Department of Energy
Nevada Operations Office
P. O. Box 98518
Las Vegas, NV 89193-8518

WBS #1.2.9.3
QA

OCT 13 1989

Robert F. Pritchett
Technical Project Officer for Yucca Mountain Project
Reynolds Electrical &
Engineering Co., Inc.
P.O. Box 98521
Las Vegas, NV 89193-8521

ISSUANCE OF STANDARD DEFICIENCY REPORTS (SDRs) 450 THROUGH 455, REVISION 0, RESULTING FROM YUCCA MOUNTAIN PROJECT OFFICE (PROJECT OFFICE) QUALITY ASSURANCE (QA) AUDIT 89-05 OF REYNOLDS ELECTRICAL & ENGINEERING CO., INC. (REECO) (NN1-1990-0217)

Enclosed are SDRs 450 through 455, Revision 0, generated as a result of Project Office QA Audit 89-05 of REECo.

Please identify the corrective actions to be taken and implemented to correct the deficiencies by completing blocks 14 through 18, as appropriate, on each SDR.

Responses to the SDRs are due within 20 working days of the date of this letter. Any extension to these due dates must be requested in writing with appropriate justification prior to the due date. Please send the original of your responses to Juanita J. Brogan, Science Applications International Corporation, 101 Convention Center Drive, Las Vegas, Nevada 89109, and a copy to Ralph W. Gray, U.S. Department of Energy, P.O. Box 98518, Las Vegas, Nevada 89193.

Your cooperation and timely response is appreciated. If you have any questions, please contact James Blaylock of my staff at 794-7913, or William H. Camp of Science Applications International Corporation at 794-7166.

Edwin L. Wilmot, Acting Director
Quality Assurance Division
Yucca Mountain Project Office

YMP:JB-245

Enclosure:
SDRs 450 through 455,
Revision 0

1/1

OCT 13 1989

cc w/encl:
Ralph Stein, HQ (RW-30) FORS
Dwight Shelor, HQ (RW-3) FORS
M. A. Fox, REECo, Las Vegas, NV
J. J. Brogan, SAIC, Las Vegas, NV, 517/T-12
K. A. Hodges, SAIC, Las Vegas, NV, 517/T-06
W. H. Camp, SAIC, Las Vegas, NV, 517/T-06
J. H. Nelson, SAIC, Las Vegas, NV, 517/T-04
K. W. Moore, SAIC, Las Vegas, NV, 517/T-28
S. W. Zimmerman, NWPO, Carson City, NV
J. E. Kennedy, NRC, Washington, DC

cc w/o encl:
A. L. Temple, SAIC, Las Vegas, NV, 517/T-38
J. W. Gilray, NRC, Las Vegas, NV

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YMPO STANDARD DEFICIENCY REPORT

N-QA-038
4/89

Completed by Originating QA Organization

1 Date 9/28/89 | 2 Severity Level ☐ 1 ☒ 2 ☐ 3 | Page 1 of 2

3 Discovered During	3a Identified By	4 SDR No.
Audit 89-5	F.J. Ruth	450 Rev. 0

5 Organization	6 Person(s) Contacted	7 Response Due Date is 20 Working Days from Date of Transmittal
REECo	A. Fowkes/M. Fox	

8 Requirement (Audit Checklist Reference, If Applicable)
NNWSI Project QA Plan, NNWSI/88-9, Rev. 2, Section II, Quality Assurance Program Para. 5.1.1, "Position Description (PD)" minimum education and experience requirements shall be established and documented in position

9 Deficiency
1. The PD for the General Manager does not define what the minimum experience requirements are for that position.

10 Recommended Action(s): ☒ Remedial ☒ Investigative ☐ Corrective
1. Remedial Action

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11 QAE/Lead Auditor/Date	12 Division Manager/Date	13 Project Quality Mgr./Date
William H. Camp 10/12/89	Walt Hedges 10-12-89	James Blaylock 10/12/89

Completed by Organization in Block 5

14 Remedial/Investigative Action(s)

15 Effective Date _____

16 Cause of the Condition & Corrective Action to Prevent Recurrence

17 Effective Date _____

18 Signature/Date

Comp. by Orig. QA Org.

19 Response Accepted	QAE/Lead Auditor/Date	Division Manager/Date	Project Quality Mgr./Date
20 Corrective Action Verif. Satisfactory	QAE/Lead Auditor/Date	Division Manager/Date	Project Quality Mgr./Date

21 Remarks

22 QA CLOSURE	QAE/Lead Auditor/Date	Division Manager/Date	PQM/Date

8 Requirement (continued)

descriptions for each position involved in the performance of activities that affect quality.

