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July 19, 2013

Mr. Peter Kenny Pacific Gas and Electric Company PG&E Applied Technology Services 3400 Crow Canyon Road San Ramon, CA 94583

Dear Peter:

This letter is to formally document the approval of the Shaw Pipeline Services tethered AUT system for PG&E's intended use for the evaluation of girth welds from the inside of line pipe. A system qualification test was performed and witnessed at Shaw's facilities in Houston, TX on July 8th, 2013.

The qualification test involved developing and approving a written AUT procedure and ultrasonic calibration block containing reflectors to insure sufficient coverage of the girth weld geometry. Additionally, two welded pipe samples were made using the same welding process and diameter as that of the welds to be examined in the field. The weld samples contained designated weld defects and imperfections at various locations around the pipe circumference. Once the weld samples were completed, they were X-rayed to validate the actual location and type of defect/imperfection imbedded in the welds.

The AUT system, after having been properly calibrated, scanned the two weld samples and evaluated the detected imperfections. Results of the AUT scans were then compared to the results of the defect/imperfection types and locations that were shown in the X-rays. The sensitivity of the AUT system was then readjusted and the welds were rescanned. It was ultimately determined that the AUT system is capable of detecting and discriminating defect/imperfection type and location within the girth weld samples. Therefore, approval of Shaw's tethered AUT system is hereby given for PG&E's intended use for the evaluation of girth welds from the inside of line pipe.

Let me know should you require any additional information concerning this subject.

Respectfully,

and J. Culterter

David L. Culbertson President ASNT Level III – 2820 ACCP Professional Level III

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cc:

Blake Braswell

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