

OFFICE OF CIVILIAN RADIOACTIVE WASTE MANAGEMENT

YUCCA MOUNTAIN QUALITY ASSURANCE DIVISION

QUALITY ASSURANCE SURVEILLANCE REPORT OF

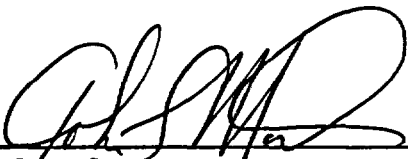
THE FIELD CHANGE CONTROL PROCESS

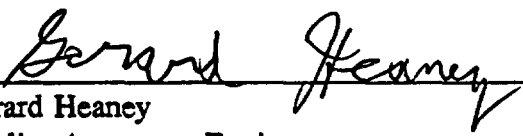
SURVEILLANCE NO. YMP-SR-92-009


CONDUCTED MAY 13 THROUGH 20, 1992

ACTIVITIES SURVEILLED:

IMPLEMENTATION OF THE FIELD CHANGE CONTROL PROCESS FOR  
COMPLIANCE WITH ADMINISTRATIVE PROCEDURE AP-3.5Q,  
"FIELD CHANGE CONTROL PROCESS"

Prepared by:  Date: 6-3-92  
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Approved by:  Date: 6/9/92  
Donald G. Horton  
Director  
Office of Quality Assurance

## 1.0 EXECUTIVE SUMMARY

The surveillance of the implementation of the field change control process was conducted to verify compliance to Administrative Procedure (AP)-3.5Q, "Field Change Control Process." In general, implementation was found to be acceptable; however, there were four deficiencies identified by the surveillance team during the course of the surveillance. One deficiency relative to the delegation of authority was considered remedial in nature and was corrected during the course of the surveillance and no further action is deemed necessary at this time. Three deficiencies resulted in the issuance of Corrective Action Requests (CARs) YM-92-038 (for exceeding the allowed number of changes to a controlled document prior to revision), YM-92-039 (for personnel not being trained for quality-effecting activities), and YM-92-040 (for procedural inadequacies within AP-3.5Q). Specific details of these deficiencies are provided in Section 5.0 of this report and copies are provided as information in Enclosure 1.

Recommendations as a result of this surveillance are provided in Section 6.0 of this report.

## 2.0 SCOPE

This report contains the results of the Office of Civilian Radioactive Waste Management (OCRWM) Quality Assurance Surveillance No. YMP-SR-092-009 of the implementation of the field change control process. The surveillance was conducted at the Field Operations Center, Yucca Mountain, and at the Yucca Mountain Site Characterization Project Office (YMPO) Las Vegas, Nevada, on May 13 through 20, 1992. The surveillance was conducted by a team from the Yucca Mountain Quality Assurance Division (YMQAD) of the Office of Quality Assurance (OQA) in accordance with OCRWM Quality Assurance Administrative Procedure (QAAP) 18.3, Revision 3, "Surveillance Program."

The surveillance was intended to examine implementation of AP-3.5Q, "Field Change Control Process," Revision 1.

## 3.0 SURVEILLANCE TEAM

The surveillance team consisted of the following personnel:

John S. Martin, Quality Assurance Engineer, Surveillance Team Leader, Science Applications International Corporation (SAIC)/YMQAD

Gerard Heaney, Quality Assurance Engineer, Surveillance Team Member, SAIC/YMQAD

#### 4.0 PERSONNEL CONTACTED DURING THE SURVEILLANCE

J. Calovini, Deputy Technical Project Officer, Raytheon Services Nevada (RSN)  
P. Chadwick, Training, SAIC  
C. J. Huston, Configuration Management, Management and Operations (M&O)  
Contractor  
T. Grant, Geologist, SAIC  
J. McNeely, Resident Engineer, RSN  
R. Nance, Geologist, SAIC  
C. Newberry, Technical Analysis Branch, U.S. Department of Energy (DOE)  
S. Robinson, Configuration Management, M&O  
R. Spence, Director, YMQAD, DOE  
A. Tacelli, Document Records Center, Field Supervisor, SAIC  
A. Williams, YMQAD Field and Test Lead, DOE  
W. Wilson, YMPO, Site Manager, DOE

