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QUALITY ASSURANCE

002912 AUG SURVEILLANCE REPORT

PROJECT NO.: Mechanical Testing of Tuff
REPORT NO.: 90-010
PAGE 1 OF 1

SURVEILLANCE SCOPE: Monitoring a Uniaxial Compressive strength test for compliance with QA Program.

REFERENCE DOCUMENTS:

STARTING DATE: August 20, 1990
ENDING DATE: August 20, 1990

QA REPRESENTATIVE: Dr. James G. McCray

PERSONS CONDUCTING TEST / EXAM / ACTIVITY: Bob Armstrong and Farid Abdul conducted a Uniaxial Compressive Strength Test for Young's Modulus and Poisson's Ratio Determination. Dr. P.H.S.W. Kulatilake was an observer.

SATISFACTORY FINDINGS:

Sample No. 25.1.1-U1 was compressive fail tested utilizing a calibrated Versa Tester and a Dynamic Test System 447 Servo Controller. Approximate control of the compression loading rate was done utilizing an uncalibrated CT-500 Concomp monitor. This seemed satisfactory as long as no concomp data was utilized in analysis. The load rate was about 25 psi per second. The test was successfully executed with both numerical and graphical data results.

UNSATISFACTORY FINDINGS: None

NONCONFORMANCE REPORT NO.: None

ATTACHMENTS: None

RECOMMENDATIONS / ACTIONS: The Concomp CT-500 be calibrated to insure no inadvertant use of invalid data.

APPROVED:
CENTER DIRECTOR OF QUALITY ASSURANCE
DATE: 8/27/90

DISTRIBUTION:
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M E M O R A N D U M

TO: Q A Director
Center for Nuclear Waste Regulatory Analyses

FROM: P.H.S.W. Kulatilake *Kulatilake*
Associate Professor, Mining & Geological Engineering

DATE: September 20, 1990

SUBJECT: Response to Report No: 90-010 - Monitoring a Uniaxial
Compressive Strength Test for Compliance with QA Program

PROJECT TITLE: MECHANICAL CHARACTERIZATION OF WELDED TUFF

In performing the uniaxial compressive strength test, the Concomp CT-500 was used with Versa Tester to set and control the loading rate.

According to ASTM designation D2938-86, the loading rate should be applied continuously and without shock to produce an approximately constant rate of load or deformation such that failure occurs within 5 to 15 min. of loading. The tested sample failed around 12 min.

The loading rate is not used in calculating any of the deformation or strength parameters.

Due to the above reasons, I feel that calibration of the Concomp CT-500 is not really necessary.

PHSW/etn

pc: Dr. J.G. McCray, QA Representative, U of A
Dr. A. Chowdhury, Element Manager, CNWRA
Dr. J.J.K. Daemen
file

*Reply to recommendations/
Comments on Surveillance
Report 90-010.
Reviewed and concurred.
ReBuil 9/24/90*

