



**GEOSCIENCES AND ENGINEERING DIVISION
QUALITY ASSURANCE
SURVEILLANCE REPORT**

PROJECT NO.: 06002.01.322

REPORT No.: 2006-10

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SURVEILLANCE SCOPE: Corrosion Science and Process Engineering

REFERENCE DOCUMENTS: AP-001, Evaluation of Potential for Conflict of Interest; QAP-001, Scientific Notebook Control; QAP-004, Surveillance Control; QAP-005, Quality Indoctrination and Training; QAP-007, Professional Personnel Qualification; QAP-013, Quality Planning; and QAP-019, Control of Measuring and Test Equipment

START DATE: 05/08/2006

END DATE 05/26/2006

QA REPRESENTATIVE:
Mark R. Ehnstrom *MRE*

PERSONS CONDUCTING ACTIVITY: V. Jain, Y. Pan, L. Yang, X. He, K. Chaing, S. Painter, and B. Derby

SATISFACTORY FINDINGS:

Quality Requirements Application Matrix (QRAM) forms for the Corrosion Science and Process Engineering Integrated Subissues (ISI) were reviewed. The information contained on the QRAM was used as a starting point for each interview conducted during the surveillance. Information contained on the QRAMs was found to be accurate in identifying the applicable portions of the quality program to be applied. The Corrosion Science and Process Engineering ISIs include, "Performance Confirmation" and "Degradation of Engineered Barriers." Each effort is discussed below:

Performance Confirmation

Current activity is directed towards xFlo code development. At this time xFlo development is a low priority item and essentially has not progressed out of the planning stage.

Degradation of Engineered Barriers

The investigation of dissimilar metal coupling continues. When the initial investigation is complete, additional activities will be performed at elevated temperatures up to 220 deg. C. Data for these investigations is recorded in Scientific Notebook 744.

Three long duration investigations are currently being performed. An investigation on how dust effects alloy 22 has just started and the investigation on the verification of preferential decomposition of nitrate continues. One additional investigation will be performed at a longer time duration to try and determine why the preliminary corrosion rates observed at the CNWRA on alloy 22 are significantly higher than those observed by the Department of Energy. Measuring and test equipment for these investigations was reviewed and found to be satisfactory. The equipment and other information relative to the investigations is currently documented in Scientific Notebook 771.

Reviews performed on Scientific Notebooks 771, 774, and 675, used to record microbiological investigations, were reviewed and found to be compliant with procedural requirements.

Critical measuring and test equipment used in laboratory experimentation was reviewed for acceptability and is identified on Attachment 1. The equipment was properly identified and was

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<p>SATISFACTORY FINDINGS (continued):</p> <p>within each calibration cycle.</p> <p>Surveillance was performed on chemicals stored in Building 57. Four 1-liter bottles of Hypochlorite, used for cleaning microbiological test equipment, was identified with an expired certification tag. The Hypochlorite was removed from the cabinet and segregated to another cabinet in the laboratory. The only other items with expiration dates are the different pH buffers. These buffers were all within current expiration dates.</p> <p>It was noted that during the surveillance an effort had been made to close out Scientific Notebooks. Approximately 15 notebooks have been closed and archived by staff since the last surveillance. Timely closeout and archival of information contained in Scientific Notebooks is very important and this effort should be commended.</p> <p>Personnel Qualification records were reviewed for GED staff contacted during the surveillance and for consultants S. Birnbaum and J. Becker. All records were determined to be acceptable.</p>		
UNSATISFACTORY FINDINGS: None		
NCR NO.: N/A	CAR NO.: N/A	
ATTACHMENTS: Attachment identifies the critical measuring and test equipment reviewed during the surveillance.		
RECOMMENDATIONS/ACTIONS: None		
APPROVED: <u><i>V. Jain</i></u> DATE: <u>5/31/06</u>	DISTRIBUTION: ORIGINAL—QA RECORDS DIRECTOR, QA ASSISTANT DIRECTOR: S. Mohanty MANAGER: V. Jain PRINCIPAL INVESTIGATOR: Y. Pan	

Attachment to Surveillance Report 2006-SR-010

Measuring and Test Equipment reviewed during the surveillance:

Item	Asset/Serial No.	Cal. Date	Cal Due Date
Dual Thermometer	011674	12/7/05	6/7/06
Dual Thermometer	011746	7/25/05	7/25/06
Keithly 614	0555368	3/2/06	9/1/06
Keithly 614	007087	7/12/05	7/12/06
Vaisala Temp/Hum. Probe	010699	4/11/06	4/11/07
Torque Screwdriver	010443	5/1/06	11/1/06
Torque Screwdriver	009202	4/4/06	10/4/06
Torque Wrench	011740	7/22/05	7/21/06
Fluke 54 Thermometer	012159	4/17/06	4/17/07
Thermometer	008109	1/12/06	7/12/06
Thermometer	007303	1/9/06	7/7/06
Thermometer	004986	3/2/06	9/1/06
Thermometer	007170	9/9/05	9/8/06
Thermometer	011745	7/25/05	7/25/06
Thermocouple	012151	4/5/06	4/5/07
Thermocouple	009261	4/4/06	4/4/07
Thermocouple	012154	4/5/06	4/5/07
Ohaus Balance	002345	1/5/06	7/5/06
Sartorius Balance	008780	5/9/06	11/9/06