#### 5.0 SURVEILLANCE RESULTS

The surveillance consisted of documentation reviews and personnel interviews. Documentation reviews consisted of a thorough review of ten Field Change Requests (FCRs) generated as a result of implementation of AP-3.5Q, Revision 1. Specifically, these documents were reviewed for identification and determination of the change type, completion of technical evaluations, appropriate review and approvals, inclusion of implementation instructions and completeness. FCRs reviewed with applicable Job Packages (JPs) are as follows:

JP 91-1, "Midway Valley," Revision 0

FCR 92-045

JP 91-9, "Drilling of Neutron Access Boreholes," Revision 1

FCR 92-015                      FCR 92-056  
FCR 92-036                      FCR 92-074

JP 92-4, "Pad Construction for VSP Drill Hole UZ-16," Revision 0

FCR 92-046                      FCR 92-049  
FCR 92-041                      FCR 92-061  
FCR 92-052

FCR numbers 92/036 and 92/074, generated for the relocation of neutron access boreholes, were reviewed and found to impact more than just JP 91-09. EG&G drawing No. YMP-91-026.1, "Proposed Drillholes and Subsurface Access Drifts," was also impacted. The EG&G drawing will be part of the Site Atlas which is part of the YMP Technical Data Base. Presently, the Site Atlas is currently undergoing complete revision and will become a controlled document within the next several months. As such, future FCRs that change locations of boreholes will have to indicate impacts on JPs, and impact reviews on the Site Atlas will have to be performed once it is a controlled document. The two FCRs mentioned were brought to the attention of EG&G personnel for appropriate incorporation. No other similar cases were found during the course of this surveillance.

Personnel interviews were conducted with individuals responsible for the generation, processing, review and approval of FCRs to determine their overall knowledge of procedural requirements specific to AP-3.5Q. In general, these interviews provided positive evidence of an overall working knowledge and comprehension of the programmatic aspects as stipulated.

Overall, the adequacy and implementation of AP-3.5Q was found to be acceptable. However, there were four deficiencies identified during the course of the surveillance. One deficiency was considered remedial in nature and was corrected during the course of the surveillance. The other three deficiencies resulted in the issuance of CARs. A synopsis of each deficiency is provided below:

#### Deficiency Corrected During The Surveillance:

AP-3.5Q, Paragraph 3.3, requires that an authorization letter be issued delegating authority for a designee to commit their organization, with respect to accepting responsibility, for the adequacy and correctness of proposed FCRs. In review of FCRs and authorization letters, one individual was found to have approved an FCR without it being clear that said individual had been delegated authority to do so. Discussions with the individual's cognizant supervisor, indicated that this individual was an acceptable designee and subsequently a letter of delegation was issued for clarification for the individual in question. This deficiency is considered isolated in nature and no further action is deemed necessary at this time.

#### CARs Issued:

YM-92-038

AP-3.5Q, Revision 1, Paragraph 5.0, Step 3b, states in part: "There shall be no more than 5 changes posted for incorporation on any document under FCCB purview." Contrary to this requirement, JP 91-01 has had six FCRs posted against it.

YM-92-039

QMP-02-01, Revision 5, Paragraph 5.0, Step 8, requires that personnel be trained to applicable documents prior to performing quality-affecting work. Contrary to this requirement, two individuals approved FCRs without being trained to the FCR procedure AP-3.5Q.

YM-92-040

Quality Assurance Program Description Document. Revision 3, Section 5, Paragraph 5.0, requires that procedures include or reference appropriate quantitative or qualitative acceptance criteria for determining that prescribed activities have been satisfactorily accomplished. Quality Management Procedure QMP-06-04, Revision 4, Attachment 2, Paragraph 3.0, states in part: "Define terms or expressions necessary to understand the procedure." Contrary to these requirements, AP-3.5Q does not quantify nor define criteria for the determination as to the type of FCR change being processed.

See attached informational copies of referenced CARs (Enclosure 1).

## 6.0 RECOMMENDATIONS

The following recommendations are provided as a result of this surveillance. These recommendations are not considered as deficiencies, but as areas in which it is felt the FCR process could be improved and/or enhanced.

