-of-facility safety.
- **H. Committee disposition and consultation.** Provide an issue-by-issue technical response explaining whether each requested safeguard has been accepted, modified, placed in a cross-referenced instrument or rejected, and why. Where changes materially alter normative requirements, consider renewed targeted consultation before publication.

6. Proposed text for inclusion in the draft (or a normative cross-reference)

> *"Swimming-pool water treatment shall be selected, validated, operated and monitored to achieve the specified microbiological health outcomes under representative operating conditions. Treatment-system risk assessment shall also address reasonably foreseeable hazards from the storage, generation, handling and dosing of treatment chemicals and associated airborne exposures. Where such hazards cannot reasonably be eliminated, higher-order risk controls and applicable statutory requirements shall be considered and implemented. Alternative integrated treatment pathways shall be evaluated against equivalent independent performance criteria, without displacing requirements imposed by law or by the relevant public-health authority."*

If the Committee considers some matters outside the normative scope of AS 3633, the draft should specify the relevant safety interfaces and provide clear, current normative or informative cross-references rather than remaining silent on them.

7. Formal questions requiring a recorded response

1. What independent evidence shows that the draft's prescribed sanitiser ranges deliver the specified organism-specific outcomes across actual permitted operating conditions, including use of cyanuric acid?
2. How does the draft address chemical mixing, bulk-chemical leakage, airborne releases and treatment-system failure, and which applicable WHS safeguards are expressly cross-referenced?
3. Has the Committee compared the total risk profile of conventional chlorine-dependent pathways with appropriately validated lower-inventory or multi-barrier options, using equivalent criteria?
4. If the Committee elects not to address reasonably foreseeable chemical incidents within this water-quality standard, where exactly are those risks accounted for and what prevents misleading claims of comprehensive safety?
5. Will the Committee provide a reasoned, issue-by-issue disposition of this and Enviroswim's earlier comments before the final ballot or publication?

8. Conclusion

The public does not need a national standard whose principal achievement is to convert familiar practices into a stronger form of industry orthodoxy. It needs a demonstrably protective, scientifically transparent standard that prevents avoidable illness and injury, addresses foreseeable chemical hazards and welcomes any treatment method proven to meet the required outcomes.

Dublin and Seymour are not verdicts on individual operators, and investigations must take their course. They are timely reminders that the consequences of chemical-system failure can be serious. Enviroswim respectfully asks CS-061 to use this review to improve real-world health protection—not simply to give established protocols the appearance of settled authority.

Submitted by Watertech Services International Pty Ltd / Enviroswim

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Source references

1. RTÉ News, 15 and 16 October 2026: Dublin chemical incident and fire-officer update. Source link
2. ABC News, 19 October 2026: WorkSafe probes Seymour chemical leak. Source link
3. Fire and Rescue NSW: Pool chemical safety. Source link
4. US CDC: Pool chemical safety, 24 June 2025. Source link
5. Safe Work Australia: Managing chemical hazards using the hierarchy of controls. Source link
6. Standards Australia: What is a Standard? (Standards and the Law). Source link
7. Enviroswim: Prior public submissions and evidence relating to DR AS 3633:2026. Source link