

U.S. DEPARTMENT OF ENERGY
OFFICE OF CIVILIAN RADIOACTIVE WASTE MANAGEMENT
OFFICE OF QUALITY ASSURANCE

SURVEILLANCE REPORT

OF

M & O Contractor (TRW)

Vienna, VA

SURVEILLANCE NUMBER HQ-SR-93-05

August 24-26, 1993

PRIMARY ACTIVITY EVALUATED

Preparation, review and issue of the Transport Waste System Requirements Document
(TW-SRD)

Prepared by: *F. Bearham* Date: 9/24/93
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Surveillance Team Leader
Headquarters Quality Assurance Division

Approved by: *R. W. Horton* Date: 10/7/93
fr Donald G. Horton
Director
Office of Quality Assurance

1.0 EXECUTIVE SUMMARY

Surveillance HQ-SR-93-05 was conducted to evaluate the development, preparation, review and issue of the Transport Waste System Requirements Document (TW-SRD). The surveillance was conducted at the M&O offices at Vienna, VA on August 24-26, 1993, by personnel from Headquarters Quality Assurance Division (HQAD). It was determined that the TW-SRD adequately addresses the requirements of the Technical Document Preparation Plan (TDPP) and performs its intended purpose. No Corrective Action Requests (CARs) were issued but the surveillance team offered three recommendations for consideration by the M&O management. The recommendations were in the areas of training records, review of technical documents, and control of changes to technical documents.

2.0 SCOPE

Surveillance HQ-SR-93-05 was conducted to evaluate the development, preparation, review, and issue of the TW-SRD with emphasis on the flow down of requirements from the Civilian Waste Management System Requirements Document (CRD). The Technical Specialist reviewed the technical content of the reviewer comments and evaluated the technical adequacy of the TW-SRD. Other members of the surveillance team concentrated on procedural compliance during the development, review and issue of the TW-SRD.

The surveillance team used checklists based on the requirements of the following M&O Quality Assurance Procedures (QAPs):

QAP-2-1 *Indoctrination and Training, Revision 4*
QAP-2-2 *Verification of Personnel Qualification, Revision 1*
QAP-3-1 *Preparation of Technical Documents, Revision 2*
QAP-3-5 *Review of Technical Documents, Revision 2*
QAP-17-1 *Record Source Responsibilities for QA Records, Revision 3*
Technical Document Preparation Plan (TDPP) for the Transportation System Requirements Document, Revision 3

3.0 SURVEILLANCE TEAM

The surveillance team consisted of the following personnel:

Fred Bearham, QATSS, Surveillance Team Leader
Dennis Threatt, QATSS, Surveillance Team Member
Jim Cassidy, M&O, Technical Specialist

4.0 PERSONNEL CONTACTED

The following personnel were contacted during the course of the surveillance:

See Attachment 1

5.0 SURVEILLANCE RESULTS

The surveillance team determined that the TW-SRD adequately addressed the purpose defined in the TDPP. The preparation, review and issue of the TW-SRD was determined to be effective. Implementation of QAP-2-1 and QAP-2-2 was determined to be marginally effective but OCRWM CAR HQ-93-019, OCRWM CAR YM-93-038, and M&O CAR 92-QA-C-032 were previously issued to address the adverse conditions. Therefore, CARs were not initiated as a result of this surveillance, however, recommendations were made to expedite the corrective actions currently in progress. The effectiveness of the implementation of QAP-17-1 was indeterminate because the TW-SRD is currently undergoing Program Baseline Configuration Control Board (PBCCB) review and records are in-progress at this time.

The surveillance team reviewed the TW-SRD and the Document Review Records (DRRs) prepared by the 14 reviewers. There were 284 comments, approximately 40 percent of which were technical and 60 percent editorial or administrative. All comments, including the non-mandatory comments, were responded to and resolved with the reviewers. Comments indicated a thorough review of the document. Although some technical areas in the TW-SRD were not specifically matched with areas of expertise of the assigned reviewers, the comments indicated that all technical areas of the document were adequately reviewed. A recommendation was made that future reviews indicate reviewer expertise more specifically related to the technical content of the documents (see Recommendation 6.2). Draft 0B of the TW-SRD was prepared to incorporate comments as applicable and the surveillance team's Technical Specialist reviewed this Draft to verify that the comment resolution and incorporation process was complete.

