ATL 7.5.7 R/V ATLANTIS Quality of Potable Water

Originator:	Approved By:
Theo Moniz	Albert F. Suchy

1. Purpose

The purpose of this procedure is to set forth the guidelines for the quality of potable water aboard the R/V ATLANTIS

2. Responsibility

It is the responsibility of the Chief Engineer to maintain adequate potable water quality.

3. General

Potable water on Atlantis is produced by one or more of the following installed equipment; 2 each Lifestream 4000 GPD Reverse Osmosis units and a Reiley-Beard evaporator. Each unit discharges fresh water into a piping arrangement that directs the water to one or both of the potable water tanks (3-60-2 & 3-60-1) located on the forward bulkhead of the lower engine room. Potable water may also be taken on board through a main deck connection

Two Grundfos stainless steel potable water pumps take a suction from the tanks through a piping arrangement that allows either one or both of the pumps to be online. The pumps cycle automatically to pressurize the potable water pressure tanks.

Ozone is provided to the potable water tanks from a Chem-Free Purification Systems unit via stainless steel tubing and a ceramic block bubbling system. The Chem-Free unit is programmed to cycle between the tanks to maintain a minimum ORP (Oxygen Reduction Potential) value of at least 650 mV.

It is important to regularly monitor the concentration of dissolved ozone in the potable water. This monitoring ensures that the ozone supply units are functioning as designed thereby keeping the water well dosed to kill off any harmful organisms. Ozone concentration is measured as ORP (Oxygen Reduction Potential) and the value is expressed in mV. On Atlantis, the test is performed with a EUTECH Instrument, model EC-ORPTEST10.

4. Sampling and Recording Procedure

During a period of high potable water usage, such as just before the noon meal, allow the petcock on #2 potable water pressure pump to run for several minutes. Fill the provided sample cup with sufficient water to immerse the probes of the ship's ORP tester. Keep the probes submerged for at least 30 seconds to allow the readings to level out. Record the ORP value in NS5 in the Standard Job, Potable Water Testing. Should the value be below 650 mV, the 1 A/E should be notified in a timely manner to address the problem.