9 Deficiency (continued)

2. There is no PD for the Senior QC technician who is assigned responsibilities within the Calibration Lab.

3. In revision of the PDs, the required education and training have been identified. However, in 16 of 65 that were reviewed, the position required a bachelor's degree in a specific area, but went on to state "or equivalent experience." The equivalent experience in lieu of a bachelor's degree has not been identified.

10 Recommended Actions (continued)

a) Identify what the minimum experience requirements are for the General Manager.

b) Prepare a Position Description for the Senior QA Technician.

2. Investigative Action(s)

a) Review additional PDs to determine if equivalent experience is stated in lieu of a bachelor's degree.

b) Determine if there is a need to prepare additional PDs for individuals involved in the performance of activities that affect quality.

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4/89

Completed by Originating QA Organization

1 Date 9/28/89 | 2 Severity Level ☐ 1 ☒ 2 ☐ 3 | Page 1 of 3

3 Discovered During: Audit 89-5
3a Identified By: A.I. Arceo
4 SDR No. 451 Rev. 0

5 Organization: REECo
6 Person(s) Contacted: M. Fox
7 Response Due Date is 20 Working Days from Date of Transmittal

8 Requirement (Audit Checklist Reference, if Applicable)
(CL # 16-2) NNWSI/88-9, Rev. 2, Sec. XVI, Para. 1.1

9 Deficiency
A Corrective Action Report (CAR) was not identiated as a result of Audit Finding No. 1 of Audit Report No. REECo-001-89 dated 8/2/89. The finding stated that, "With 59 unsatisfactory findings out of 86.

10 Recommended Action(s): ☒ Remedial ☒ Investigative ☒ Corrective
1) Remedial - Write a CAR.

Aprvl.

11 QAE/Lead Auditor/Date	12 Division Manager/Date	13 Project Quality Mgr./Date
William H. Camp 10/5/89	Walt Hedges 10-5-89	James Blaylock 10/6/89

Completed by Organization in Block 5

14 Remedial/Investigative Action(s)

15 Effective Date _____

16 Cause of the Condition & Corrective Action to Prevent Recurrence

17 Effective Date _____

18 Signature/Date

Comp. by Orig. QA Org.

19 Response Accepted	QAE/Lead Auditor/Date	Division Manager/Date	Project Quality Mgr./Date
20 Corrective Action Verif. Satisfactory	QAE/Lead Auditor/Date	Division Manager/Date	Project Quality Mgr./Date

21 Remarks

22 QA CLOSURE	QAE/Lead Auditor/Date	Division Manager/Date	PQM/Date

ENCLOSURE

8 Requirement (continued)

1.1 SIGNIFICANT ADVERSE CONDITIONS

For significant conditions adverse to quality the identification, cause, and corrective action taken to preclude recurrence shall be documented and reported to immediate management and upper levels of management for review and assessmment. A significant condition adverse to quality is one which, if not corrected, could have a serious effect on safety or operability. Significant conditions include, but are not limited to breakdowns in the Quality Assurance program and repetitive nonconformances. Upon discovering or receiving notification that a significant condition adverse to quality or unusual occurrence exists, each NNWSI Project Participant shall ensure that:

- o Immediate actions have been taken to remedy the specific conditions(s).
- o Causative factors have been determined.
- o Controls have been reviewed, implemented, monitored and revised, if necessary.
- o Affected managers at all levels have been notified of adverse condition(s) and of lessons to be learned to improve conditions or avoid similar occurrences.

QP 16.0, Rev. 7, Para. 5.1 & 5.2

5.1 REECo personnel connected with activities on the YMP shall be responsible for reporting to Project Quality Assurance (PQA) and their immediate management any observed condition which is adverse to Quality.

NOTE: No individual shall be deterred from reporting deficiencies or potentially adverse conditions to PQA.

5.2 Project Quality Assurance Manager (PQAM) - The Project Quality Assurance Manager is responsible for evaluating significant conditions adverse to quality or potentially adverse conditions; initiating the Corrective Action Request (CAR), Exhibit III; concurring with the proposed corrective action or providing other corrective action; ensuring that all significant conditions adverse to quality are properly documented and reported to upper levels of management for review and assessment; and implementing follow-up action to assure that corrective action is implemented in a manner which will preclude recurrence.

9 Deficiency (continued)

Requirements, the overall finding is a failure to effectively implement the

9 Deficiency (continued)

YMP QA Program. "The Audit Report stated in part, "There were 86 programmatic requirements identified on the audit checklist. Of the 86 requirements, compliance was unsatisfactory for 59 of them, resulting in a failure rate of 69.7%. This inordinate failure rate signifies a failure to effectively respond to the YMP QA program requirements."

10 Recommended Actions (continued)

2) Investigative and Corrective - Identify the cause of the deficiency and actions taken to prevent recurrence.

