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**HEADQUARTERS QUALITY ASSURANCE DIVISION
OBSERVATION REPORT**

**EM-343 VITRIFICATION PROJECTS DIVISION
AUDIT NO. 93EA-SR-AU-01
OF THE DOE SAVANNAH RIVER FIELD OFFICE
DEFENSE WASTE PROCESSING DIVISION (DWPD) AND
WESTINGHOUSE SAVANNAH RIVER COMPANY (WSRC)**

**CONDUCTED AT AIKEN, SOUTH CAROLINA
MAY 3 - 7 AND 24 - 28, 1993**

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Observer

Date: 6/10/93

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1.0 INTRODUCTION

The OCRWM Office of Quality Assurance observed the EM-343 Vitrification Projects Division Quality Assurance Audit No. 93EA-SR-AU-01 of the DOE Savannah River Field Office Defense Waste Processing Division (DWPD) and Westinghouse Savannah River Company (WSRC). The combined DWPD and WSRC Quality Assurance Programs support High-Level Waste Vitrification (HLWV) activities.

The audit was conducted during the periods of May 3 through 7 and 24 through 28, 1993, in Aiken, South Carolina.

The function of the Defense Waste Processing Facility (DWPF) is to produce a high-level waste form product, including the borosilicate glass form and the canister, suitable for shipping to and ultimate disposal in a licensed geologic repository.

The DWPD is responsible for the construction and operation of the DWPF. WSRC is a subsidiary of Westinghouse Electric Corporation and is the management and operating (M&O) contractor for the DWPF.

The scope of this audit was to evaluate the adequacy and effectiveness of implementation of the Quality Assurance Program Descriptions for the DWPD (DOE-SR-1, Section A, March 7, 1993, and Section C, March 1, 1993) and WSRC (SW4-1.8, Rev. 6) as applied to HLWV activities at the DWPF. Additionally, implementation of corrective actions resulting from Audit No. 92EA-SR-AU-04 conducted during September 14 through 18, 1992, were evaluated for closure by the audit team.

2.0 OBJECTIVE

This report addresses the evaluation of the adequacy and effectiveness of the EM-343 audit process in determining the ability of the DWPD and WSRC to implement selected QA Program controls supporting HLWV activities.

3.0 AUDIT PARTICIPANTS

L. Wade, MACTEC	Audit Team Leader
J. Conway, EM-343	Audit Team Manager/Auditor
J. Allison, EM-343	Auditor/Technical Specialist
M. Cloninger, MACTEC	Auditor/Technical Specialist
S. Crawford, BDM/SAIC	Auditor/Technical Specialist
J. Flaherty, BDM/SAIC	Auditor/Technical Specialist
K. Grisham, EM-343	Auditor

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B. Jakubik, BDM	Auditor/Technical Specialist
J. LeVea, BDM/SAIC	Auditor
B. McClanahan, BDM/SAIC	Auditor
T. McIntosh, EM-343	Auditor
C. McKee, MACTEC	Auditor
N. Moreau, MACTEC	Auditor
T. Patterson, MACTEC	Auditor
L. Sirianni, BDM/SAIC	Auditor
B. Toro, BDM/SAIC	Auditor
B. Belke, NRC	Observer
B. Brient, NRC	Observer
K. Hooks, NRC	Observer
A. Mozhi, Weston/RW-3	Observer/Technical Specialist
T. Rodgers, CER/RW-3	Observer

4.0 REVIEW OF AUDIT PROCESS

The audit process was observed to determine the audit team's ability to adequately assess the implementation and effectiveness of the DWPD and WSRC QA Programs as applied to HLWV activities. Evaluation of the audit process was based on direct observations during interviews; discussions with the auditors and auditees; and reviews of the audit plan, checklists, and auditee documents. The OCRWM Observer found the audit team qualified to perform the audit. The team was thorough and professional in the manner that they conducted the audit. The audit was performed using checklists based upon DWPD and WSRC Quality Assurance Program Documents and implementing procedures. Deviations and observations identified during previous audit 92EA-SR-AU-04 were also reviewed in preparation for the audit.

Five Auditors/Technical Specialists were used on the audit team. Technical requirements were identified in those checklists prepared to evaluate the adequacy of Criteria 3, Design Control, and Criteria 19, Computer Software.

The audit team determined that the implementation of the DWPD and WSRC QA Programs was considered to be effective based on the deviations and observations identified during the audit. The OCRWM Observer generally agrees with this determination.

The audit team identified seven potential deviations in the areas of QA Program, procurement (2), procedures, special processes, nonconformances, and audits. In addition, thirty-two potential observations in the areas of organization; QA program (2); design control (4); procurement document control; instructions, procedures, and drawings; document control (2); control of purchased items and services (2); control of

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processes; test control (3); QA records; audits (9); and computer software (5) were identified. Remedial action was taken in the area of document control.

Overall, the OCRWM Observer considers the EM-343 audit process to have been generally effective in evaluating the adequacy and effectiveness of implementation of the DWPD and WSRC QA Programs for this audit. It is recommended that future audits use a more performance-based approach to provide a better assessment of overall QA Program effectiveness.

