

Spa Inspection/Leak Detection Report

Inspection Date

June 24, 2021

Pool Located at

280 Mahoney Dr. Telluride, CO 81320

Prepared For

Lulu City Condominiums HOA

&

Rick McBreen

Pool Spa Specialties

Inspection & Report By

David Smith, Owner/Operator
(970)201-6962

Job Assignment and Background Information

The year built, and the timing of subsequent repairs and abandonment was not available at the time of inspection. Significant preparation was needed prior to inspection and pressure testing. The decking was removed from over the spa, making it accessible for a preliminary inspection. Years of dirt running into the spa coated it and in places it was becoming like concrete. I believe some of it was concrete, as even the skimmer had been filled with concrete which was subsequently chipped out for pipe testing. In addition, the pipe covers (in the spa) had been plastered over and needed chipped out so the pipes can be properly sealed for pressure testing. The pipes themselves contained pockets of a septic sludge material that required flushing out for the most accurate inspection results. Accessing all pipes in the equipment room required the removal of stored material and the existing pool filter, as it was built over pump supply piping. Inspection and testing is intended to guide decisions regarding refurbishment or replacement.

Inspection Summary

Several pipes near the spa were inspected with a camera after flushing. The visual condition of the several pipes were consistent, and poor enough that I did not spend the time inspecting them all. Since the pipes passed pressure testing, I was not attempting to find a catastrophic break, but was looking for signs of binding, out-of-round pipe, excessive wear, and chemical deterioration. There were micro-cracks and significant deterioration of the pipe at fittings, most likely due to a combination of age and chemical deterioration. Some of the pipe had a biological slime that was not removed with flushing. This slime could be concealing leaks not found with the pressure test. Other parts of the pipe appeared very brittle.

I normally see chemical deterioration where chlorine dosing or water chemistry was out of line for a significant period. In this case, I believe the hydrogen sulfide and other acid gases in the black septic material that was in the pipe may have taken a toll on the glued joints and exposed ends of the flex pipe. The joints and the flex pipe had a very brittle appearance. Although the pipes passed a pressure test in these conditions, there is no guarantee that they won't start leaking after some additional use and wear. Pictures are included here that show the conditions I am referring to. My gut feeling is that the pipes should not be trusted as replacing or repairing leaks after the project completion would not be cost effective.

Feel free to contact me with any questions.

Regards,

David Smith

(970)201-6962

APPENDIX A Pipe Testing

Determining what pipe did what in the equipment room was determined as a matter of course in performing the pressure testing, although their purpose should be re-confirmed prior to replumbing the spa. In particular, two separate banks of jets are connected by shared air supply piping inside of the spa's concrete shell. Designating one of the pipes as the air supply pipe is only a best-guess at this time. Also, one pipe holds pressure with no plugs in the spa. We don't know what this pipe was for, but it seems abandoned and is not required to operate the spa.

Return piping Pressure Test: PASS

Return ports were plugged to isolate and pressure test between the spa and the equipment room. The piping held 12psi with no signs of a leak.

Skimmer Piping Pressure Test: PASS

Skimmer inlet was plugged to isolate and pressure test between the spa and the equipment room. The piping held 12psi with no signs of a leak.

Main Drain Pressure Test: PASS

More chipping of plaster was required to get a good seal inside of the pipe, then the main drains (pump supplies) were plugged to isolate and pressure test between the spa and the equipment room. The piping held 12psi with no signs of a leak.

Jet Piping (2 banks plus connecting air supply piping)