1. In review of AP 3.5Q, it was noted that for FCRs annotated as design, scientific investigation or quality-affecting, that an Internal Participant Evaluation Checklist be generated in accordance with participant procedures or Attachment IV of AP-3.5Q. In discussions with cognizant personnel, it was discerned that presently no plans have been made to incorporate the evaluation checklist to the applicable FCR. It is recommended that the evaluation be submitted with the FCR and become part of the FCR package. In accomplishing this, a complete records package would be developed and all records would be traceable to the activity performed.
2. CAR YM-92-038 was generated as JP 91-01 and has six FCRs posted against it. Procedural requirements mandate that no more than five FCRs can be posted to a document under FCCB control. It is recommended that AP-3.5Q requirements be reviewed to allow for management decision as to the necessity for revising documents when five FCRs are posted against a document. Additionally, the incorporation of FCRs into a JP revision should only require review and approval by the JP coordinator responsible for incorporating the FCRs, review and approval

by QA to ensure the FCRs were incorporated properly, that no other changes to the document were made, and approval by the Site Manager. Currently, the incorporation of FCRs into a JP revision require all the top management approvals that approved Revision 0 of the JP.

3. In discussions with field personnel, it was ascertained that the processing of individual field changes has the potential to stop work in the field while waiting for full approval of FCRs. It is recommended that a system be devised in which work would be allowed to proceed at risk, subsequent to approval by the Field Engineer and the Site Manager. This would be accomplished by having a carbon copy of the FCR with those approvals in the field while the original would be processed through its full cycle.
4. In review of FCRs, it was noted that design has been applied to the construction of test pits and trenches. It is recommended that this area be reviewed by YMPO as to the applicability of design documents and quality inspections relative to test pits and trenches. It is felt that design criteria does not apply to these areas; however, as-builts may want to be developed subsequent to investigation to record the locations and dimensions of these areas.

**ENCLOSURE 1**  
**CORRECTIVE ACTION REQUESTS**

**ORIGINAL**  
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<b>OFFICE OF CIVILIAN          RADIOACTIVE WASTE MANAGEMENT          U.S. DEPARTMENT OF ENERGY          WASHINGTON, D.C.</b>		8 CAR NO.: <u>YM-92-038</u> DATE: <u>3/22/92</u> SHEET: <u>1</u> OF <u>2</u> GA
<b>CORRECTIVE ACTION REQUEST</b>		
1 Controlling Document <u>AP-3.5Q</u>		2 Related Report No. <u>YM-SR-92-009</u>
3 Responsible Organization <u>EMPO</u>		4 Discussed With <u>T. Sullivan/T. Grant</u>
5 Requirement: <u>AP-3.5Q, "Field Change Control Process," Revision 1, Section 3.9, Step 3, Note B, states, "There shall be no more than five changes posted for incorporation on any document under FCCB purview. The document custodian is responsible for incorporating the changes into the document."</u>		
6 Adverse Condition: <u>Contrary to the above requirement, Job Package 91-01, "Midway Valley," Revision 0, has had six FCAs posted against it since 2/20/92 that have not been incorporated into a revision of the Job Package.</u>		
9 Does a significant condition adverse to quality exist? Yes ___ No <u>X</u> If Yes, Circle One: A B C		10 Does a stop work condition exist? Yes ___ No <u>X</u> ; If Yes - Attach copy of SWO If Yes, Circle One: A B C D
		11 Response Due Date: <u>15 Days From Transmittal Date</u>
12 Required Actions: <input checked="" type="checkbox"/> Remedial <input type="checkbox"/> Extent of Deficiency <input type="checkbox"/> Preclude Recurrence <input type="checkbox"/> Root Cause Determination		
13 Recommended Actions: 1. Revise the Job Package (JP) per procedural requirements. 2. Consider revising AP-3.5Q to allow for management decision as to the necessity for revising documents when five FCAs are posted against the document. 3. The incorporation of FCAs into a revision of a JP, should only require a		
7 Initiator <u>Gerard Beany</u> <u>Gerard Beany</u> Date <u>5-26-92</u>		14 Issuance Approved by: <u>QADD RC Spence</u> Date <u>5/27/92</u>
15 Response Accepted QAR Date		16 Response Accepted QADD Date
17 Amended Response Accepted QAR Date		18 Amended Response Accepted QADD Date
19 Corrective Actions Verified QAR Date		20 Closure Approved by: QADD Date

ENCLOSURE 1  
CORRECTIVE ACTION REQUESTS  
(Continuation)

