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CENTER FOR NUCLEAR WASTE REGULATORY ANALYSES
QUALITY ASSURANCE
SURVEILLANCE REPORT

PROJECT NO.: 5702-600 & 5704-030 series | REPORT NO.: 95-11 | PAGE 1 OF 1

SURVEILLANCE SCOPE: Review of Repository Design, Construction, and Operation and Rock Dynamics Experiments and Equipment

REFERENCE DOCUMENTS: Quality Requirements Application Matrix; QAP-001 Scientific Notebook Control; CQAM Ch. 12, Control of Measuring and Test Equipment; TOP-012, Identification, Control Storage, Handling, Shipping, and Archiving of Samples.

STARTING DATE: 2 November 1995 ENDING DATE: 9 November 1995

QA REPRESENTATIVE: Mark R. Ehnstrom MRE

PERSONS CONDUCTING TESTIEXAMIACTIVITY: Asadul Chowdhury, Simon Hsiung, Ronald Green, Allan Pickens, Linda Hearon, Walter Smithson, Sitakanta Mohanty

SATISFACTORY FINDINGS: Surveillance activities were performed in the areas of Repository Design, Construction, and Operations (RDCO), and Rock Mechanics. The surveillance consisted of reviewing the associated scientific notebooks which documented project experiments and reviewing critical equipment certification documentation for equipment used during project activities. Attachment 2 identifies which equipment was reviewed during the surveillance. Scientific notebooks were reviewed and they were compliant with procedural requirements. Among the specific paragraphs and requirements reviewed during the surveillance were:

QAP-001 Para. 3.3 and 3.5:	Initial and in-process entries were recorded and very clearly described the activities being performed.
QAP-001 Para. 3.6:	The specific items identified under Scientific Notebook Protocol were being followed. This included corrections, the inclusion of charts/graphs/photos and other forms of data.
CQAM Section 12, Para. 12.4.2(3):	Scientific Notebooks referenced the results of calibrations before and after use. Calibration tags were observed on calibrated items showing the required information.

UNSATISFACTORY FINDINGS: None

NONCONFORMANCE REPORT NO.: N/A

ATTACHMENTS: See Attachment 2 showing items reviewed during the surveillance.

RECOMMENDATIONS/ACTIONS: See Attachment 1 for a list of recommendations.

APPROVED: _____
CENTER DIRECTOR OF QUALITY ASSURANCE

DATE: 11/10/95

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Attachment **1**
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Recommendation No. 1:

CQAM Section 12, Paragraph 12.6(a) requires equipment and standards to be calibrated in accordance with documented TOPs or instructions. The surveillance found that on June 30, 1995 a Keyence Laser Scanner, Serial No. LC2320, was verified for measurements in distance from table, parallelism to table, and perpendicularly by the SwRI Machine Shop inspector (see Attachment 3). This activity was performed at that time for information only. Future consideration should be given to developing a calibration procedure for this device and issuing an actual certificate of calibration when this information is provided.

Recommendation **No.** 2:

TOP-012 titled "Identification, Control Storage, Handling, Shipping, and Archiving of Samples," Paragraph 4.2.1 requires "large samples such as plates, rock samples, and containers of solutions, shall be marked by indelible markers, indentation, or tags." It was observed in the Division 04 High Bay that rock samples located under and near the Keyence Laser Scanner were not physically marked or identified. Although these samples are being used for the development of fracture techniques, and the data will not be included in any report to be officially submitted, care should be exercised in always maintaining a minimum amount of sample traceability.

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Attachment **2**
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Scientific Notebooks Reviewed: CNWRA 074 and 106

Equipment checked:

Model	Part No.	SwRI ID No.	Calibrated By
Gilmont 150mm	gf-5541-2417	53422	JM Test Systems (on the SwRI Approved Suppliers List)
Gilmont 150mm	gf-5541-2417	53423	JM Test Systems (on the SwRI Approved Suppliers List)
J-W Scientific	200-3637	53424	JM Test Systems (on the SwRI Approved Suppliers List)

Load Cells				
Model	Serial No.	Procedure	Tech.	Cal Date/Due
Interface 1220-AJ	48940	ASTM-E4	TEM	2/5/95-2/5/96
Interface 1220-AJ	48924	ASTM-E4	TEM	2/6/95-2/6/96
Reviewed certification documentation from the National Standards Testing Laboratory for the Morehouse Proving Ring No. **81**1 used for the certification of the load cells.				