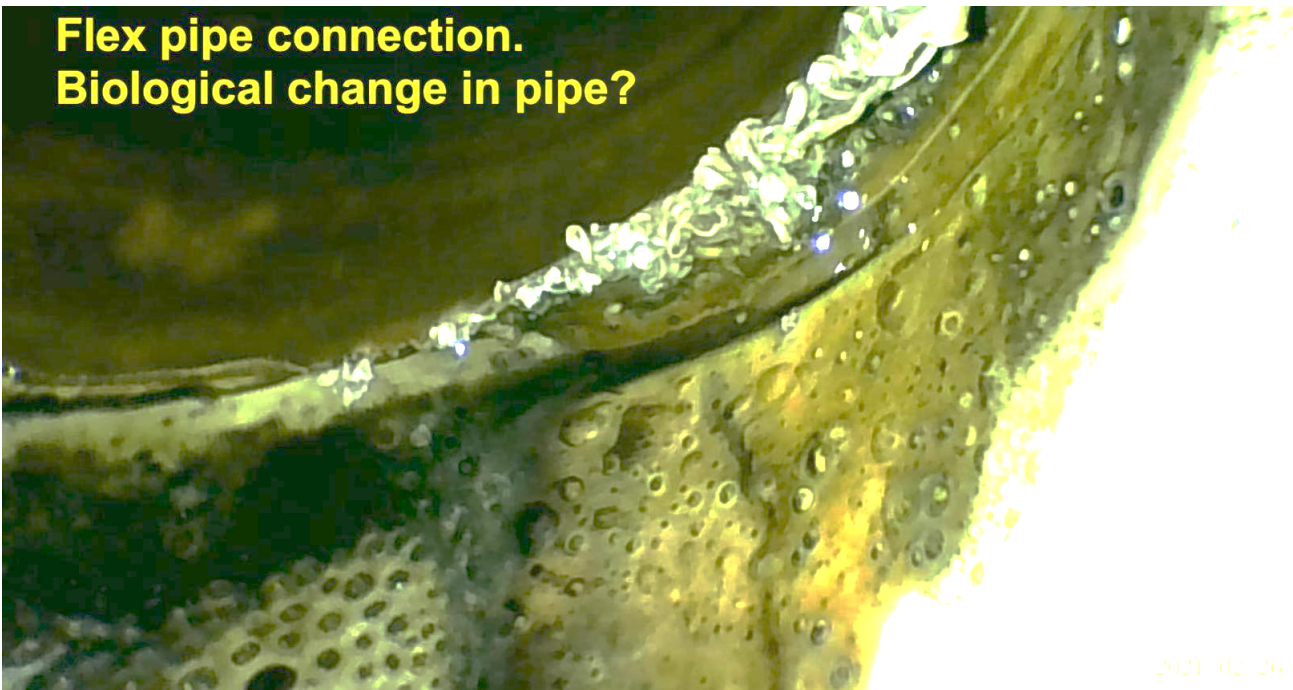
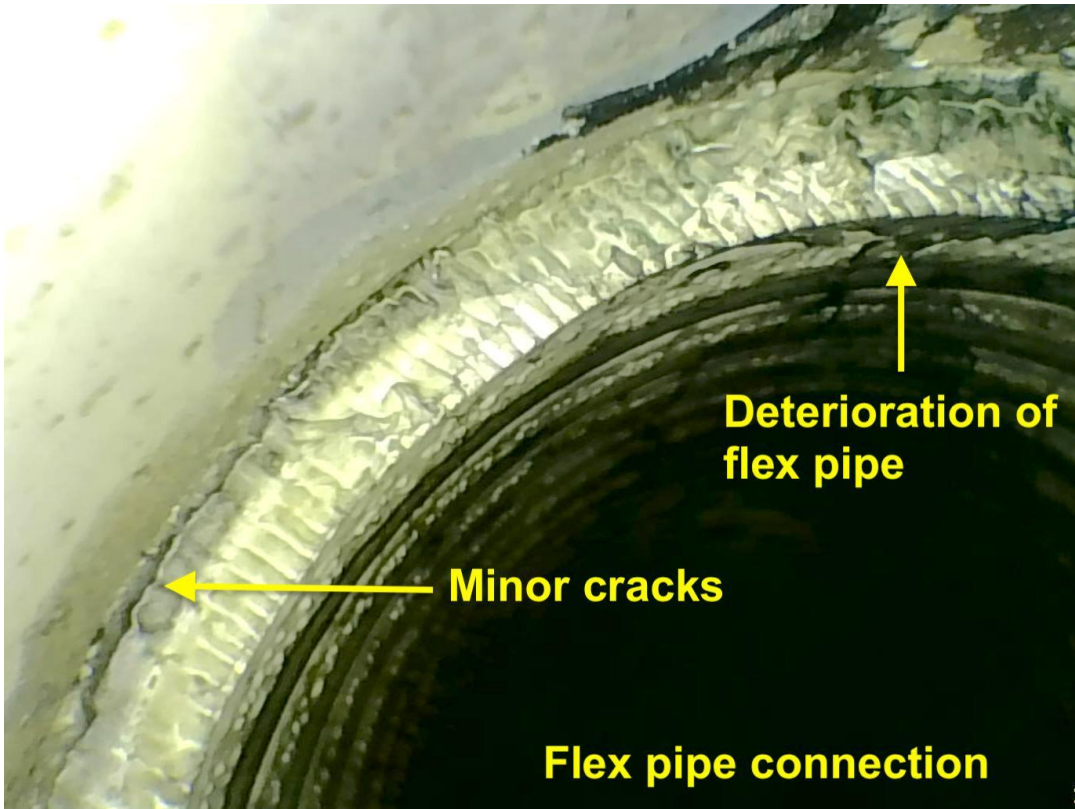
Pressure Test: Pass

Jet Piping was plugged to isolate and pressure test between the spa and the equipment room. The piping held 12psi with no signs of a leak.

Appendix B Pictures







Equipment Room Piping





Initial Condition