<b>OFFICE OF CIVILIAN RADIOACTIVE WASTE MANAGEMENT U.S. DEPARTMENT OF ENERGY WASHINGTON, D.C.</b>	<b>6 CAR NO.:</b> <u>YM-92-038</u> <b>DATE:</b> <u>5/22/92</u> <b>SHEET:</b> <u>2</u> <b>OF</b> <u>2</u> <b>QA</b>
<b>CORRECTIVE ACTION REQUEST (Continuation Page)</b>	
<p><b>13 Recommended Action(s) (continued)</b> review/approval by the JF coordinator, QA and Site Manager, since the revision incorporates previously approved FCRA. Present approvals include all top management who approved Revision 0 of the JF.</p>	



**ENCLOSURE 1**  
**CORRECTIVE ACTION REQUESTS**  
 (Continuation)

**ORIGIN**  
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<b>OFFICE OF CIVILIAN          RADIOACTIVE WASTE MANAGEMENT          U.S. DEPARTMENT OF ENERGY          WASHINGTON, D.C.</b>		8 CAR NO.: <u>TR-92-039</u> DATE: <u>5/22/92</u> SHEET: <u>1</u> OF <u>2</u> QA
<b>CORRECTIVE ACTION REQUEST</b>		
1 Controlling Document QMP 02-01, Rev. 5		2 Related Report No. TR-SR-92-009
3 Responsible Organization NPO	4 Discussed With R. Spence/S. Jones	
5 Requirement: <p>Quality Management Procedure (QMP) 02-01, Rev. 5, "Project Office Indoctrination and Qualification Training" paragraph 3.6, step 8, Note #1 states in part: "As a minimum all personnel shall be trained to the applicable document(s) prior to performing quality affecting activities".</p> <p>In addition, QMP 02-01, paragraph 3.3 states: "The supervisor is the individual responsible for determining an employee's qualification evaluation and assigning initial and additional training for personnel within his/her cognizance".</p>		
6 Adverse Condition: <p>Contrary to the above requirements, the following personnel have approved Field Change Requests (FCRs) without documenting training to Administrative Procedure AP 3.5 Q. Rev. 1.</p> <p align="center">James Bleylock      FCR 92/046          Susan Jones        FCR 92/074</p> <p>A review of training documents for in-service that training requirements have not been updated, as required, to include AP 3.5Q by the responsible supervisor.</p>		
9 Does a significant condition adverse to quality exist? Yes ___ No <u>X</u> If Yes, Circle One: A B C	10 Does a stop work condition exist? Yes ___ No <u>X</u> ; If Yes - Attach copy of SWO If Yes, Circle One: A B C D	11 Response Due Date: 15 days from issuance
12 Required Actions: <input checked="" type="checkbox"/> Remedial <input checked="" type="checkbox"/> Extent of Deficiency <input checked="" type="checkbox"/> Preclude Recurrence <input checked="" type="checkbox"/> Root Cause Determination		
13 Recommended Actions: 1) Identify the remedial actions to be taken to correct the deficiencies noted in block 6. 2) Investigate the program, process, activity, or documentation to determine the extent and depth of similar conditions to those listed on the CAR.		
7 Initiator John S. Martin <i>JS</i> Date <u>5-16-92</u>	14 Issuance Approved by: QADD <i>R.C. Spence</i> Date <u>5/27/92</u>	
15 Response Accepted QAR _____ Date _____	16 Response Accepted QADD _____ Date _____	
17 Amended Response Accepted QAR _____ Date _____	18 Amended Response Accepted QADD _____ Date _____	
19 Corrective Actions Verified QAR _____ Date _____	20 Closure Approved by: QADD _____ Date _____	

ENCLOSURE 1  
CORRECTIVE ACTION REQUESTS  
(Continuation)

<b>OFFICE OF CIVILIAN RADIOACTIVE WASTE MANAGEMENT U.S. DEPARTMENT OF ENERGY WASHINGTON, D.C.</b>	<b>6</b> CAR NO.: <u>YK-92-039</u> DATE: <u>5/22/92</u> SHEET: <u>2</u> OF <u>2</u> QA
<b>CORRECTIVE ACTION REQUEST (Continuation Page)</b>	
<p>13 Recommended Action(s) (continued)</p> <p>3) Identify these deficiencies and provide the measures required to correct them.</p>	