5.0 OBSERVER COMMENTS

5.1 The defensive, adversarial attitude displayed by EM-343 during this and previous audits does little to foster an acceptable working relationship with OCRWM. This condition has existed for nearly two years and shows little or no sign of improvement. The following examples are indicative of the situation:

- a) Observers had difficulty obtaining copies of Audit Concern Reports during EM Audit 93EA-SR-AU-01. It is essential that the Observers be provided the opportunity to review selected reports to evaluate the rationale for disposition.
- b) During both EM Audits 93EA-WV-AU-01 and 93EA-SR-AU-01, the decision of DCAR versus Observation was based solely on a consensus between the Auditor, ATL, and Audit Manager rather than upon procedural requirements. When challenged, the Observers were told that this practice was based upon past precedence and that there would be no further discussion.
- c) During OCRWM Audit HQ-93-02 of EM-343 activities, EM displayed an openly defensive and adversarial attitude to the extent that the NRC Observers were compelled to comment both at the postaudit meeting as well as in their written report.
- d) Information regarding the logistics of EM Audits 93EA-WV-AU-01 and 93EA-SR-AU-01 was not freely provided by the ATL to the Observers.

5.2 The various innuendoes directed towards the Observers during the course of the audit are considered to be unprofessional and completely inappropriate.

- a) During EM Audit 93EA-WV-AU-01 the Observers were not allowed to

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attend the audit team pre-postaudit meeting.

- b) When the NRC Observer from Southwest Research Institute was introduced to the audit team during EM Audit 93EA-SR-AU-01, his credibility and authorization to participate was challenged.
- c) Comments were periodically directed towards the OCRWM Observers regarding the use of their time.
- d) One of the NRC Observers had to leave the audit team pre-postaudit meeting prematurely due to being upset over the arrogance displayed by the ATL and Audit Team Manager.

5.3 Much time and discussion was spent on relatively minor issues dealing with document control; instructions and procedures; and audits. Meanwhile, little emphasis was placed on major issues such as qualification of existing data, definition of essential software, and configuration management.

5.4 As reported in OCRWM observer reports of previous EM-343 audits, violations of QA Program requirements are not consistently documented on Deviation and Corrective Action Reports (DCARs) as required by Vitrification Projects Division, EM-343, implementing procedures. Specifically, Standard Practice Procedure (SPP) 4.02, *Administration and Conduct of Quality Assurance Audits*, Rev. 3, Paragraph 4.c.(4) requires that audit team members record adverse findings on a DCAR in accordance with SPP 5.01, *Deviations and Corrective Actions*. In addition, SPP 5.01, Paragraph 3.a, states in part "...A DCAR shall be initiated to define a deviation and to request corrective action by the responsible organization. The DCAR form is utilized to document the entire process of finding and correcting a deviation....Deviations identified during an audit require corrective action and action to prevent recurrence." Spp 5.01 goes on to define a "Deviation" as a Condition Adverse to Quality that is a departure from specified requirements. A "DCAR" is defined as a report to document and track deviations and corrective actions.

Several examples of deviations identified during the audit that were not properly documented as DCARs follow:

- a) Existing data within the Waste Form Qualification Report (WQR), requiring qualification in accordance with DOE/RW-0214 and WSRC implementing procedure GT-QA-2-10 has not been identified. In addition, all referenced source documents providing data that requires qualification have not been identified. In essence, it is not known

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which data contained in the WQR has been qualified to date. It is recognized that the DWPF issued a Plan for Qualification of Existing Data for Waste Acceptance on May 7, 1993. This plan addresses major activities requiring qualification within the waste acceptance process, but fails to address all source documents that must be qualified to support qualification of the final waste form. The audit team presented the "observation" that existing data in the WQR does not identify references requiring qualification.

- b) Volumes 2, 5, 8 and 9 of the WQR, approved by EM-343 in January, 1993, after completion of the Technical Review Group (TRG) review, have not been issued by the DWPF. Several of these volumes contain data related to canister activities currently in progress. The canister procurement specification is contained in Appendix 1 of Volume 8. Coors is currently fabricating 20 canisters for August, 1993 delivery and may be working to an outdated version of the canister specification. DWPF has arbitrarily decided to hold up issuance of these volumes based on pending changes imposed by the recently issued EM Waste Acceptance Product Specification (EM-WAPS). The OCRWM Observer considers the changes would be minor in nature, since the WAPS must reflect the WA-SRD requirements. The EM-WAPS has not been formally recognized as a credible document by OCRWM to date. It is unacceptable for the WQR preparers to hold up issuance of approved documents based upon future changes that will be required as a result of the EM-WAPS. In the meantime, configuration control has been lost, increasing the potential for having to perform rework on the canisters. DOE/RW-0214, Sections 3 and 6, respectively require that measures be taken to ensure change control and that correct documents controlling quality affecting activities are being employed. The above condition was initially identified as an audit concern by one Auditor/Technical Specialist, dismissed as a non-issue by the Audit Team Leader (ATL), and subsequently resubmitted as an audit concern by a second Auditor/Technical Specialist. The final resolution was to present an "observation" that WQR Volumes 2, 5, 8 and 9, approved by DOE-HQ in January, 1993, are not being maintained in document control.
- c) DOE/RW-0214, Rev. 4, requires that computer software essential to Waste Acceptance be identified and listed in the Software Quality Assurance Plan (SQAP). SW4-1.8, Revision 6, requires that computer software essential to Waste Acceptance be identified and listed in the Waste Form Compliance Plan (WCP). Neither of the above