

# Water Management Technologies

## Scavenger 2000 Oxyplus System Decontamination Report

On February 09, 2008, Water Management Technologies conducted an experiment to determine the effectiveness of the Scavenger 2000's onboard Oxyplus decontamination system. This experiment took place at the Riverside Center (Scavenger 2000 dock space), which is located at the junction of SW 2<sup>nd</sup> ave., and the Miami River. The system was activated for one complete hour of operation.

The experiment was conducted under the following conditions:

- Slack Water
- High tide (10:24h)
- Partly clouded skies
- Wind ENE at 10kts
- Air temp : 75°
- Water temperature : 73.5°

The slip is 73' long by 57' wide, while the water depth averaged 10' during high tide, which represent 38 690 ft<sup>3</sup> of water (288 731 US Gallons). At 09:59h a water sample was taken from the starboard bow door. A dissolved oxygen reading was also taken. At 10:00h the scavenger was placed in the working mode at 1100 RPM with four moorings lines holding the vessel in place. Additional samples were taken at 20 minutes intervals.

The water samples were then given to MICRIM LABS Inc. (right after the experiment), they analyzed the water for different forms of pollutants such as Algae formation, E-Coli and other less known bacteria (which are listed in the attached report).

The results showed that after **one (1) hour of operation, the fecal coliforms count (FCC) decreased by 95%, algal morphologies became non existent while the oxygen level increased by 38%**. The results are shown in the following graph.

sample	Time of day	Dissolved Oxygen (mg/l)	% increase	FCC (CFU/100ml)	% decrease
A	09:59	5.99	0	194	0
B	10:20	7.63	27	76	61
C	10:40	8.12	36	60	69
D	11:00	8.24	38	10	95

Note 1: The dissolved oxygen analysis was performed by the on-board testing equipment.