The Technical Specialist also reviewed the TW-SRD draft 0A (QAP-3-1 review draft); TW-SRD draft 0B (review concurrence draft); the TW-SRD draft 0C (PBCCB review draft); the Requirements Backup Sheets associated with each of these drafts; the Issue Clarification and Derived Requirements Documentation Forms associated with these drafts; the CRD to TW-SRD Requirements Cross-reference; and the TW-PSR to TW-SRD Requirements Cross-reference. These documents provided evidence that all of the required cross references and requirements tracing have been adequately performed.

The following minor discrepancies in the TW-SRD and conflicts with the CRD were identified by the Technical Specialist. Discrepancies in the TW-SRD will be corrected

in conjunction with the PBCCB review process and conflicts with the CRD will be processed according to paragraph 7.3.5 of the TDPP for the TW-SRD which requires that a Baseline Change Notice be prepared upon approval of the TW-SRD by the PBCCB.

- Requirement 3.2.4 as shown in the TW-SRD Conformance Verification Matrix (Table 4-1) has N/A identified for the verification method. Paragraph 3.2.4 of the TW-SRD contains a "shall" statement and therefore should identify a verification method. Also paragraph numbers 3.7.1.2.1.J and 3.7.1.2.1.K of the TW-SRD, both of which are headings only, are not included in the table entries.
- CRD requirements as delineated in paragraphs 3.3.6.3.F, 3.2.5.3.B, and 3.7.2.2.D of the CRD are erroneously allocated to the TW-SRD. The CRD requirements cross-reference identifies these requirements as not applicable to TW-SRD and provides a rationale for exclusion. A change to the CRD will be required to ensure a proper correlation between the CRD and the TW-SRD.
- The tables in Appendix A of the CRD identify documents 33CFR323, 40CFR61, 41CFR109-40, 49CFR175, DOE Order 1324.2A, and DOE Order 3790.1A as requirements sources for the TW-SRD. These documents were not included in the list of source documents identified in the TW-SRD and no rationale for exclusion was available.

All discrepancies noted above were documented during the surveillance as recommended by the surveillance team (See Recommendation 6.3) and tracked as a potential change to affected documents. This change was submitted on a draft BCCB Change Disposition Summary Record to BCP-00-93-0001 via letter # VA.SE.GAC.9/93 to the Executive Secretary, Program Baseline Change Control Board. The change was processed according to OCRWM Program Baseline Change Control Procedure, DOE/RW-0409, revision 0.

The adequacy of the preparation of the TW-SRD was verified using a checklist based on the requirements of QAP-3-5 and the TDPP. It was established that preparation of the TW-SRD was well planned and executed in accordance with the control documents. The team reviewed the following input documents to verify compliance with the planning:

- Functional Flow Diagram
- Interface Diagrams
- Requirements Backup Sheets
- Issue Clarification and Derived Requirements Documentation Forms
- Issues List
- Technical Document Input Control Forms
- Verification Matrix
- Cross Reference Tables

A complete set of input documents and supporting documentation was provided to the team at the start of the surveillance. This provided confidence in the retrievability of the documentation and allowed the team to systematically review the material.

The surveillance team also evaluated the review process for the TW-SRD according to the requirements of M&O procedure QAP-3-1, revision 2. The Systems Engineering Department Manager in cooperation with the Lead Document Preparer solicited nominations for the review team from other affected managers and selected the team. The review team was provided review criteria which met the requirements of QAP-3-1. The surveillance team evaluated reviewers' comments as documented on the Comment Sheets and concluded that the review criteria was followed. All comments, including non-mandatory comments, were appropriately resolved by the Lead Document Preparer and reviewers indicated acceptance by initialing and dating the response.

Overall, the Technical Document Review process was determined to be well-organized, effective, and in accordance with applicable procedures.

The process for the selection of the TW-SRD preparation and review teams was reviewed and found to be effective. The TDPP identified, by name, the Task Manager, the Task Leader, five preparers and 17 technical support personnel. The TDPP included specific task assignments and training requirements. In addition, the TW-SRD records package contained a list of the review team members and their areas of expertise. A statement of qualification for each preparation team and review team member was prepared and signed by their respective supervisor.

The verification of experience and education of the SRD Task Team and Review Team members was evaluated using a checklist based on QAP-2-2 and a review of records located in the M&O Training Department. The available records indicated that the team members were qualified and trained to perform their assigned tasks but this element was determined to be marginally effective because of inconsistencies in the training records (See Recommendation 6.1).

