

**MICROBIOLOGY DEPARTMENT 7218**

**THE MANAGING DIRECTOR  
CRANE GROUP INTERNATIONAL  
Attention: Mr Neal Balasny  
364 Summit Avenue  
Hackensack, NJ 07601 USA**

Your ref: (UF) Membrane

Our ref: 17/37/7

Enquiries: 428-6172/3

Date: 2005-06-14

page 1 of 2

2564387/05-1722/Y62469

**Preliminary Report: Water - Membrane Filtration System****1. Description of sample**

A water filtration unit features several pre-filters, an ultra filtration (UF) membrane and post carbon filter that will produce potable water was received for microbiological examination. The membrane filtration system was tested on 2005-06-08 and 2005-06-10.

**2. TEST REQUESTED**

To determine the bactericidal efficacy of the membrane filtration system against various bacteria species.

**3. METHOD OF TEST**

- 3.1 A  $10^3$  bacterial suspension of each of the following organisms: *Escherichia coli*, *Pseudomonas aeruginosa*, *Salmonella typhi* and *Staphylococcus aureus*.
- 3.2 After thorough mixing the suspension were plated out as controls.
- 3.3 The inlet water supply of membrane filter was spiked with the bacterial suspensions and samples collected in sterile 250ml bottles from the "Product" and "Waste" outlet pipes and plated out for viable counts at 37°C after 48h incubation.
- 3.4 The samples were tested in accordance with:
  - 3.4.1 SABS SM 221 Edition 4 2001: Microbiological quality of water: General test methods.  
Total viable count.

**4. RESULTS/...**

## Test House - SABS affiliated company

REPORT No.7218/2564387/05 -1722/ Y 62469

Page 2 of 2

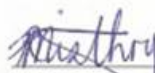
### 4.RESULTS

#### Water - Membrane Filtration System

Description of sample	Bacteria culture	Total viable bacteria count / ml	Percentage Reduction
1 Product pipe - filtered water	<i>Pseudomonas aeruginosa</i>	0	99,9%
2 Waste Pipe water	<i>Pseudomonas aeruginosa</i>	9 500	0%
3 Product pipe - filtered water	<i>Escherichia coli</i>	0	99,9%
4 Waste Pipe water	<i>Escherichia coli</i>	6 850	0%
5 Product pipe – filtered water	<i>Staphylococcus aureus</i>	0	99,9%
6 Waste Pipe water	<i>Staphylococcus aureus</i>	1 850	0%
7 Product pipe - filtered water	<i>Salmonella typhi</i>	6	99,85
8 Waste Pipe water	<i>Salmonella typhi</i>	4 000	0%



R A Roos Manager:  
Microbiology Department



R.MISTHRY Microbiologist

#### Confidentiality Notice:

This message is intended only for the use of the individual or entity to which it is addressed and in terms of Section 32 of the Standards Act, 1993, it contains information that is strictly confidential. If the reader of this message is not the recipient, or the employee or agent responsible for delivering this message to the intended recipient, you are hereby notified that any disclosure, distribution, copying or the taking of any action in reliance on the contents of this communication, is strictly prohibited. If you have received this communication in error, please notify us immediately by telephone to arrange for the return of the documents to us.

This report relates only to the specific sample(s) tested as identified herein. It does not imply SABS approval of the quality and/or performance of the item(s) in question and the test results do not apply to any similar item that has not been tested. (Refer also to the complete conditions printed on the back of official test reports.)