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ASX Announcements

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ENCOURAGING RESULTS CONTINUE WITH PO3's PROPRIETARY PFAS DESTRUCTION TECHNOLOGIES.

- PurifloH Limited ("PurifloH," "PO3" or "Company") continues to advance its proprietary PFAS removal technology with ongoing testing providing further validation and encouraging results.
- The latest series of experiments focused on validating an even more energy efficient methodology, whilst being safer to humans and to the environment.
- The results have provided confirmation of both previously successful PFAS destruction methodologies being suitable for larger scale operations and of the improved ones being suitable for smaller scale local operators, of which there are many. The economic feasibility of these solutions for both smaller and larger scale water purification operations will likely be compelling.
- The most recent results and the protocols of the tests will now be used in preparation for upcoming field trials in conjunction with Osmoflo.
- The IP for PFAS destruction using the new PurifloH proprietary technology is being finalized in preparation for the field trials.
- Market awareness of the issue of PFAS is growing. The Company is keeping track of media attention on the issue and the scope of the problem in relation to where PO3's unique solution will apply.

Dr Alex Sava, Technical Director of PurifloH, said today that:

"I am extremely pleased with the significant progress made on this project.

The validated improvements are highly suitable for small and medium-scale PFAS purification facilities. There will continue to be a global abundance of these operators as the issues with PFAS become more widely understood.

The further enhancement of the environmental and human safety profile provides confidence that our PFAS decontaminating solutions could be commissioned within a short period of time, generating revenue faster than originally envisaged."

Testing Methodology and Results:

All test work, research and validation were undertaken under the supervision and guidance of Dr Alex Sava and conducted by Vigneswaran Appia. Relevant PFAS assays were conducted independently by SGS Australia.

In the process of refining its PFAS destruction solution, PurifLOH has recently completed a series of tests comparing the effectiveness of its technology against competition. These tests aimed to identify the distinctive advantages of PurifLOH's water treatment for PFAS removal.

The findings of the tests led to the following substantive conclusions:

1. The results confirm PO3 can now offer commercially viable PFAS-elimination technologies for either flow-through or batch treatment settings. The PFAS concentration was reduced to below detectable levels in some minutes.
2. PurifLOH's method demonstrated the highest reduction in PFAS compounds with the most efficient energy use when compared with existing methods.
3. Unparalleled energy efficiency, as confirmed both internally and by partner studies, showcases the environmental friendliness of PurifLOH's system, along with a promise of restoring contaminated water sources to original state by removal of hazardous PFAS and other non-biodegradable chemicals.

These solutions will be tested on commercial scale at a pilot plant in New Mexico, United States, later this year, in collaboration with our partner, Osmoflo. Osmoflo intends to concentrate PFAS-contaminated water as Reverse Osmosis reject brine, while the PO3 technology will be used for destroying the PFAS within the concentrate. In New Mexico PurifLOH will also conduct qualitative and quantitative assays of the PFAS-decomposition bi-products and their fate in the aquatic systems.

Market Scope:

PFAS prevalence:

PFAS contaminates are surprisingly widespread due to their unique surface tension modifying properties. Some common off-the shelf products that likely contain PFAS:

- Food Packaging: Grease-resistant liners in food wrappers, microwave popcorn bags, pizza boxes, and candy wrappers often utilize PFAS for grease and moisture resistance and thermal stability.
- Non-Stick Cookware: The slick surface of many non-stick cooking appliances contains PFAS.
- Stain and Water Repellents: Fabrics like carpets, upholstery, and outdoor clothing are often treated with PFAS-based formulations to resist staining and repel water.
- Paints, lacquers, varnishes and most specialised, coatings (especially marine-grade ones) most likely contain PFAS compounds.
- Fire retardants and fire-fighting foams.
- Cleaning and disinfecting Products: Some common cleaning formulations, stain removers, degreasers and carpet cleaners may contain PFAS for enhanced cleaning power.
- Personal Care Products: While less common nowadays, for decades some mascaras, foundations, lipsticks, and other cosmetics with improved water resistance may have historically used PFAS.

PFAS synthesis and manufacturing is a relatively sophisticated chemical process that only large companies can afford. At the same time, there is virtually no restrictions on sale and use of PFAS anywhere in the world.

Industrial facilities that produce PFAS containing products potentially contaminating waterways and land:

- Contract Chemical Manufacturers: Factories that manufacture or utilize PFAS in various formulations like paints, varnishes, coatings, and fire retardants could release PFAS through wastewater streams.
- Metal Plating Facilities: Chrome plating processes sometimes utilize PFAS-containing chemicals.
- Textile and Paper Mills: These facilities may use PFAS for water and stain repellence in their products.
- Landfills: Landfills receiving solid and liquid waste from industries and users may leach PFAS into groundwater and waterways.
- Fireworks Manufacturers: PFAS-based components are sometimes used in fireworks.