Indoctrination and Training of the SRD Task Team and Review Team members was evaluated using a checklist based on QAP-2-1 and a review of records located in the M&O Training Department. The available records indicated that the team had received the training required by the TDPP. This element was also determined to be marginally effective because of inconsistencies in the training records (See Recommendation 6.1).

6.0 RECOMMENDATIONS

The following recommendations are presented by the surveillance team for consideration by the M&O management:

- 6.1** Personnel records in the Training Department are inconsistent in content and completion. Verification of Education Forms required by QAP-2-2 have the directions for completion on the reverse side of the form but the form, in most cases, was found to be incorrectly completed. Some training folders contain resumes and training records while others do not. In several cases a superseded form had been used for verification of education. No CARs were issued because similar adverse conditions have been previously identified in CAR HQ 93-019, CAR YM 93-038, and M&O CAR 92-QA-C-032. It is recommended that the corrective actions associated with the CARs be expedited and that the M&O Training Department perform proactively rather than reactively in the assembly and maintenance of training records.
- 6.2** Sections of the TW-SRD pertaining to Radiological Protection (3.2.2), Safety (3.3.6), and Environmental Protection (3.3.11) were identified during the review of the document. QAP-3-1, paragraph 5.1.3 requires that the review team "include....reviewers knowledgeable in the technical area(s) addressed in the document." The list of reviewers did not identify any reviewers with specific expertise in the areas listed above. A review of the comments indicated that all technical areas of the document had been adequately reviewed. However, it is recommended that during future reviews, reviewer expertise be identified more specifically to the technical content of the document to ensure all areas are adequately addressed.
- 6.3** During the technical evaluation performed during the surveillance, it was noted that minor discrepancies existed in the flowdown of requirements from the CRD to the TW-SRD and in the requirements allocation contained in the TW-SRD. This was a result of re-evaluation of requirements during the preparation of the TW-SRD. The updates to the requirements are reflected in the TW-SRD but will not be incorporated into the CRD until the next revision. It is recommended that changes that affect upper-tier documents be tracked to ensure that they are incorporated. This will provide greater confidence that the previously approved documents will be properly updated to maintain document consistency.

7.0 LIST OF ATTACHMENTS

Attachment 1: List of Personnel Contacted during the Surveillance

Attachment 2: List of Objective Evidence Reviewed During the Surveillance

ATTACHMENT 1

List of Personnel Contacted During the Surveillance

<u>Name</u>	<u>Organization</u>	<u>Title</u>
James S. Willis	M&O	Manager, System Integration
Phyllis Lovett	M&O	System Engineer
Robert Morgan	M&O	Manager, M&O Quality Assurance
Philip Horsman	M&O	QA Technical Specialist
Paul Viggiano	M&O	QA Engineer
James Wells	M&O	QA Consultant
Eugene Chulick	M&O	Manager, M&O Training
Christopher Kelly	M&O	Training Database Coordinator

ATTACHMENT 2

List of Objective Evidence Reviewed During the Surveillance

<u>Item</u>	<u>Rev/Date</u>	<u>Title</u>
1		List of Preparers and Technical Support Personnel
2		Preparer Qualifications Folder - TW-SRD Record Package
3		Reviewer Qualifications Folder - TW-SRD Record Package
4	4/9/93	Memo to DOE from G. Carruth # VA.SE.GAC.4/93.232
5	4/13/93	Memo R930416.0005 from W. Lemeshewsky
6	4/16/93	Memo from R. Brackett # VA.QA.RJB.4/93.042
7	4/21/93	Memo from G. Carruth # VA.SE.GAC.4/93.243 initiating QAP-3-1 review (with 11 attachments)
8		Document Review Record Folder - TW-SRD Record Package
9		Teer - Training/Qualification File
10		Cole - Training/Qualification File
11		Crow - Training/Qualification File
12		Holloway - Training/Qualification File
13		Tierney - Training/Qualification File
14		Rahimi - Training/Qualification File
15		Wilson - Training/Qualification File
16		Kelly - Training/Qualification File
17		McGuinn - Training/Qualification File
18		Medford - Training/Qualification File
19	5/12/93	5/12/93 Memo from D. Horton re Verification
20	10/9/92	M&O CAR 92-QA-C-032
21	2/17/93	OCRWM CAR HQ 93-019
22	4/15/93	Action Plan to correct references 20 and 21