

THE EVIDENCE QUESTION

Enviroswim and the APVMA, 2001–2026

An evidence-based history of microbiological testing, the 2004 compulsory recall, regulatory decisions, the 2020–2021 court proceedings and the October 2026 disclosure

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Evidentiary parity and transparent microbiological efficacy assessment for chlorine-based, hydrogen-peroxide and polyhexanide hydrochloride (PHMB) pool and spa sanitisers.

The public challenge: Identify the original independent efficacy results, or explain precisely which alternative evidence justified each product-specific decision.

This report brings together the APVMA disclosure of 23 October 2026, original laboratory testing, relevant regulator decisions and correspondence, and contemporaneous records of Enviroswim's representations. It identifies the evidence provided, the boundaries of those records and the scientific questions that remain. The analysis represents Enviroswim's documented position; it is not a judicial finding of misconduct or a determination that any identified product is unlawful or ineffective.

PUBLIC EDITION 1.5 | 26 OCTOBER 2026 | Incorporates the 23 October 2026 APVMA disclosure and an examination of the 2004 recall in light of the later Waterco proceedings. Historical NSW Health test criteria are distinguished from the APVMA's 2014 guidance. Findings are limited to the particular products, conditions and records identified.

Executive summary

The record now extends from the early operation and microbiological assessment of Enviroswim in the 2000s through a compulsory APVMA recall in March 2004, a disputed regulatory process, the APVMA's own 2014 efficacy guidance, a formal 2014 FOI decision, a prolonged chemical-review nomination, the APVMA's adverse 2020 scientific findings about certain hydrogen-peroxide and PHMB products, the procedural setting-aside of their cancellations in 2021, and renewed access-to-evidence requests culminating in the 23 October 2026 release. [S01–S23]

The precise, unresolved question is whether the APVMA can identify the organism-specific laboratory data, or a scientifically and legally sufficient alternative evidence pathway, supporting specified efficacy claims for representative registered chlorine-based, hydrogen-peroxide and PHMB pool/spa sanitisers at their approved-use conditions. The eight-document release shows some reference-product and scientific-argument pathways, but it does not permit a complete public reconstruction of the underlying microbiological evidence. That limit of

disclosure is not proof that the APVMA lacks such evidence or that any identified product is ineffective. [S05, S09–S10, S16–S20]

Four findings are verified within defined limits: (1) the APVMA's 2014 FOI refusal addressed only specified products and documents satisfying the post-July-2014 guideline scope; (2) its 2020 published findings were adverse to certain peroxide and PHMB product uses at their nominated concentrations; (3) an APVMA officer's September 2026 active-constituent searches did not locate specified chlorine/PHMB laboratory reports, and the officer cautioned that product files might hold relevant records; and (4) the 23 October release includes reference-product similarity decisions and a chlorine-dose equivalence argument without publicly examinable full pathogen/time/concentration datasets for all three categories. [S05, S11–S20]

The historical enforcement issue also warrants examination. The 1.0 mg/L chlorine-only test failed the 2001 NSW Health four-log *P. aeruginosa*/30-second benchmark even after 15 minutes (2.61-log reduction), first passing at the 30-minute sample. [S01] On 17 March 2004 the APVMA issued a compulsory recall against the original Enviro-Swim system, expressing concerns about registration and the available scientific evidence. Enviroswim's contemporaneous position was that its earlier technology, operated with reduced but measurable chlorine residuals, had demonstrated favourable microbiological results. The recollection that the regulator was protecting an incumbent chlorine market is Enviroswim's interpretation of the events, not an established motive proved by available records. [S02–S04, S21] The 2004 recall record also raises a specific procedural-fairness question, because the present source set does not establish what opportunity Watertech was afforded before the recall. [S03, S21]

THE THREE-CHEMISTRY CHALLENGE

Two of the three principal sanitiser chemistries repeatedly identified in Enviroswim's correspondence — hydrogen peroxide and PHMB — were the subjects of APVMA-initiated cancellation action against specified products in 2020. That action followed the regulator's own adverse performance analysis and relied legally on safety and labelling criteria. The cancellation decisions were subsequently set aside on natural-justice grounds, without a judicial conclusion overturning the underlying scientific findings. The third category, chlorine, has an independently measured historical performance challenge: in the Tweed Laboratory 2001 Experiment B, 1.0 mg/L chlorine alone achieved <1.87-log *P. aeruginosa* reduction at 30 seconds and only 2.61-log at 15 minutes, failing the NSW four-log/30-second process criterion. [S01, S11, S12]

The 23 October 2026 release provides approval reasoning by comparison with registered reference products for PHMB product 87715 and peroxide product 88288; it does not disclose the underlying organism-specific kill-time results that would allow those comparisons to be independently verified. Its substantial peroxide report concerns product 83311, registered for clarifier/algaecide uses, and the results are heavily redacted. For chlorine-based product 93754, the disclosed argument compares the mass of available chlorine in weekly doses and does not itself constitute a 2014-guideline microbial kill test. These are documentary findings about what was supplied, not proof that no protected, archived or alternative scientific evidence exists. [S17–S20]

PUBLIC QUESTION: Following its own 2020 scientific findings and the 2001 independent chlorine comparison, can the APVMA identify a primary pool or spa sanitiser in each of these three categories and disclose the laboratory results — or scientifically justified alternative evidence — upon which it relies to demonstrate the applicable efficacy claims at approved-use concentrations? [S01, S10–S12, S16–S20]

Documentary findings and level of confidence

Finding	What the record supports	What the finding does not establish
2004 recall	Original instrument identified, issued 17 March 2004 under s101; accompanying company objections and later permit history.	The notice does not itself prove a commercial motive or an actual incident of illness.
2001 / 2004 laboratory data	Quantified <i>P. aeruginosa</i> log reductions under named laboratory conditions.	Results apply to the tested historical configurations, organisms and water conditions.
Sleeman Centre	Three selected 2004 SAS Laboratory sampling rounds across nine pool locations each, measuring pool microbiology and residual chlorine.	Selected sampling rounds do not establish continuous compliance or measured chemical savings.
2014 FOI	No responsive guideline-specific documents for three named legacy products.	The decision does not prove absence of all older efficacy evidence.
2020 cancellations	APVMA published adverse conclusions for specified peroxide / PHMB uses.	The court orders addressed legal process, not new efficacy measurements.
2026 released files	Agency reports reliance on scientifically argued equivalence / reference-product comparisons.	Other reference-product data may exist or be protected from disclosure.

