



Green Cove Springs, FL Site Report

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Serving Florida Water & Wastewater Utilities Since 1982

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Comparison of Chlorine Gas to MIOX Mixed Oxidant Town of Green Cove Springs, Florida Harbor Road Water Plant February, 2001

<u>Parameter</u>	<u>Chlorine Gas</u>	<u>MIOX Oxidants</u>
Feed Point	Pump Suction	Ground Storage
Average Dose	2.46 PPM	2.21 PPM
Plant Residual	1.46 PPM	1.16 PPM
Average Field Residual	0.81 PPM	1.05 PPM
Average Distribution Demand	<u>0.65 PPM</u>	<u>0.11 PPM</u>
Lowest Field Residual	0.00 PPM *	0.80 PPM
Maximum Distribution Demand	<u>1.46 PPM</u>	<u>0.36 PPM</u>
Field pH	7.65	7.89
Chlorine, Taste & Odor	Noticeable	None
H2SO4, Taste & Odor	Trace	None
Public Works Residual*	0.0 / Trace	0.8 PPM
High School	.38 / .60	1.0 PPM
Black Creek Ramp*	Trace after 2 hr. flush	0.8 PPM
Police Station	Brown Water	Clear
Hazard	Pressurized Gas	None

Conclusion:

MIOX mixed oxidants were able to maintain chlorine residuals throughout distribution with less than a 0.2 PPM reduction from plant to field. Residuals within 0.4 PPM of the plant were found in areas where it had been impossible to maintain residuals without extensive flushing. Chlorine taste and odor was eliminated from customers water. Hydrogen sulfide taste and odor was eliminated from customers water. Iron color was eliminated from water.

Superior quality water was provided and the use of pressurized chlorine gas was eliminated. MIOX equipment should be sized to provide 2.5 PPM dose. The actual residual leaving water plants should be reduced to 0.6 PPM with an average field residual of 0.5 PPM. Required dosage would then be 1.6 PPM. Equipment should be specified to provide redundant generation capability of largest unit and provide adequate generation with one unit out during sustained average daily flow.