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Certificate of Test

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Project/Test Description: [redacted] contracted SES to perform Tension Testing of SDR-9 10" HDPE Pipe Connections produced and installed by Boyd Tech Inc. Three samples were tested to determine maximum tension capacity.

Test Article: SDR-9 10" HDPE Pipe Connections by Boyd Tech Inc.

Test Equipment: SES L2000 Horizontal Load Frame
Load Cell – S/N: 139568
Displacement Transducers – S/Ns: 34080721, 39070651, 39100458

Procedure: Axial tension was applied to sample ends while monitoring applied force and displacement until ultimate failure was achieved. Prior to tension testing of Sample 1, SES's load frame was used to apply compression until pin was fully inserted into connection box while monitoring applied compressive force and sample displacement.

Results:

Sample	Maximum Compression Force Required for Assembly (lbf)	Maximum Applied Tension Force (lbf)	Failure Mode
S1	4,808	37,336	Connection Pull Out
S2	Not Tested	35,317	Connection Pull Out
S3	Not Tested	34,420	Connection Pull Out

Plots of the recorded test data are provided in Attachment 1. Plots of applied force vs. displacement and applied force vs. time are included for each sample.

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