

Not a Walk in the Park



1995 Inspection of sewer line at Rubes Creek Pump Station showed the perfect condition of Madison's coatings.

Madison Chemical employees will go to the depths of the earth to make sure our coatings perform.

We recently did just that in Cobb County, Georgia when we carried out an inspection of an active sewer line. With the assistance of the Cobb County Water System Department, we inspected the 30 inch diameter reinforced concrete sanitary sewer line that connects with the Rubes Creek Pump Station as part of the Noonday Creek Water Reclamation Facility.

In the mid 1980's, Cobb County, a northern suburb of Atlanta, did research in the area of internal corrosion of sewer pipe.

The Engineering Department picked a variety of coating systems and tried them in the most aggressive areas that they could find in their sewers. One of the systems chosen was Madison's 100% solids polyurethane coating.

The pipe was installed during the spring of 1990. The dry cast concrete pipe was manufactured and internally coated with 40 mils (1,000 microns) of Madison's polyurethane coating at the Atlanta area plant of CSR Hydro Conduit. The conditions to which the line was exposed were, in the words of one design engineer, "as bad as it gets....anywhere".

High sewage sulphate content resulted in high levels of hydrogen sulfide (H_2S) production. The low flow rate of the sewer line at this point, just before its entry into the treatment plant, gave the bacteria ample time to metabolize the H_2S gas into sulfuric acid. The pH on the crown of the pipe was estimated to be between 1 and .5 pH.

In addition, the low flow rate meant the sewer pipes were less than half full much of the time. Therefore, the flow could never wash away the acid or the acid producing bacteria. Finally, the line took input from some nearby industries and therefore regularly saw elevated effluent temperatures. All of these conditions created a very tough environment that would be expected to limit a coating's service life. The pipe was inspected almost 6 years after the initial installation. The internal coating was found to be in excellent condition without damaged or deteriorated areas.

Many coatings tested in the past never made it further than the first year of service. Madison's coatings are still performing today. And that's not a walk in the park.



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