Addressable Market and Cost Effectiveness:

PFAS contamination is a growing concern of global significance due to its presence in various water sources around the world. Global and Australian media is focused on the issue, evidenced by articles, movies and documentaries becoming increasingly prevalent. PurifLOH's scalable technologies could offer inexpensive and environmentally friendly PFAS decontamination solutions for both water supply and water disposal.

- Drinking Water: artesian wells and groundwater may contain PFAS. PurifLOH's technology offers a potential solution for treatment.
- Industrial Wastewater: Manufacturers using PFAS can release them in wastewater. Here, PurifLOH's water treatment system could address this issue.
- Sewage and Landfill Leachate: PFAS-contaminated soil and waste in landfills can leach into surrounding water. PurifLOH's technology offers several remediation options for such leachate.

Market Potential: The addressable market is extensive, ranging from small-scale water sources to large municipal water treatment facilities.

Cost-Effectiveness: PurifLOH's approach presents a potentially manyfold cheaper alternative to current PFAS decontamination options. For instance, treating 10 tons of contaminated water per day could be achieved with a non-prohibitive capital investment of, potentially, between \$10,000 - \$30,000 using PurifLOH's technology, compared to potentially hundreds of thousands or millions using existing methods.

Next Steps:

Given the success of these latest results, testing will now focus on refining the simulated contaminated water to match real-world scenarios. Osmoflo will also embark on independent validation tests while we collaborate on finalizing the pilot plant design in the coming months.

Post-success at the field trials, an IP restructuring will ensure ongoing protection of PurifLOH's unique method. Following this, we will adjust process parameters to ensure the biodegradability of treatment by-products in aquatic environments. The Company is also approaching councils and manufacturers to offer custom PFAS removal solutions to their incoming or effluent waters.

Concurrent to the work above, the Company will further enhance its strategy of business execution with a view to commence operation as soon as practicable.

Further updates and details will be provided as more progress is achieved.

This release is approved by the Board of PurifLOH.

Appendix: Recent PFAS Headlines

International Contamination:

- [*This factory contaminated the whole world. And you helped pay for it*](#) - Australian government threatens to sue 3M over PFAS based firefighting foam - Sydney Morning Herald April 2024 - The article highlights the scale of the problem across the world.
- [*High rates of 'forever' chemical found in Aussie tap water*](#) – PFAS has been found in Australian tap waters at a 140 times safe levels according to the US EPA. This story highlights the local prevalence of PFAS contamination and our potential exposure to it every day.
- [*Will Hong Kong's single-use plastics ban recycle one problem into another? Green groups warn of dangerous substitute items.*](#) South China Morning Post (China): An April 2024 article delves into the environmental damage caused by PFAS in plastic substitute products. This story talks to the global range of the issue and the universal nature of the problem.
- [*PFAS 'Forever Chemicals' Are Pervasive in Water Worldwide, Study Finds.*](#) This April 2024 article from the New York Times talks about the scale of the issue – it is global and present everywhere.

Health Concerns and Regulations:

- [*Mark Ruffalo on the 'evil' company that poisoned every person on the planet – then kept it secret*](#) – An article about a soon-to-be released documentary on the intentional poisoning of our environment with PFAS chemicals.
- [*National Institute of Environmental Health Sciences \(NIEHS\)*](#): An ongoing series of articles explores the latest scientific findings on PFAS exposure and potential health effects [Source: NIEHS website].
- Environmental Working Group (EWG): A report by EWG details the results of their national tap water testing initiative, revealing widespread PFAS contamination in US water supplies [Source: EWG website]. This report highlights the urgency for stricter regulations on PFAS in drinking water.

Legal Issues and Industry:

- [*EPA puts limits on 'forever chemicals' in drinking water:*](#) An April 2024 report explores the ongoing legal battle between residents affected by PFAS contamination and chemical giants like 3M and DuPont. The article focuses on new lawsuits alleging the companies' awareness of health risks associated with PFAS.
- [*Six Things to Know About 'Forever Chemicals':*](#) The New York Times (US): An April 2024 article discusses the complexities of holding companies accountable for PFAS contamination. The story mentions the ongoing debate about who should shoulder the financial burden of clean-up efforts.

These are just a few examples of recent media coverage surrounding PFAS. As the issue continues to gain global attention, we can expect to see more articles focusing on contaminated sites across the world and the sheer financial implications on industries.