

GEOSCIENCES AND ENGINEERING DIVISION NONCONFORMANCE REPORT

Project No. 20.06002.01.262

NCR No. 2005-36

PART 1: DESCRIPTION OF NONCONFORMANCE

AC Watt Transducer (Model: Ohio Semitronics PC5-103D, Serial Number: 03080279, Asset Number: 010467). Item was found to be out of tolerance per Certified Measurements, Inc. (subcontractor to SwRI Cal. Lab.) during a normally scheduled calibration. The unit was adjusted and returned within tolerance.

Initiated by: Don Bannon Date: 31Oct05

Action Required by: Chandrika Manepally Response Due Date: 14Nov05

PART 2: PROPOSED DISPOSITION AND CORRECTIVE ACTION

Disposition: The data obtained from this sensor (one of four in the tests) is used to set boundary conditions for the physical test and the computer model of the test. The data obtained from this sensor are acceptable as-is with respect to the physical test. The data obtained from this sensor are acceptable with respect to the computer model efforts with the following stipulation. The calibration results must be recorded in the lab notebook and communicated to the analysts so that the analysts can assess the impact of having a power level that is approximately 2% lower than the nominal set point. The remaining three sensors were found to be operating within the calibration limits; so it is expected that the impact of this one out-of-tolerance sensor on the overall computer model results will be small compared to other sensor and model uncertainties.

Basis of Disposition: The power transducer was found to be out of tolerance in the ranges 40 W through 100 W. At 40 W, error is 2%; 60 W, error is 2.066%; 80 W, error is 2.175%; 100 W, error is 2.31%. Instrument was used to monitor power level and variability during an experiment. Measurements obtained using instrument are used to scale data applied to modeling software. The power transducer is used to specify the desired power level for a given test setup and to coordinate with the computer model of the test conditions. It is not known precisely when the power sensor went out of calibration; however, the computational modeling effort can be adjusted to accommodate the possibility that the power level to the affected heater was 2% greater than expected.

Action to Correct Nonconformance: The power transducer was adjusted and recalibrated. This transducer will continue to be included on the calibration recall list. The calibration of the power transducer will be checked at the conclusion of the next test (scheduled to end no later than March 2006). If the sensor is found to be out of tolerance at that time, it is recommended that it be removed from service.

Target date for completion: 14Nov05

Proposed by: Chandrika Manepally *MCA* Date: 11/11/05

PART 3: APPROVAL

Manager: *Gordon Wittmeyer* Date: 11/13/2005

Director of QA: *Al Bued* Date: 11/14/05

Comments/Instructions:

PART 4: CLOSE OUT

Comments: *No additional action necessary.*

Verified by: *Al Bued* Date: 11/14/05

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