



# MANAGEMENT SYSTEM MANUAL

## KNR 7.5.7 Quality of Potable Water

Originator:	Approved By:
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### 1. Purpose

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

### 2. Responsibility

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

### 3. General

Knorr is equipped with 4 independent potable water tanks. The tanks are located on the 1<sup>st</sup> Platform level of the ship and are designated as 2-24-0, 2-24-1, 2-45-2 and 2-45-1. A sight glass on each tank indicates the water level to the engineers. The sight glass is attached to the tank bulkhead with steel pipe nipples and isolation valves at the top and bottom of each glass and the vertical tube also has petcocks in case the glass becomes cloudy and the level can not be seen.

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 and the value is expressed in mV. On Knorr, the test is performed with a EUTECH Instrument, model EC-ORPTEST10.

### 4. Sampling and Reporting Procedure

In accordance with ISM Procedure 7.5.7, Quality of Potable Water, a sample of the water in each tank is to be tested and recorded weekly. On Knorr, the procedure below is to be followed for each tank.

1. Secure the isolation valve at the top of the sight glass.
2. Open the bottom most petcock and allow 1 gallon of water to flow into a container.
3. Using a different container, draw and test a sample as instructed by the paperwork provided with the ORP meter.
4. Record the test results in NS5 in the Standard Job.
5. Open the upper isolation valve and secure the area.



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