1. Scope, evidence rules and central hypothesis

This dossier separates five kinds of information: original laboratory measurements; original APVMA statutory decisions and contemporaneous agency letters; contemporaneous Watertech/Enviroswim representations; later master-register reconciliations; and scientific interpretations or inferences drawn from that record. Primary-source documents prove their own contents, not necessarily the scientific or legal correctness of the statements made within them.

“No document located,” “no document disclosed,” “scientific argument accepted,” “registration exists,” and “microbial efficacy demonstrated” are different propositions. They must not be collapsed into a single conclusion. A regulator may lawfully use valid scientific argument, overseas data, historical use or standards-based pathways in circumstances allowed by its legislation; the practical public-interest question is what specific evidence was accepted and whether its scientific rationale can be explained.

The APVMA’s efficacy guidance favours laboratory tests by a NATA-accredited or similarly accredited independent laboratory. That guidance must be distinguished from the legislation and from the applicable criteria when older products were registered. The dossier therefore requests named studies and laboratory methods where available, while expressly inviting identification of legally acceptable scientific argument, historical evidence, relevant literature, overseas studies or reference-product pathways. [S10, S23]

2. Chronology: more than two decades of disagreement

2000–2001 | Early operational evaluation. Fortitude Valley Pool experience and company-reported reduced chemical use; original manager letter (4 April 2001) is retrospective evidence rather than audited dosing data. [S21]

12 and 17 July 2001 | Tweed ES1 trials. Prepared pool-water experiments compare copper/silver-ionised water plus chlorine with corresponding chlorine-only conditions; Dr Paul Wright's report issued August 2001. [S01]

2003–early 2004 | Commercial trials and system development. Watertech documented product development, aquatic-facility experience and planned market expansion; historical proposals are not realised-revenue proof. [S21]

4 and 24 February 2004 | Tweed spa testing. Two 1,500-L spa trials with negligible pre-inoculation total chlorine report *P. aeruginosa* log reductions of 4.895 and 4.96 at 30 seconds. [S02]

17 March 2004 | Compulsory recall. APVMA notice No. 0006 of 2004, reference O-C36316, issued to Watertech concerning the original Enviro-Swim system. [S03]

18 March–16 April 2004 | Recall compliance deadlines. The notice required distributor communication, product-alert steps and manufacturing/supply information by specified deadlines. [S03]

6 April; 4 May; 4 August 2004 | Sleeman independent monitoring. SAS Laboratory sampled nine pool locations; report results included non-detection of specified organisms at stated analytical limits and measured chlorine residuals. [S04]

30 July and 10 August 2004 | Formal company challenge. Enviroswim protested APVMA's interpretation of laboratory evidence; correspondence referenced a nine-page statement of reasons attributed to Dr Timothy Dykes (full statement remains a targeted source gap). [S03, S21]

2004–March 2005 | Conditional supply / application. Historic Product Alert refers to a minimum 1 mg/L chlorine condition; Phil Jones sought an extension to APVMA permit 8049 on 3 March 2005. Signed permit instrument not yet in controlled evidence set. [S21]

23 May–20 December 2005 | ES1 registration path. APVMA requested further information/fees; later record supports historic registration no. 58847 for algae-control electrodes, not blanket system-level disinfection approval. [S21]

30 January 2008 | APVMA scope correspondence. An officer acknowledged registration of the ES1 electrode for algae control and challenged broader system-level representations. [S21]

7 May 2009 | NSF/ANSI 50 certificate. Historical certification record is a separate, scope-limited technical credential; it must not be described as current APVMA registration or ongoing NSF listing. [S21]

22–26 March 2012 | Chlorine chemical-review inquiry. APVMA's Danielle Cregan reported chlorine was not then on its chemical-review list; earlier 2004 Gazette reference was not the review the company understood. This was not an efficacy FOI finding. [S06]

1 July–15 August 2014 | FOI G11233 / LEX3979. FOI narrowed to products 59426, 39380 and 50590; decision refused access because documents meeting the post-1 July 2014 efficacy-guidance scope did not exist. [S05]

16 October 2014–2019 | Peroxide review nomination. Watertech/Phil Jones nomination concerning peroxide products led to years of follow-ups and agency status explanations; master register records delays and eventual reconsideration activity. [S21]

24 March–28 July 2020 | Consultation and adverse findings. APVMA consulted on certain peroxide/PHMB products and published its final scientific reasoning and s5A/s5D cancellation determinations. [S11]

17 February 2021 | Federal Court outcome. The APVMA consented to orders setting aside the cancellation decisions on natural-justice grounds; the court outcome was not a demonstration of microbial efficacy. [S12]

April–July 2022 | Proposed testing-rule amendments. The agency consulted on strengthening how efficacy standards were applied; 2026 correspondence says the proposal did not proceed after consideration, but decision rationale remains disputed. [S13, S14]

November–December 2025 | Renewed open correspondence. Enviroswim again sought parity and evidence explanations; the APVMA directed attention to applications and review nomination procedures. [S22]

February–May 2026 | Chief executive and Board correspondence. The company repeatedly requested scientific identification; APVMA explained registration-time evaluation, lack of automatic re-testing and reconsideration triggers. [S22]

5–24 June 2026 | New FOI / Agvet Code request. APVMA redirected the request to Agvet Code and provided product/data-record spreadsheet extracts rather than underlying full efficacy reports. [S07, S22]

10 July 2026 | Ombudsman complaint. Formal 97-page complaint lodged about administrative handling and regulatory transparency; accompanying form and acknowledgement establish lodging, not investigative findings. [S07, S08]

16 July 2026 | Scope clarified. APVMA expressly agreed the June spreadsheet extract was not the underlying studies and offered product-specific release subject to statutory limits. [S15]

3 September 2026 | Formal s31 submission. Enviroswim sought consideration of scientific evidence and grounds for regulatory action; submission does not establish that s31 review commenced. [S22]

9 September 2026 | Search result from APVMA. FOI officer identified one peroxide document but reported no laboratory efficacy reports found by active-based searches for chlorine or PHMB, citing age/file structure and offering product-level searches. [S16]