Keyence Laser Scanner, *SIN* No. LC2320
Asymtek Automove 102 Verified on 6130195 by Walter Smithson/SwRI.
Reference SwRI Document (Attachment 3) showing measurements taken.

ATTACHMENT 3

SOUTHWEST RESEARCH INSTITUTE

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06-30-95

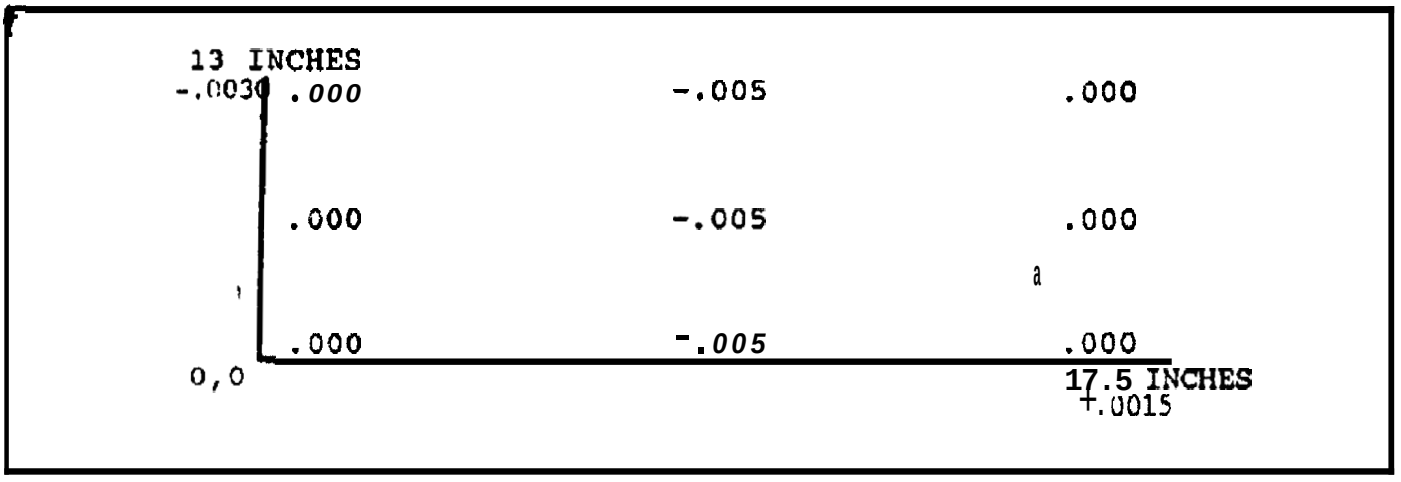
TO WHOM IT CONCERNS:

KEYENCE LASER SCANNER (LC2320) WAS VERIFIED FOR MEASUREMENTS IN DISTANCE FROM TABLE, PARALLELISM *TO* TABLE, AND PERPENDICULARLY OF BARS, MOUNTED TO TABLE, TO TRAVEL OF SCANNER.

TIR OF SCANNER TO BARS: X AXIS + .0015 IN 17.5 INCHES
Y AXIS - .0030 IN 13 INCHES
Z AXIS + .0002 IN 1 INCH
0,0 AT BOTTOM LEFT HAND SIDE OF BARS

PARALLELISM OF SCANNER TO TABLE AND SCANNER MEASUREMENTS TO TABLE:

TOTAL INDICATOR READING FROM TABLE TO MOVEMENT OF SCANNER



WALTER L. SMITHSON
IQA SR. INSPECTOR

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