

# **SOUTH AFRICAN ASSOCIATION FOR MARINE BIOLOGICAL RESEARCH**

Reg. No. 1951/000002/08

**SAAMBR** Incorporates  
**Oceanographic Research Institute (ORI)**  
**Sea World at uShaka Marine World**  
**Sea World Education Centre**



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MARINE BIOLOGICAL RESEARCH

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To whom it may concern

7<sup>th</sup> February 2006

I was the Curator at SEA WORLD in Durban when Mr DS von Broembsen (then Managing Director of Process Chlorination Pty Ltd, South Africa, now since 2000, President of Chlorking Inc., USA) installed a hypochlorite generator into our dolphin pools. We were running a semi-closed system using sea water that was pumped from well points on the coastline, and the new system was created so that we could generate the hypochlorite on site and dose it into our dolphin pools. Until that point we had been using gas chlorine as a sterilizer in our exhibits. We found that the hypochlorite system was a much better system. It was safer for animals and staff. In fact, we believe that the comfort of animals improved with the new water chemistry. Furthermore, the cost of generating the sterilizer was far less than purchasing the gas chlorine.

Our dolphin population suffered no ill effect, and continued to breed despite the change in the life support system.

Recently we relocated to new premises. Our intention was to operate with ozone and extra make up water. We have, however, added a system similar to Mr von Broembsen's original system, which incorporates the electrolytic conversion of sea water to a dilute solution of sodium hypochlorite, to provide a chlorine residual in the pool water in parallel with the use of conventional filtration and ozonation. This also helps in the control of algae.

Based on our past single experience, I can recommend Mr von Broembsen's work. I can recommend this type of control in life support system that supports dolphins. It must be remembered however that an installation is only as effective as the control mechanisms that are used on a daily basis to manage the system. We, therefore, do daily checks on the water to ensure that chemical levels are safe for the animals. With this system we are easily able to rectify and troubleshoot before animals are adversely affected.

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WAZA (World Association of Zoos and Aquariums) PAAZAB (Pan African Association for Zoos and Aquariums)  
ORI is academically affiliated to the University of KwaZulu-Natal