21 October 2026 | Fee discussion. Enviroswim reiterated the need for actual microbial trials, not registration extracts; APVMA itemised eight proposed documents. An additional \$285 was paid. [S17]

23 October 2026 | Release 2026-070-ACR. The APVMA released eight documents; reference-product reasoning is inspectable, but no full microorganism/time/concentration/log-reduction evidence has been released across all three classes. [S18–S20]

3. The 2004 compulsory recall and the claimed asymmetry

The original 17 March 2004 APVMA compulsory recall was a real and consequential statutory action concerning the original Enviroswim unit, which the agency described by its copper/silver electrodes and enclosure. The instrument raised a registration concern and said that the evidence before APVMA was insufficient to establish disinfection of waterborne pathogens by the original system. The recalled product, approved uses, contemporary label claims and enforcement statute must be distinguished from later generations of the treatment technology. [S03]

The company's historical account is that early Enviroswim systems could achieve useful reductions in chlorine chemical demand while maintaining measurable residuals in large pools, and that the success of this approach threatened entrenched commercial interests. That perspective belongs in this report as Enviroswim's expressly attributed contention. No examined APVMA file, competitor correspondence or independently established

financial evidence presently proves the recall was motivated by protecting chlorine sales rather than the registration/evidence reasons given in the notice.

A transparent institutional review would compare (i) the legal and scientific tests actually applied to Watertech in 2004; (ii) the underlying 2001/2004 Tweed material available to the decision-makers at each date; (iii) the contemporaneous operating evidence from public pools; and (iv) the scientific and legal pathways applied to analogous incumbent products. The missing Dykes statement of reasons, full 9 July 2004 legal fax, original permit 8049 and authenticated label files remain important exhibits. [S03, S21]

3.1 Procedural fairness: the 2004 recall and the 2021 court outcome

The March 2004 recall required Watertech to cease promotion and supply, recover distributed stock and undertake prescribed notification steps. It took effect as a regulatory measure before Envirosim's later written challenge of the APVMA's scientific reasoning. The recall correspondence refers to an earlier APVMA communication dated 11 March 2004. Without that letter and the complete decision record, this report cannot determine whether Watertech had an adequate opportunity to respond to the adverse case before the recall. The existence of reconsideration and review information in the notice does not, of itself, resolve the adequacy of the pre-decision process. [S03, S21]

The company's letter of 10 August 2004 challenged the APVMA's treatment of the Tweed Laboratory evidence and referred to a separate nine-page statement of reasons attributed to Dr Timothy Dykes. That statement and relevant pre-recall communications remain unverified in the present public record. These gaps justify a specific request for the notice history, material relied on, decision-maker's reasons and the opportunities actually offered to Watertech to answer the allegations. The available documents raise procedural questions; they do not establish a proven denial of natural justice. [S03, S21]

In the separate 2020–2021 proceedings concerning specified hydrogen-peroxide and PHMB products, the APVMA records that it consented to Federal Court orders setting aside its cancellation decisions on natural justice grounds. That outcome concerned cancellations of existing registrations under section 41, not the 2004 compulsory recall of an unregistered product under section 101. The legal powers and circumstances differ, but both situations warrant examination against the procedural fairness requirements applicable at the time. The 2021 outcome did not constitute a judicial finding that the products passed particular microbiological efficacy tests. [S03, S11, S12]

The Administrative Appeals Tribunal's separate 2004 decisions in the Questa/Katali and Floatron matters also distinguished complete pool-treatment devices from certain registrable electrodes or oxidising components. Those were other parties' cases and did not automatically overturn the recall directed to Watertech. They nevertheless provide relevant statutory context for evaluating the proper scope of any product description used in the 2004 recall. [S25]

PROCEDURAL-FAIRNESS QUESTION | What notice, adverse scientific material and opportunity to respond did Watertech receive before the March 2004 recall, and how did the APVMA distinguish the whole system from the components it considered registrable?

4. Controlled microbiological evidence: historical ES1 and ES3

4.1 Tweed Laboratory Centre, August 2001 – chlorine comparison

Dr Paul Wright PhD tested *Pseudomonas aeruginosa* (ACM 495) in July 2001 using pool water at pH 7.2 and 20 °C. The experiments were conducted and reported according to the then-applicable NSW Health "Treated Water Public Swimming Pools and Spa Pools – New Disinfection Process Criteria", quoted in the original laboratory report: a 4-log₁₀ reduction of *P. aeruginosa* within 30 seconds. They pre-date the APVMA's 2014 efficacy

guidance by thirteen years and must be assessed in their actual historical testing context, not retrospectively against later methods. The controlled Experiment B comparison used 1.0 mg/L (1 ppm) chlorine in both chlorine-only water and copper/silver-ionised water supplemented with chlorine. At 30 seconds, chlorine alone recorded a reduction of less than 1.87-log, whereas ionised water plus 1.0 mg/L chlorine recorded 4.39-log. [S01]

Tweed Laboratory Centre was a NATA-accredited laboratory. The original report identifies the historical NSW Health protocol and the measured results. NATA laboratory accreditation and the NSW Health efficacy criterion are distinct matters; neither should be confused with the APVMA's later 2014 guidance.

Evidence link: [Enviroswim's published 2001/2004 laboratory evidence and discussion](https://www.enviroswim.com/2026/10/12/chlorine-the-king-of-swimming-pools-or-a-pretender-to-the-crown/) | <https://www.enviroswim.com/2026/10/12/chlorine-the-king-of-swimming-pools-or-a-pretender-to-the-crown/>

1.0 mg/L (1 ppm) chlorine; Experiment B	Measured log ₁₀ reduction	Against 4-log / 30-s criterion
Chlorine alone — 30 seconds	<1.87	FAIL — did not achieve 4-log
Chlorine alone — 15 minutes	2.61	FAIL — 30 times the stipulated 30-second contact period
Chlorine alone — 30 minutes	4.57	PASS — earliest recorded passing sampling point
Copper/silver-ionised water + 1.0 mg/L chlorine — 30 seconds	4.39	PASS — achieved 4-log at required 30 seconds

This is not a marginal laboratory miss. At 1.0 mg/L chlorine alone, the four-log threshold had not been achieved even at 15 minutes (2.61 log), 30 times the specified 30-second contact period. The first recorded passing result was 4.57 log at the 30-minute sampling point; the data do not establish the exact instant between 15 and 30 minutes when the threshold was crossed. In the same Experiment B, 0.5 and 2.0 mg/L chlorine alone also did not meet four-log reduction at 30 seconds. These are the measured results under this explicitly identified organism, chemistry and protocol. [S01]

