standard lab-based test (membrane filtration[2]) - for detecting *E. coli*. We seeded de-ionized water (estimated UV extinction coefficient = 0.01 cm^{-1}) with non-pathogenic *E. coli* and pumped this water through the UVWw 2.x unit at 4 gallons per minute. Membrane filtration tests indicated a concentration between 500,000 and 600,000 CFU per 100 ml in the inlet water, while the less-precise Colilert test indicated a concentration no less than 100,000 CFU per 100 ml. Both test methods indicated the treated outflow water had no detectable *E. coli*, suggesting a 5-6 log reduction resulting from the UVWw unit.

4. At LBNL in the spring of 1997, we modified a UVWw 2.x unit to test field water samples that were of insufficient volume to be tested in the laboratory under actual flow conditions (4 gallons/minute) through the unit. Instead of the sample water flowing through the unit at 15 lpm, we used a tray of water to hold the sample volume in the unit and expose it for 12 seconds with an aluminum shutter (12 seconds is the length of exposure in the unit for flowing water). Using this method we evaluated samples from Berkeley's Strawberry Creek and South Africa's Inanda Dam reservoir (near Durban). Membrane filtration found the Strawberry creek samples to have total colony counts reduced by 4 logs by the UVWw. Two tests of the Inanda Dam water found that filtering the water before treatment improved performance by 1 log, from 3 to 4 log reduction.

5. In July 1997, A test of the UVWw 2.x unit's performance on field site water was performed at the Durban Metro Water laboratory in Durban, South Africa. LBNL and Durban Metro staff collected an untreated sample of water from the field site and exposed it to UV in the unit using the same 'tray' method developed at LBNL in its spring 1997 tests. This test found that the unit reduced the coliform concentrations by 6 logs. The inlet water, which had a UV extinction coefficient close to that of distilled water, had initial concentrations of 20 million coliform CFU/100 ml (this was in part due to an old in-line carbon filter unrelated to the UVWw project; the filter was subsequently removed, improving water quality to 6000 CFU/100 ml just by this action!).

6. A test performed in September 1997 in the Philippines Department of Health (in conjunction with the University of the Philippines) found an early prototype of the UV 2.x unit to reduce an estimated 100,000 CFU/ml concentration of *E. coli* to less than detectable levels (less than 1 CFU/100 ml). (The inlet concentration remains only an estimate because their test equipment got contaminated during the inlet concentration measurements. The outlet concentration was measured reliably and was reported.) The test method used in this experiment reports only the presence or absence of coliform bacteria and is not intended to provide a measure of concentration of these organisms.

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[2] Membrane filter method according to Standard Methods for the Examination of Water and Wastewater, 18th ed. (1992), Method 9222 B. Petri dishes prepared with HACH brand m-ENDO prepared broth, a total coliform broth.