



Department of Energy

Washington, DC 20585

QA: L

OCT 09 1997

L. D. Foust, Technical Project Officer
for Yucca Mountain Site
Characterization Project
TRW Environmental Safety Systems, Inc.
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ISSUANCE OF SURVEILLANCE RECORD M&O-SR-97-056 RESULTING FROM
THE OFFICE OF QUALITY ASSURANCE (OQA) SURVEILLANCE OF THE
CIVILIAN RADIOACTIVE WASTE MANAGEMENT SYSTEM MANAGEMENT
AND OPERATING CONTRACTOR (CRWMS M&O)/FRAMATOME
TECHNOLOGIES INC. (FTI)

Enclosed is the Record of Surveillance M&O-SR-97-056 conducted by the OQA of
CRWMS M&O/FTI facility in Lynchburg, Virginia, September 15-17, 1997.

The purpose of the surveillance was to assess the implementation of CRWMS M&O
design control procedures as they relate to the design process.

Based on document reviews and personnel interviews, it has been determined that the
overall effectiveness and adequacy of the design control process and related technical
document preparation is in accordance with the Office of Civilian Radioactive Waste
Management and CRWMS M&O quality assurance procedures and is considered
satisfactory. No deficiencies or recommendations were generated as a result of this
surveillance.

This surveillance is considered completed and closed as of the date of this letter.
A response to this surveillance record is not required.

If you have any questions, please contact either James Blaylock at (702) 794-1420 or
Patrick V. Auer at (702) 295-2665.

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PDR WASTE PDR
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OQA:JB-0052

Enclosure:
Surveillance Record M&O-SR-97-056

James Blaylock
Donald G. Horton, Director
Office of Quality Assurance



Rec'd: WMSS/PAHL

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OCT 09 1997

cc w/encl:

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OFFICE OF CIVILIAN
RADIOACTIVE WASTE MANAGEMENT
U.S. DEPARTMENT OF ENERGY
WASHINGTON, D.C.

Surveillance No. M&O-SR-97-056

QUALITY ASSURANCE SURVEILLANCE RECORD

SURVEILLANCE DATA

1. ORGANIZATION/LOCATION: Civilian Radioactive Waste Management System Management and Operating Contractor (CRWMS M&O) / Framatome Technologies Inc. (FTI), Lynchburg, Virginia	2. SUBJECT: Design Control Process	3. DATE: September 15-17, 1997
4. SURVEILLANCE OBJECTIVE: Assess the implementation of CRWMS M&O design control procedures as they relate to the design process.		
5. SURVEILLANCE SCOPE: Review documentation and interview personnel for activities related to development of Criticality Analysis Methodology Technical Report and implementation of CRWMS M&O procedures for design control. Also, procedure availability, management control/oversight and training to appropriate design control procedures will be reviewed.		6. SURVEILLANCE TEAM: Team Leader: Patrick V. Auer Additional Team Members: N/A
7. PREPARED BY: Patrick V. Auer <i>Patrick V. Auer</i> 8/6/97 Surveillance Team Leader Date	8. CONCURRENCE: <i>James Blaylock</i> Donald G. Horton 8/7/97 Director, OQA Date	

SURVEILLANCE RESULTS

9. BASIS OF EVALUATION/DESCRIPTION OF OBSERVATIONS On September 15 through 17, a surveillance was conducted at CRWMS M&O/FTI facility in Lynchburg, Virginia, to assess the implementation of CRWMS M&O design control procedures as they relate to the design process and activities related to development of the Criticality Analysis Methodology Technical Report. Also, a review of compliance to applicable training, personnel qualification, and document control procedures, as well as management control/oversight of the design activities was performed. See page 2	
10. SURVEILLANCE CONCLUSIONS: Based on document reviews and personnel interviews, it has been determined that the overall effectiveness and adequacy of the design control process and related technical document preparation is in accordance with the Office of Civilian Radioactive Waste Management and CRWMS M&O quality assurance procedures and is considered satisfactory. No deficiencies or recommendations were generated as a result of this surveillance.	
11. COMPLETED BY: Patrick V. Auer <i>Patrick V. Auer</i> 9/29/97 Surveillance Team Leader Date	12. APPROVED BY: <i>James Blaylock</i> Director, OQA 10/1/97 Date

9. BASIS FOR EVALUATION/DESCRIPTION OF OBSERVATIONS: (Cont'd)

DESIGN CONTROL

The following design products were discussed with appropriate engineering personnel and were reviewed for adequate assumptions, selection of inputs, software controls, use of To Be Verified/To Be Determined system where applicable, and design method, as well as compliance to applicable design control procedures.