The proper challenge to the APVMA is therefore narrow, rigorous and reproducible: identify independent test results demonstrating a four-log reduction of *P. aeruginosa* in 30 seconds using chlorine alone at 1.0 mg/L under genuinely comparable laboratory conditions, or identify the material differences in protocol that would account for a divergent finding. The chemical identity of chlorine alone does not resolve the experimentally relevant effects of demand, pH, matrix, initial inoculum, neutralisation and contact time. This 2001 NSW Health criterion must remain distinct from APVMA's 2014 organism-specific table. The 2001 copper/silver treatment still contained chlorine, and no claim is made that the study was chlorine-free. [S01, S10]

4.2 Tweed Laboratory Centre, 6 May 2004 – spa tests

Two 1,500-litre spa trials compared an Enviroswim-treated spa with an untreated control at 24 °C and 35 °C, using the NSW Health new-disinfection-process criterion then in use. Total chlorine before inoculation was reported below 0.01 mg/L in both spas. Treatment results against *P. aeruginosa* were 4.895 log₁₀ (30 s) and 5.996 log₁₀ (2 min) at 24 °C, and 4.96 log₁₀ (30 s) and 6.88 log₁₀ (2 min) at 35 °C. These historical 2004 experiments pre-date the APVMA's 2014 guideline and report the efficacy of the specific configuration and conditions tested, not all pathogens or every iteration of ES3 V3 hardware. [S02]

Evidence link: [Original Tweed Laboratory Centre spa report \(6 May 2004, PDF\)](https://www.enviroswim.com/wp-content/uploads/2020/01/tweed-lab-report-es3.pdf) | <https://www.enviroswim.com/wp-content/uploads/2020/01/tweed-lab-report-es3.pdf>

Trial	30-sec log ₁₀ reduction	2-min log ₁₀ reduction	Pre-test chlorine
4 February 2004, 24 °C	4.895	5.996	<0.01 mg/L total
24 February 2004, 35 °C	4.96	6.88	<0.01 mg/L total

A 2004 report footnote appears to repeat the first trial's 4.895 result when discussing the second trial; the separate Table 4 lists 4.96. This dossier faithfully uses the two numerical table results and identifies the original source. The laboratory's reported procedure and contemporaneous NSW Health criterion govern interpretation of this historical trial. The later 2014 APVMA protocol is a separate document and should not be invoked as though it controlled testing in February 2004. [S02]

5. Brisbane aquatic facilities: favourable 2004 microbiological results

Three selected 2004 SAS Laboratory microbiology reports for the Sleeman Centre, Chandler, Brisbane, identify nine sampling locations in each round, across main, community, diving, toddlers, slide and waterjet pools. Tests covered *Pseudomonas aeruginosa*, *Staphylococcus aureus*, coliforms and other parameters, with contemporaneous pH, bather counts and measurable free chlorine. These records are genuine independent field sampling in public aquatic facilities and evidence operation with a chlorine residual — not chlorine-free operation. [S04]

2004 sampling date	<i>P. aeruginosa</i>	<i>S. aureus</i>	Recorded free chlorine
6 April 2004	Below 1 CFU/100 mL in all 9	Below 1 CFU/100 mL in all 9	0.7–5.0 mg/L
4 May 2004	Below 1 CFU/100 mL in all 9	Below 1 CFU/100 mL in all 9	1.5–4.0 mg/L
4 August 2004	Below 1 CFU/100 mL in all 9	Below 1 CFU/100 mL in all 9	1.0–3.0 mg/L

Across these 27 selected 2004 sampling results, the reported *P. aeruginosa* and *S. aureus* concentrations were below the stated detection level. This is significant positive evidence of microbial water quality in those particular samples. Because the laboratory reports measured the residual and not the total quantities dosed over time, they must be paired with historical chemical consumption logs for a quantified claim about savings. These selected results are not presented as a complete audit of every sampling date, and no claim is made that each later sample or every moment of operation produced an identical outcome. [S04]

The separate April 2001 Fortitude Valley Pool manager testimonial records an approximate 60% chlorine-use reduction and energy/filtration benefits. It is contemporaneous operational testimony, not independently audited microbiological or consumption measurement, and should be presented as such. The 2004 recall cannot be justified or criticised solely from later Sleeman sampling because several of those reports post-date the recall. [S21]

6. The APVMA's 2014 efficacy guidance and scientific benchmark

The APVMA's published "Demonstrating efficacy of pool and spa sanitisers" guidance explains the organism-specific performance characteristics recommended for relevant pool/spa treatments. It calls for initial controlled laboratory testing against named pathogens, followed by field testing after laboratory success in busy full-sized pools or spas with significant, variable bather loads. The field trial guidance proposes at least six months of observations and records treatment residuals, microbiology, bather loads and other operational parameters. These are the APVMA's recommended evidence-generating methods, not an absolute assertion that every legacy registration must have followed that identical sequence. [S10]

Indicator organism	Required reduction	Contact time (2014 guidance)
<i>Escherichia coli</i>	4-log10	30 seconds
<i>Enterococcus faecium</i>	4-log10	2 minutes
<i>Pseudomonas aeruginosa</i> , spas	4-log10	2 minutes
<i>Legionella pneumophila</i> , spas	4-log10	2 minutes
Adenovirus (disaggregated)	3-log10	10 minutes

Indicator organism	Required reduction	Contact time (2014 guidance)
Rotavirus (disaggregated)	3-log10	2 minutes
Naegleria fowleri cysts	4-log10	30 minutes
Giardia cysts (specified species)	3-log10	45 minutes

6.1 Evidence sequence and effective concentration

The APVMA guidance distinguishes laboratory pathogen challenge tests from full-size pool field trials. It recommends that laboratory tests show the sanitisers work first; field trials should then examine performance under realistic bather loads. Its efficacy-safety-margin principle asks whether a sanitiser remains effective at 50% of its recommended operating concentration (using a *P. aeruginosa* assessment), with relevant substance-specific design considerations. The guidance also accepts alternative scientifically supported pathways. In this report these are scientific review criteria, not an allegation that every historic registration had an identical mandatory set of trials. [S10]

