December 2, 2016

Surface Creek Ditch & Reservoir Company
17528 Happy Hollow Road
Cedaredge, Co 81413

CWCB
Ben Wade
Project Manager
1313 Sherman Street Rm 721
Denver, CO 80203

Re: Final report for the Surface Creek Ditch & Reservoir Piping Project.

This piping project was contracted with the Pipeline Inspection Services of Nampa, Idaho. The project was scheduled for mid-September but upon arrival the company realized that the wrong sized liner was delivered. The project was rescheduled for a later date. After this initial problem the project went as planned.

This project was done on October 6, 2016. The project plan was to line the existing 24" diameter steel outlet pipe using a cured in place plastic pipe. The pipe was cleaned of any and all debris. The joints were sealed using a hydrophilic caulk. After all prep work was done the liner was inverted from upstream to downstream in the existing outlet pipe. The contractor then began the curing of the liner using steam. This process took about 2 hours and was done by all manufacturing specification.

Once the cool down temperature was met the excess liner was trimmed off. There was a small fracture but it was located in front of the hydrophilic seal so it did not appear to jeopardize the integrity of the project.

A video inspection of the interior of the liner was done. There were a few wrinkles near the upstream end but otherwise it was smooth and had no flaws. All tests done by the engineer have good results.

The engineer concluded at the end of the project that this liner will increase the expected service life of the outlet pipe. All previous concerns by the State Dam Safety Engineer were addressed.

This project was started and completed on the same day. Attached are some photos taken during the lining process.

Thank you,

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Hydrophilic seal in position at the upstream end of the existing outlet pipe.

Liner being deployed from a pallete through the shooter and being inverted.

Liner inserted and inverted from upstream end using compressed air.

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Downstream end of liner. Hoses are provided for steam venting allowing transmission through the entire length of the liner.

Installation complete and curing begins

Trimming begins at the upstream end.

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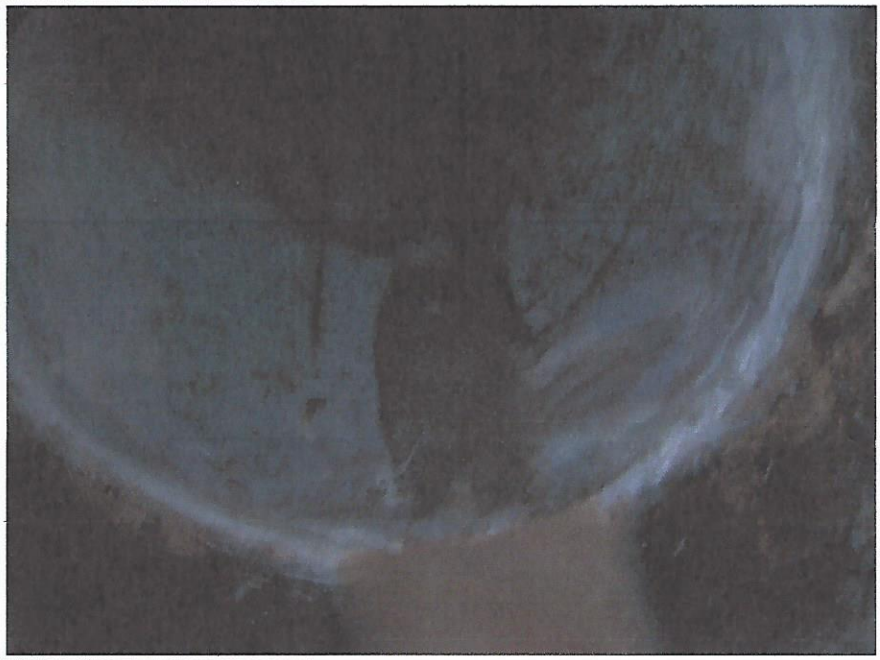
Fracture of liner occurred around the circumference at the transition with the elbow in front of the hydrophilic seal.



Trimming and sealing complete at upstream end.

Relatively small wrinkles present in the crown of the pipe at the upstream end. Hydrophilic sealant applied to the area between the liner and the host pipe.

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Contractor sealing and cleaning joint at location of observed infiltration. No infiltration was present at this time.

Interior view of the liner terminus and the elbow at the upstream end.


View of open airvent near crown of pipe.

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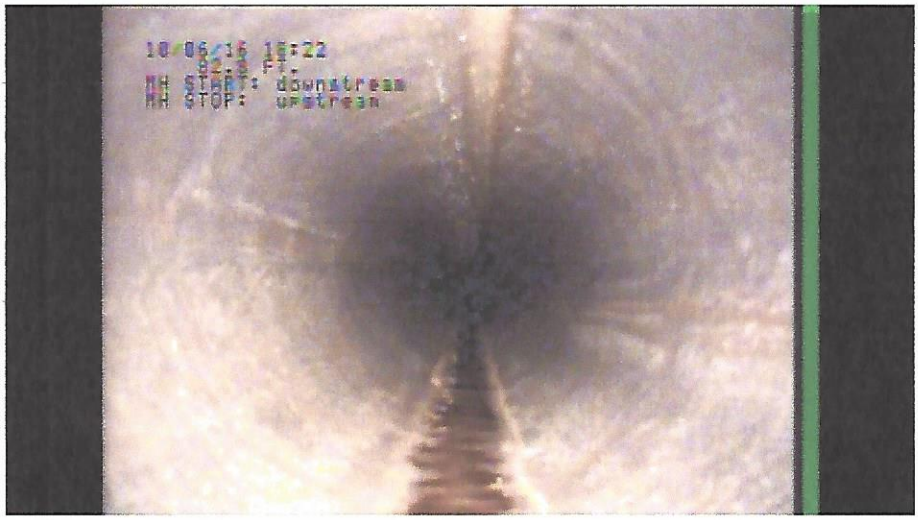
Interior view of upstream liner terminus shows small wrinkles in crown of pipe




General overview of the liner interior after installation