**ENCLOSURE 1**  
**CORRECTIVE ACTION REQUESTS**  
 (Continuation)

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<b>OFFICE OF CIVILIAN          RADIOACTIVE WASTE MANAGEMENT          U.S. DEPARTMENT OF ENERGY          WASHINGTON, D.C.</b>		8 CAR NO.: <u>YH-92-048</u> DATE: <u>5/22/92</u> SHEET: <u>1</u> OF <u>2</u> QA
<b>CORRECTIVE ACTION REQUEST</b>		
1 Controlling Document QAPD, Rev. 3 and QMP-02-01, Rev. 4		2 Related Report No. YMP-SR-92-009
3 Responsible Organization YMO	4 Discussed With Winn Wilson	
5 Requirement: Quality Assurance Program Description (QAPD), Rev. 3, Section 5, paragraph 3.0, states in part: "OCRM activities affecting quality are prescribed by, and controlled in accordance with plans, procedures, and instructions. Plans, procedures, and instructions include or reference appropriate quantitative or qualitative acceptance criteria for determining that prescribed activities have been satisfactorily accomplished."  Quality Management Procedure (QMP) 02-01, Rev. 4, "Project Office Document Development, Review, Approval, & Revision Process", Attachment 2, paragraph 3.0, states in part: "define terms or expressions necessary to understand the procedure."		
6 Adverse Condition: Contrary to the above requirement, AP 3.50 "Field Change Control Process," Rev. 1, does not quantify nor define criteria for determination as to the type of PCR change being processed (i.e.; what constitutes a scientific investigation, design or quality affecting changes.)  Discussion:  In review of AP 3.50 paragraph 3.0, step 6, it is stated that the technical evaluation, as to the type of PCR change, be documented in Section II of the PCR. However, this determination is based upon subjective evaluation without proceduralized criteria or rationale for the type of change selected. In review of 10 PCRs it was noted that two, PCR 92/036 and PCR 92/074 relocated Neutron Access Boreholes. Examination of Section II of subject PCRs revealed that the technical evaluation was annotated as "Non-QA, non-technical". It must be noted that this change required a revision to the Test Planning Package for		
9 Does a significant condition adverse to quality exist? Yes ___ No <u>X</u> If Yes, Circle One: A B C	10 Does a stop work condition exist? Yes ___ No <u>X</u> ; If Yes - Attach copy of SWO If Yes, Circle One: A B C D	11 Response Due Date: 15 days from issuance
12 Required Actions: <input checked="" type="checkbox"/> Remedial <input checked="" type="checkbox"/> Extent of Deficiency <input checked="" type="checkbox"/> Preclude Recurrence <input type="checkbox"/> Root Cause Determination		
13 Recommended Actions: 1) Identify the remedial actions to be taken to correct the deficiencies noted in block 6.  2) Investigate the program, process, activity, or documentation to determine the extent and depth of similar conditions to those listed on the CAR.		
7 Initiator John S. Martin <i>JS</i> Date <u>5-26-92</u>	14 Issuance Approved by: QADD <i>R.C. Spence</i> Date <u>5/27/92</u>	
15 Response Accepted QAR Date	16 Response Accepted QADD Date	
17 Amended Response Accepted QAR Date	18 Amended Response Accepted QADD Date	
19 Corrective Actions Verified QAR Date	20 Closure Approved by: QADD Date	

ENCLOSURE 1  
CORRECTIVE ACTION REQUESTS  
(Continuation)

<b>OFFICE OF CIVILIAN RADIOACTIVE WASTE MANAGEMENT U.S. DEPARTMENT OF ENERGY WASHINGTON, D.C.</b>	6 CAR NO.: <u>YH-92-040</u> DATE: <u>5/22/92</u> SHEET: <u>2</u> OF <u>2</u> GA
<b>CORRECTIVE ACTION REQUEST (Continuation Page)</b>	
<p>6 Adverse Condition (continued) determination of test interference and impacts to waste isolation in accordance with AP 5.32Q "Test Planning and Implementation Requirements". As such, these changes should be considered technical and quality affecting and should be annotated as "Scientific Investigation" within Section II for the technical evaluation.</p> <p>13 Recommended Action(s) (continued) 3) Identify the deficiencies and provide the measures required to correct them.</p>	