Brand identity should not be confused with treatment chemistry. Chlorine sources may deliver hypochlorous acid/hypochlorite to pool water, yet pH, cyanuric acid, chlorine demand, residual speciation and contact time can alter performance. Hydrogen peroxide retains its chemical identity across suppliers, but its concentration and use with additional processes matter. PHMB formulations, polymer characteristics, operating concentration and any supplementary oxidation must likewise be identified. Evidence for one concentration or treatment programme cannot be transferred automatically to a materially different registered use. [S10, S11, S23]

Crucial differences: the NSW Health benchmark quoted in the original Tweed reports from 2001 and 2004 required a 4-log10 reduction of *P. aeruginosa* within 30 seconds. The distinct APVMA July 2014 guidance instead specifies 4-log10 *E. coli* within 30 seconds and 4-log10 *P. aeruginosa* within two minutes for spas. The later guidance cannot be used to invalidate the earlier experiments merely because their procedures or organism-specific endpoints differ. Conversely, the earlier tests should not be represented as a direct demonstration of compliance or failure against an APVMA requirement that was published years later. [S01, S02, S10]

The published APVMA page expressly permits alternative information and scientific argument. It also coexists with statutory efficacy criteria, standards for certain listed pool products and previous registrations. Accordingly the public challenge must not falsely allege a universal legal requirement for every extant product to possess new NATA results meeting the 2014 table. Rather, it calls for a product-by-product identification of the scientifically sufficient basis used and of the evidence underpinning any precedent relied upon. [S10, S23]

7. 2012 correspondence and the formal 2014 FOI decision

A recovered APVMA correspondence chain dated 22–26 March 2012 records Enviroswim’s question about whether chlorine had been reviewed for potential human-health effects. APVMA Chemical Review officer Danielle Cregan replied that chlorine was not then on its nominated/reviewed chemical list and clarified that a 2004 Gazette notice referred to an approval route without full registration consideration, not a formal chemical review. This is an important historical administrative record, but it is not a 2012 section 24A FOI determination and not proof of absent chlorine disinfection science. [S06]

On 15 August 2014 APVMA legal officer Margaret Horne issued FOI decision G11233 (LEX3979) after Watertech narrowed a broad request to products 59426 (Waterco calcium hypochlorite tablet 650), 39380 (Poppit Sanitiser), and 50590 (Orica Eclipse liquid chlorine). The decision refused access under FOI Act s24A because documents demonstrating those products met the efficacy guideline operative from 1 July 2014 were not found and were deemed not to exist within that scope. It explained that no qualifying applications or reviews had

triggered the new-guideline requirements for those registrations. It did not find that no earlier evidence of efficacy existed; nor did it conduct an all-products, all-time records audit. [S05]

Strong conclusion supported: the APVMA could not identify the requested contemporary-guideline scientific documents for three named products in 2014, and formally recorded that result after searching. The evidence question remained live.

The 2014 FOI decision was limited to three specified products and documents within the prospective scope of the July 2014 efficacy guidance. It was not an exhaustive audit of every earlier registration study or laboratory file.

8. APVMA's 2020 findings: peroxide and PHMB

The 28 July 2020 APVMA Gazette contains a detailed published scientific analysis. For the specified hydrogen-peroxide products, it cited literature reporting weak antibacterial performance at maintenance concentrations broadly around 100–150 mg/L, and concluded that their nominated concentrations could not achieve the APVMA's minimum antibacterial sanitiser performance characteristics without higher concentrations creating additional safety problems. For the specified PHMB products, it cited inadequacy against *Legionella pneumophila* at roughly 1–1.2 mg/L. These were APVMA findings about identified products and use patterns, not universal conclusions about every peroxide or PHMB application. [S11]

The APVMA cancellations were framed under statutory safety (s5A) and labelling (s5D) grounds, though their scientific rationale centrally concerned disinfection efficacy. Products 87715 (Spa Fresh Active, PHMB) and 88288 (Pool and Spa Sanitiser, peroxide) appeared in Appendix A and the cancellation notice. The APVMA annual report confirms that in February 2021 it consented to court orders setting aside the cancellation decisions on natural-justice grounds. The court did not decide by independent laboratory assessment that the previously criticised use concentrations met microbial efficacy criteria. [S11, S12]

The original chemical identity does not change simply because a cancellation is set aside, but chemical performance in water may depend on formulation, operating concentration, pH, stabiliser, temperature, oxidisers and other relevant conditions. The accurate question is whether later evidence, altered label conditions, other findings or a fresh scientific assessment has superseded the APVMA's July 2020 assessment for the exact products identified. Absence of a later study from this disclosure cannot alone establish no later study exists.

9. Proposed 2022 efficacy reforms, and renewed 2025–2026 requests

The APVMA publicly consulted in 2022 on proposed changes to pool/spa chemical efficacy assessment, including more explicit performance standards. Enviroswim filed its supportive technical submission and historical laboratory exhibits on 29 July 2022; the APVMA acknowledged receipt that day and later advised that the submission would be published. In the published submissions, Enviroswim supported performance-based health protections and laboratory and field testing. SPASA likewise supported health-based performance targets and laboratory microbiology, but opposed making nationally accredited independent testing mandatory in every case and opposed requiring full-pool microbial efficacy studies as a condition of registration. SPASA proposed that whole-pool trials principally assess biocide dispersion and residual concentrations, partly because deliberately introducing pathogens into pools raises ethical concerns. Their positions should be described in full, not as blanket opposition to all scientific testing. The agency later advised that the proposed legislative changes did not proceed; the detailed contemporaneous scientific/administrative rationale remains a legitimate subject for enquiry. [S13, S14, S22]

After renewed open letters in November 2025, Enviroswim wrote repeatedly to APVMA CEO and Board in 2026 about product registration, legacy acceptance, documentary proof and access routes. On 5 June 2026 the company lodged a broad FOI request; the APVMA redirected access to the Agvet Code route; on 24 June it produced product/data spreadsheet extracts. On 16 July the APVMA acknowledged those spreadsheets were not the underlying efficacy studies. [S07, S15, S22]

