



CENTER FOR NUCLEAR WASTE REGULATORY ANALYSES QUALITY ASSURANCE SURVEILLANCE REPORT

PROJECT NO.: 20.06002.01.321

REPORT NO.: 2004-19

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SURVEILLANCE SCOPE: Corrosion Science and Process Engineering

REFERENCE DOCUMENTS: QAP-002, Review of CNWRA Documents, Reports and Papers; QAP-004, Surveillance Control; QAP-007, Professional Personnel Qualification, QAP-017, Drawing Control, QAP-019, control of Measuring and Test Equipment

STARTING DATE: 10/19/2004

ENDING DATE: 10/22/2004

QA REPRESENTATIVE: Mark R. Ehnstrom 

PERSONS CONDUCTING TEST/EXAM/ACTIVITY: V. Jain, D. Dunn

SATISFACTORY FINDINGS: After reviewing the Quality Requirements Application Matrix for the Container Life and Source Term Key Technical Issue, a discussion was held with V. Jain and D. Dunn to start the surveillance. The discussion concentrated on activities within the group and possible areas for the surveillance.

During the surveillance the following documents were reviewed and were compliant to QAP-002 requirements:

- Coupled Multielectrode sensor for Localized Corrosion
- Microstructural Analysis and Mechanical Properties of Alloy 22
- Chemical Speciation, Using Thermodynamic Modeling, during a Representative Loss-Of-Coolant Accident Event
- Microbially Influenced Corrosion Studies of engineered Barrier System Materials

The report titled Microstructure Analyses and Mechanical Properties of Alloy 22 listed the use of two subcontractors, An-Tech Labs from Houston TX who provided charpy V-notch impact testing results and Westmorland laboratories from Youngstown, Penn. who performed tensile and fracture toughness measurements. The SwRI Approved Suppliers List was reviewed and found that An-Tech is listed as a "Nuclear Qualified" supplier and Westmorland is listed as "Nuclear Accepted."

The Professional Personnel Qualification files for the following consultants were reviewed and found to be complete and accurate:

Geri Becker
Dan Benac
Stuart Birnbaum
T. Calvin Tszeng

Surveillance was performed in the Building 57 laboratories to capture serial numbers of critical measuring and test equipment currently being used in testing activities. Attachment A identifies the equipment being used along with other information. Calibration tags were located on the equipment identifying the asset/serial number, calibration date and due date, and identification of the person performing the calibration. The equipment reviewed in the laboratory was found to be within calibration.

Software used by the group includes ESP V 6.6, ESPCB V 7.0, Stream Analyzer V1.2, Corrosion Analyzer V2.3, ThermoCalc V N, and Dictra V 21. These codes are currently maintained on the CNWRA Controlled List of Engineering and Scientific Software and have been validated.

A review of drawings issued since the last surveillance found them to be compliant to procedural requirements. Attachment A identifies the drawings reviewed.

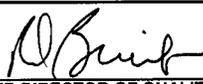
Scientific notebooks were reviewed as part of the recent 6-month recall.

UNSATISFACTORY FINDINGS: None

NONCONFORMANCE REPORT NO.: N/A
CORRECTIVE ACTION REQUEST NO.: N/A

ATTACHMENTS: Attachment A identifying equipment currently being used in testing activities and drawings reviewed during the surveillance.

RECOMMENDATIONS/ACTIONS: None

APPROVED: 
CENTER DIRECTOR OF QUALITY ASSURANCE

DATE: 10/28/04

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QA Records
CNWRA QA DIRECTOR
ORIGINATOR
PRINCIPAL INVESTIGATOR: N/A
MANAGER :B. Sagar and D. Turner

Attachment A Serveillance Report 2004-19

<u>Drawing Number</u>	<u>Drawing Title</u>
20.06002.01.081.012	Corrosion Test Cell Luggin Probe
20.06002.01.081.013	Teflon Top Lid
20.06002.01.081.014	Teflon Bolt
20.06002.01.081.015	Glass Cylinder
20.06002.01.081.016	Teflon Bottom Lid
20.06002.01.081.017	Teflon fitting for Bottom Lid
20.06002.01.081.018	Alloy 22 Specimens
20.06002.01.081.019	Teflon Bolt Top
20.06002.01.081.020	Teflon Bolt Bottom
20.R9471-001	Target
20.R9471-002	Substrate
20.R9471-003	Target

Measuring and Test Equipment

<u>Serial/Asset Number</u>	<u>Manufacturer/Type</u>	<u>Calibration Date</u>	<u>Calibration Due Date</u>
005432	Thermometer	1/8/2004	12/8/2004
008109	Thermometer	7/14/2004	1/14/2004
002792	Keathly Electrometer	9/13/2004	3/15/2005
001044	Keathly Electrometer	4/27/2004	10/27/2004
66105	Potentiostat	5/4/2004	11/4/2004
004989	Thermometer	6/14/2004	1/14/2005
2345	Ohaus Balance	7/15/2004	1/15/2005
007645	Fluke Voltmeter	1/15/2004	1/15/2005