Document Type	Title	Number	Applicable Procedure	Status
Technical Document	Summary Report of Commercial Reactor Criticality Data for Crystal River Unit 3	B00000000-01717-5705-00060, Rev. 0	QAP-3-5, Rev. 7	Completed
Technical Document	Summary Report of Commercial Reactor Criticality Data for McGuire Unit 1	B00000000-01717-5705-00063, Rev. 0	QAP-3-5, Rev. 7	Completed
Technical Document	Summary Report of Commercial Reactor Criticality Data for Sequoyah Unit 2	B00000000-01717-5705-00064, Rev. 0	QAP-3-5, Rev. 7	Completed
Design Analysis	Criticality Consequence Analysis Involving Intact PWR SNF in a Degraded 21 PWR Assembly Waste Package.	BBA000000-01717-0200-00057, Rev. 0	QAP-3-9, Rev. 7	Completed

The QAP-3-5 technical documents contain nuclear industry data (e.g., Core Operation Reports, Depletion Data, Reload Reports, Fuel Assembly General Arrangements, Reload Startup Summary Reports, etc.) taken from Framatome Cogema Fuels (FCF) calculations in which proprietary information is removed from the data. The data is then organized into the CRWMS M&O technical document. The following data was verified to have been correctly translated from the FCF calculation file to the applicable technical document:

Technical Document	FCF Calculation Document	Data Reviewed
Summary Report of Commercial Reactor Criticality Data for Crystal River Unit 3	CR3 NEMO Depletion and State-Points High-Level Waste (HLW), FCF Document Number 32-1258296-00	-Axial Dimensions by Region for Mark-B4 Fuel Assembly -Boron Letdown Data for Crystal River 3 Commercial Reactor Criticality Depletion CR-3 Cycle 1A -Burnup and Thermohydraulic Feedback Parameters by Axial Node for Assembly 1A
Summary Report of Commercial Reactor Criticality Data for McGuire Unit 1	McGuire 1 NEMO Depletion and State-Points (HLW), FCF Document Number 32-1267111-00	-Horizontal View of Vessel Along Core Midplane -Axial Dimensions by Region for Westinghouse 17x17 Standard Fuel Assembly -Statepoint Data for McGuire Unit 1, Measured Critical Conditions
Summary Report of Commercial Reactor Criticality Data for Sequoyah Unit 2	Sequoyah 2 NEMO Depletion and State-Points (HLW), FCF Document Number 32-1267112-00	-Dimensions from Core Center to Outside Surface of Pressure Vessel -Sequoyah 2 Cycle 1 Fuel Assembly/Core Data -Axial Dimensions for Pyrex BPRAs for Westinghouse 17x17 Standard Fuel Assembly

MANAGEMENT CONTROL/OVERSIGHT

Oversight of the work being performed at FTI facilities in Lynchburg consists of this Office of Quality Assurance surveillance. Work is defined and controlled via FY 1997 Statement of Work dated 9/17/96, and subcontract change requests issued by CRWMS M&O/TRW. FTI/FCF is a CRWMS M&O teammate.

PERSONNEL TRAINING AND QUALIFICATION

Qualification and training records for the preparers, reviewers, and approvers of the four design documents listed above were reviewed. All records had been satisfactorily completed. Documentation reviewed included the following:

Individual	Verification of Education & Experience Completion Date	Position Description Approved	Read & Sign Training (Sample)		Project Orientation Completed
			Procedure	Completion Date	
C.W. Mays	7/13/95	7/11/95	M&O QAP-3-5, Rev. 7 M&O QAP-3-9, Rev. 7 OCRWM AP-16.1Q, Rev. 2	6/10/97 6/10/97 7/8/97	9/9/97
J. R. Worsham III	9/7/95	9/1/95	M&O NLP-3-15, Rev. 4 M&O QAP-3-9, Rev. 7 OCRWM AP-16.1Q, Rev. 2	6/13/97 6/13/97 6/13/97	9/9/97
L. B. Wimmer	4/7/94	8/10/97	M&O QAP-3-5, Rev. 7 M&O QAP-3-9, Rev. 7 OCRWM AP-17.1Q, Rev. 0	6/10/97 6/10/97 7/11/97	9/9/97
W. J. DeCooman	3/24/94	4/25/96	M&O QAP-2-0, Rev. 4 M&O QAP-3-9, Rev. 7 OCRWM AP-16.1Q, Rev. 2	7/16/97 7/16/97 7/16/97	9/9/97
D. A. Thomas	7/1/92	6/10/97	M&O QAP-3-5, Rev. 7 M&O QAP-3-9, Rev. 7 M&O NLP-3-15, Rev. 4	6/2/97 6/2/97 7/8/97	3/10/93

DOCUMENT CONTROL

During the surveillance, a distribution list of controlled documents for the Project Manager (Control #103595) and Engineer (Control #103171) were reviewed. The following sample of documents were verified to be current in the manuals:

Control #103595

M&O QAP-2-0, Rev. 4
M&O QAP-2-3, Rev. 8
M&O QAP-3-5, Rev. 7
M&O QAP-3-8, Rev. 7
M&O QAP-3-9, Rev. 7
OCRWM AP-16.1Q, Rev. 2
OCRWM AP-16.2Q, Rev. 2
OCRWM AP-16.3Q, Rev. 1
OCRWM AP-16.4Q, Rev. 0
OCRWM AP-17.1Q, Rev. 0

Control #103171

Mined Geologic Disposal System Design
Guidelines Manual, Rev. 2, ICN 6

PERSONNEL CONTACTED:

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