On 10 July 2026 Enviroswim lodged a 97-page complaint with the Office of the Commonwealth Ombudsman, seeking investigation of reasons, FOI/Agvet handling, legacy-product parity and the unresolved evidence question. An Ombudsman receipt establishes filing, not any determination of regulatory wrongdoing. The company later filed a formal s31-related scientific submission dated 3 September and followed up on the complaint. The documentary register should distinguish submission, acknowledgement, investigation and any eventual finding. [S07, S08, S22]

On 9 September 2026 APVMA Assistant Director Phillip Maria wrote that its searches had located one peroxide-responsive document but had not found laboratory efficacy reports for chlorine chemistry or PHMB by active-constituent search. He cautioned that old records and product-based file organisation made an active-level search difficult, and offered nominated-product searches. This is an admission of an unsuccessful defined search, not an admission that APVMA never held any such reports. [S16]

10. The eight-document Agvet disclosure, 23 October 2026

On 23 October 2026 the APVMA issued its response to Agvet Code request 2026-070-ACR: a cover decision and eight supporting documents concerning product numbers 83311, 87715, 88288 and 93754. Its schedule specifies four documents released in full and four in part, including confidential-commercial-information redactions. The eight items include decision extracts and reports; they are not eight separate independent microbial efficacy studies. [S17–S20]

Product / chemistry	What was disclosed	Critical evidence issue
87715 / PHMB	Summary and delegate statement: proposed product closely similar to Crystal Waters Spa Sanitiser, product 66624.	No organism-specific source results; reference product was also among the products cited in 2020 APVMA adverse findings.
88288 / hydrogen peroxide	Summary and delegate statement: closely similar to reference Poppit Sanitiser, product 39380.	The disclosed extracts do not include original organism-specific results; the reference product was among those cited in the APVMA’s 2020 adverse assessment. A later efficacy reassessment, if any, remains to be identified.
93754 / chlorine-based Blu52	2023 consultant scientific argument and APVMA record: “Scientific argument in lieu of data”; compared 130, 140 and 180 g of nominal available chlorine per weekly dose.	The March 2023 argument compares available chlorine per dose and references a ten-week predecessor field trial; the underlying report was not released. Nominal dose/residual is not equivalent to pathogen-specific laboratory kill data. Proposed product excluded indoor/commercial uses.

Product / chemistry	What was disclosed	Critical evidence issue
83311 / hydrogen peroxide Perox Pro	21-page 2015 ALS study largely redacted as confidential commercial information.	A substantially redacted 2015 ALS report was supplied. The released registration/use record concerns clarifier/algaecide activity; it is not direct evidence of approved standalone primary-pool sanitation.

For chlorine-based product 93754, the consultant's March 2023 scientific argument compares available-chlorine quantities in weekly doses of a proposed product and nominated reference products, and refers to prior four-pool field observations over ten weeks reporting free-chlorine residual compliance with AS 3633. The underlying four-pool report was not included in the eight released documents. Maintaining or measuring a residual does not, by itself, demonstrate the recommended pathogen-specific laboratory log reductions. The Blu52 assessment also stated that the proposed product was not intended for indoor or commercial pools; it cannot simply be extrapolated to NSW public-pool compliance or to every chlorine product. [S20]

The 87715 and 88288 released extracts show a reference-product chain: regulator approval can rest on a nominated predecessor, whose own efficacy basis must therefore be identifiable. The public record is incomplete unless the agency explains the date, nature and relevance of the reference evidence, including how it reconciles the 2020 findings that included both those products and several original references. [S11, S19]

The APVMA may lawfully protect qualifying confidential commercial information under section 162 of the Agvet Code; a redacted page is not evidence that no test data exist. Enviroswim argues, as a proposed transparency reform rather than a description of existing disclosure entitlement, that sufficient non-confidential information should be accessible for independent scientific scrutiny: organisms, relevant test conditions, operating concentrations, exposure times, log-reduction results and the rationale for accepted alternatives. Genuine formulations or trade secrets may require redaction or controlled independent review. [S18–S19, S24]

10.1 The APVMA's adverse findings and reference-product approvals: the three-chemistry question

Enviroswim's submission concerns three principal sanitiser chemistries examined throughout its requests, not a claim that Australian pool-sanitation regulation recognises only three conceivable active constituents. The critical issue is the scientific basis for the efficacy of identified products and any reference-product chain used to approve them.

Chemistry / specific evidence	APVMA action or laboratory result	Issue unresolved after 23 October 2026 release
Hydrogen peroxide: pool/spa product 88288; predecessor 39380	The APVMA's 28 July 2020 Gazette identified poor antibacterial performance of specified products at their approved maintenance conditions and pursued cancellation under safety/labelling provisions. The 2021 set-aside was procedural.	The newly released delegate record approves 88288 through similarity to reference 39380. No inspectable organism/contact-time/log-reduction results for either product accompany that record.
PHMB: spa product 87715; predecessor 66624	The APVMA's 2020 analysis concluded identified PHMB sanitisers were inadequate against <i>Legionella pneumophila</i> at nominated maintenance concentrations, with resulting cancellation action.	The 2026 disclosed delegate record relies on similarity to reference 66624. It does not produce the independent microbiological results supporting that predecessor.

Chemistry / specific evidence	APVMA action or laboratory result	Issue unresolved after 23 October 2026 release
Chlorine: Tweed 2001 comparison; Blu52 product 93754	At 1.0 mg/L chlorine alone, <i>P. aeruginosa</i> reductions were <1.87 log at 30 s, 2.61 log at 15 min and 4.57 log at 30 min under the historical NSW protocol. The 2014 APVMA table is a distinct protocol.	The disclosed 93754 justification compares available-chlorine quantities with registered reference products, not direct four-log microbiological reductions. Identify the primary studies supporting 1 mg/L chlorine benchmark and approved uses.

The APVMA's 2020 language matters. The relevant action was cancellation of registrations for specified products, not a formal determination that the entire hydrogen-peroxide or PHMB chemistry can never work at any concentration or in any formulation. Its statutory conclusions were expressed principally under sections 5A (safety) and 5D (labelling), while inadequate microbial efficacy was central to the scientific reasons. Similarly, the 2021 Federal Court result invalidated the decisions on natural-justice grounds and did not itself establish that efficacy performance improved or had been demonstrated. [S11, S12]

The release creates a focused question about how continuing regulatory efficacy confidence can be independently assessed. For identified PHMB and peroxide products, what evidence, approved-use conditions or scientific reassessment, if any, has superseded or explained the 2020 findings? For chlorine, what empirical studies or accepted scientific arguments support each relevant comparator claim at stated concentrations and conditions? The Tweed 2001 comparison tested a historical NSW *P. aeruginosa*/30-second endpoint at 20 °C and must not be equated to the APVMA's later spa criterion. A proper evidence map would identify the microorganism, free active concentration, formulation, contact time, water conditions, controls and neutralisation data, and distinguish direct tests from scientific analogy. [S01, S10–S12, S18–S20]

Enviroswim has not obtained enough unredacted scientific detail from its defined APVMA access requests to independently verify each of the selected product-specific efficacy claims. This is a demonstrable transparency and document-access gap, not a finding that the regulator has no studies or that registration was unlawful. The APVMA is invited to identify each relied-on original or predecessor study, or describe an accepted scientifically justified alternative, while explaining the permissible limits of disclosure. [S05, S16–S20, S24]

11. Synthesis: grounds for a public evidence-parity challenge

The strongest documented pattern is not a finding that chemistry “does not work.” It is an unresolved, repeated lack of verifiable, product-specific disclosure that ties registration status, reference-product reasoning and the regulator’s own recommended microbial endpoints together. That pattern exists alongside original measured Enviroswim laboratory evidence and decades of company interaction with the APVMA. [S01–S23]

One explanation is that acceptable efficacy evidence is retained in older product archives, protected reference-product files, established scientific literature or lawful assessment pathways. If so, a non-confidential evidence index and scientifically meaningful explanation of the pathway would assist independent review. If a particular registration did not require the contemporary laboratory protocol, the correct response is to state which requirements applied at the date of assessment and on what evidence the statutory efficacy criterion was met. This analysis does not presume that one product’s registration can automatically establish another product’s effectiveness at materially different concentrations or treatment conditions.

EVIDENCE-PARITY PRINCIPLE | Brand names do not alter the identity of an active substance. Equivalent active chemistry can support comparison only where concentration, species present, formulation, pH, stabilisation, contact time, organic demand, associated oxidisers and approved

use allow a scientifically valid inference. Product-specific health claims require identifiable evidence—not brand reputation or registration status alone.

12. Technical disclosure questions addressed to the APVMA

1. Identify at least one currently relevant, registered primary swimming pool or spa sanitiser for each of chlorine-based, hydrogen peroxide and PHMB chemistry, stating product number, approved claim, maintenance concentration and applicable evidence pathway.
2. For each product, name every relied-upon original efficacy study or reference report, laboratory, report date, accreditation status and test-standard scope; where an equivalent non-NATA study was used, explain the basis of acceptance.
3. Provide or summarise, subject to legitimate confidentiality law, test organism/strain, tested active-species concentration at start and finish, pH, cyanuric acid level if relevant, temperature, neutralisation and controls, sampling contact times, replicates and measured log reductions. Distinguish a nominal chemical dose from actual disinfecting species under test conditions.
4. For each nominated product, distinguish (a) controlled laboratory pathogen challenge, (b) whole-pool field microbiology and bather-load monitoring, (c) measurements of residual sanitiser concentration, and (d) historical scientific argument, precedent, reference-product similarity or overseas assessments. Specify the applicable assessment pathway and any reason a different sequence was accepted.
5. Identify the original scientific evidence behind PHMB reference 66624 and peroxide reference 39380, and explain whether APVMA has reconsidered the specific 2020 conclusions applicable to those products.
6. For product 93754 and reference products 81351 / 89245 or 89246, explain the source number inconsistency and how available-chlorine mass comparison establishes actual pathogen kill under product label conditions.
7. For product 83311, state its registered clarifier/algaecide scope and whether its 2015 ALS study was ever relied upon for primary sanitisation rather than algae control; release scientifically meaningful permitted extracts if possible.
8. State whether any fresh efficacy studies, changes in approved labels, limitations, or new literature alter the 28 July 2020 findings for specified peroxide and PHMB products. Identify the date of any superseding scientific decision.
9. Clarify which standards and testing criteria applied to the original Watertech/Enviro-Swim in March 2004 and to named incumbent products contemporaneously; provide the complete recall and scientific assessment history and the missing Dykes statement. Identify any pre-decision representations from Watertech and the APVMA's response.
10. Produce the 11 March 2004 correspondence and pre-recall record showing the proposed allegations, scientific materials supplied, any opportunity for Watertech to respond and reasons for the final recall. Explain the relevant statutory treatment of the complete system versus individual electrodes or other components. [S03, S21, S25]
11. Identify records showing whether Enviroswim's 2001 and 2004 Tweed reports and public-pool operational evidence were considered, and if not accepted, explain the scientific relevance and deficiency found.
12. Identify the decision maker, reasons, technical advice and statutory status of the 2022 consultation proposal and subsequent decision not to proceed.
13. Provide a consolidated non-confidential evidence map, separating located test data, reference-product evidence, accepted scientific argument, protected material, documents not located in a defined search and future reconsideration triggers. Where an entire result cannot lawfully be disclosed, consider a meaningful redacted scientific summary or controlled examination by a suitably independent expert.

13. Scientific transparency and independently verifiable evidence

Public scientific scrutiny is best served by original laboratory reports, clearly defined regulatory decisions and source-linked summaries that identify what was tested, under what conditions and with what results. Historical FOI decisions and later product-specific disclosures must be read in their actual legal and evidentiary context. [S01–S05, S10–S12, S18–S20]

13.1 Why some efficacy results should be independently reviewable

The APVMA's confidential commercial information framework protects legitimate trade secrets, formulations and commercially valuable information, and section 162 of the Agvet Code constrains disclosure. Enviroswim supports public access, wherever legally possible, to verifiable scientific summaries of health-protection claims: test organisms and strains, method and controls, active concentration, environmental conditions, exposure times, statistical uncertainty, log reductions and the regulator's assessment reasoning. Where full disclosure is not lawful, a non-confidential summary or independent controlled review may offer a proportionate alternative. [S10, S18, S24]

Transparency has both a scientific and a legal dimension. The APVMA's 2020 adverse product-specific assessments, its subsequent reference-product decisions, and the distinct Tweed 2001 chlorine comparison warrant a documented source-to-conclusion examination. Enviroswim supports scientifically meaningful public results, or appropriately protected independent scrutiny, while respecting genuine proprietary information. Claims about public-health protection should be capable of objective assessment under intended operating conditions. [S01, S10–S12, S18–S20, S24]

14. Conclusions

The primary record establishes a longstanding scientific and administrative dispute between Watertech/Enviroswim and the APVMA: historical pathogen-specific laboratory experiments; a compulsory 2004 recall concerning an earlier unit and questions about the pre-decision procedure; favourable selected public-pool water samples during 2004; a narrowly scoped 2014 FOI decision; published adverse 2020 assessments of specified peroxide and PHMB products; a court set-aside on natural-justice grounds; limited 2026 records searches; and an October 2026 disclosure based in part on similarity and scientific argument. Each event has a distinct evidentiary meaning and must not be enlarged into a universal claim about chemical efficacy, legality or institutional motive.

The documentary record warrants a firm and testable public request: for named registered primary sanitisers, identify the pathogen-specific efficacy results or the scientifically sufficient alternative evidence accepted at approved operating conditions, and explain how reference-product comparisons were validated. The underlying scientific questions can and should be assessed independently of unsubstantiated assumptions about institutional or commercial motives.

The public-health question is not whose brand is preferred. It is whether an independently reviewable scientific record explains the microbiological performance claimed for each sanitiser at the concentrations and conditions in which swimmers use it.

Appendix A. Primary-source and literature register

- S01 Tweed Laboratory Centre, Dr Paul Wright, "Pseudomonas aeruginosa Disinfection in Swimming Pool Water – Laboratory Efficacy Testing," August 2001. July 2001 experiments and historical NSW Health criterion, pp. 1–6. [View published evidence](#)
- S02 Tweed Laboratory Centre, Dr Paul Wright, "Pseudomonas aeruginosa Disinfection in Spa Pools," 6 May 2004. Experiments conducted in February 2004, pp. 1–5. [Original laboratory report](#)
- S03 APVMA, compulsory recall notice No. 0006 of 2004, 17 March 2004, reference O-C36316, including accompanying instructions. Contemporaneous original held in the Watertech/Enviroswim documentary record.
- S04 SAS Laboratory, Sleeman Centre microbiology and water-chemistry reports 04/03474 (20 April 2004), 04/04548 (11 May 2004) and 04/07720 (16 August 2004). Three selected sampling rounds covering nine pool locations per round.
- S05 APVMA, Margaret Horne, FOI decision G11233 (LEX3979), 15 August 2014, including the four-page statement of reasons and its prospective guideline scope.
- S06 APVMA Chemical Review, correspondence with Watertech/Enviroswim, 22–26 March 2012, concerning chlorine and the chemical-review programme. Contemporaneous company correspondence.
- S07 Enviroswim/Watertech, correspondence and formal submission to the Commonwealth Ombudsman, 10 July 2026. Cited solely as evidence that a complaint was lodged; no Ombudsman finding is asserted.
- S08 Commonwealth Ombudsman, acknowledgement of a July 2026 submission. The acknowledgement establishes receipt, not a finding on the merits.
- S09 Agricultural and Veterinary Chemicals Code Act 1994 (Cth), scheduled Agvet Code, including statutory safety, efficacy and labelling criteria and applicable regulations.
- S10 APVMA, "Demonstrating efficacy of pool and spa sanitisers," guideline updated 1 July 2014. [APVMA guidance](#)
- S11 APVMA Gazette No. 15, 28 July 2020, "Final regulatory decisions for certain swimming and spa pool sanitiser products," pp. 29–35; associated notice pp. 41–43. [Official Gazette \(PDF\)](#)
- S12 APVMA, Annual Report 2020–21, "Judicial decisions and reviews by outside bodies." Includes the regulator's acknowledgement of the February 2021 consent orders. [Official APVMA annual report \(PDF\)](#)
- S13 APVMA, "Proposed amendments to how the efficacy of certain pool and spa chemicals is assessed – Submissions received," July 2022; includes SPASA and Enviroswim submissions. [APVMA submissions \(PDF\)](#)
- S14 Royal Life Saving Society Australia, explanatory summary of proposed pool-chemical efficacy testing changes, 13 April 2022. [Read report](#)
- S15 APVMA, correspondence of 16 July 2026 confirming that its 24 June spreadsheet extract was an index, not the underlying studies. Agency correspondence held by Enviroswim.
- S16 APVMA, correspondence of 9 September 2026 describing the scope and limitations of searches for chlorine and PHMB laboratory efficacy reports. Agency correspondence held by Enviroswim.
- S17 APVMA, correspondence of 21 October 2026 regarding the eight proposed documents and applicable processing fee. Agency correspondence held by Enviroswim.
- S18 APVMA, decision letter and eight-document schedule, Agvet Code information request 2026-070-ACR, 23 October 2026, three pages.
- S19 APVMA, 2026-070-ACR disclosure: assessment summaries and delegate decision extracts for PHMB product 87715 and hydrogen-peroxide product 88288; four one-page extracts.

S20 Roger W. Franklin, “Blu52 + 4 Week Pool Sanitiser,” 20 March 2023; APVMA product 93754 assessment and decision extracts; and ALS Environmental report for product 83311, 11 November 2015, substantially redacted. Four disclosed documents are grouped here; the remaining four are at S19.

S21 Enviroswim Independent Documentary Review, 11 October 2026, particularly Volumes III, VII, VIII, XIII, XV and XVI, together with the updated evidence crosswalk through 25 October 2026. A source-reconciliation record, not an independent adjudication of liability.

S22 Enviroswim’s APVMA correspondence and submissions, 2025–2026, including its 3 September 2026 section 31-related submission. Contemporaneous company records.

S23 APVMA, “Listed chemical products,” describing the standards-based registration pathway. [APVMA explanation](#)

S24 APVMA, CCI Practice Statement (version 02, 28 August 2017), and Agricultural and Veterinary Chemicals Code, section 162, concerning confidentiality and reference products. [APVMA CCI statement](#)

S25 Administrative Appeals Tribunal: Re Questa Pool Products Pty Ltd and Re Katali Pty Ltd [2004] AATA 687 (30 June 2004); BM and JA Davis Pty Ltd v APVMA [2004] AATA 955 (14 September 2004). These decisions concern other parties and distinguish specified components from complete systems. [AATA 955 decision](#)