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YMPO STANDARD DEFICIENCY REPORT

N-QA-038
4/89

Completed by Originating QA Organization

1 Date 9/26/89	2 Severity Level ☐ 1 ☒ 2 ☐ 3	Page 1 of 3
3 Discovered During Audit 89-5	3a Identified By M.R. Diaz	4 SDR No. 452 Rev. 0
5 Organization REECo	6 Person(s) Contacted A. Tonda/M. Fox	7 Response Due Date is 20 Working Days from Date of Transmittal

8 Requirement (Audit Checklist Reference, if Applicable)
QP 18.0, Rev. 6, Para. 6.2.1 states, "Internal and external audits shall be scheduled in a manner such that the audits shall be initiated as early in the life of the activities as practical, consistent with the schedule for

9 Deficiency
Some of the audit requirements as detailed in item 8 above have not been implemented accordingly such as: AUDIT REECo-001-89

10 Recommended Action(s): ☒ Remedial ☐ Investigative ☒ Corrective

1. Remedial - Review all the QA records generated by the Audit REECo-001-89 to ensure that they contain requirements stipulated in REECo's

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11 QAE/Lead Auditor/Date	12 Division Manager/Date	13 Project Quality Mgr./Date
William H Camp 10/12/89	[illegible] 10-12-89	James Blaylock 10/12/89

Completed by Organization in Block 5

14 Remedial/Investigative Action(s)

15 Effective Date _____

16 Cause of the Condition & Corrective Action to Prevent Recurrence

17 Effective Date _____

18 Signature/Date

Comp. by Orig. QA Org.

19 Response Accepted	QAE/Lead Auditor/Date	Division Manager/Date	Project Quality Mgr./Date
20 Corrective Action Verif. Satisfactory	QAE/Lead Auditor/Date	Division Manager/Date	Project Quality Mgr./Date

21 Remarks

22 QA CLOSURE	QAE/Lead Auditor/Date	Division Manager/Date	PQM/Date

8 Requirement (continued)

accomplishing the activity to assure timely implementation of quality assurance requirements."

Para. 6.4.3 states in part, "The Lead Auditor shall complete the Auditor/ Survey Plan which shall contain the following:

- o -------
- o _____
- o Date of audit plan"

QP 17.0, Rev. 4, Para. 4.1.2 states in part, "A completed QA record is a document signed and dated by the originator."

QP 18, Rev. 6, Para. 6.4.4 states in part, "The audit team shall prepare an Audit/Survey Checklist."

Para. 6.5.5 states, "The auditor(s) shall document the objective evidence reviewed on the checklist."

568-DOC-115, Rev. 7, Para. 1.5 states in part, "The audit report shall include the following information:

- o Identification of the auditors
- o Identification of persons contacted during audit activities
- o Description of each reported adverse audit finding in sufficient detail to enable corrective action to be taken by the audited organization."

QP 18.0, Rev. 6, Para. 6.6.1.1 states in part, "The audit report shall consist of the QA Audit/Survey Plan, QA Audit/Survey Report and Audit Finding Reports."

Para. 6.6.3 states in part, "For Audit Reports which contain AFRs the report cover memo shall require management of the audited organization to submit to the PQAM a written response to each AFR within thirty (30) days after receipt of the audit report."

Para. 7.1 states, "Audit/Survey Plan, Audit/Survey Checklist, Audit/Survey Report, Audit/Finding Report, Audit Log, Evaluation Report, all correspondence relating to the audits and other documents generated by the implementation of this procedure are considered QA Records and shall be controlled and maintained in accordance with QP 17.0."

9 Deficiency (continued)

a. An audit schedule has not been developed. However, one audit has been performed and others should be performed in the near future.

b. Date of audit plan of REECo-001-89 is missing.

c. Signature on Audit Plan done by L. Lykens is missing. Therefore, the validity of the document as a QA record does not exist.

d. Signature on Checklists done by A. Tonda are missing. Therefore, the validity of the documents as QA records does not exist.

e. Objective evidence of the items found acceptable were not documented on the checklists. Therefore, these documents do not contain all required data.

f. Audit report did not include the identification of the auditors, identification of persons contacted during audit activities.

g. Audit report did not provide a description of each reported adverse audit finding in sufficient detail and to allow to group them - based on each criteria of the REECo's QAPP - in order to produce a comprehensive trend analysis.

h. The Audit Plan was not included with the Audit Report.

i. Audit response was requested by September 1, 1989. However, an extension was requested and approved but this method is not recognized by the procedure as acceptable.

j. Extension report was requested one week after due date of response.

10 Recommended Actions (continued)

568-DOC-115, Rev. 7 and implementing procedures.

2. Corrective - Develop an audit schedule to assure timely implementation of quality assurance requirements in areas such as: organization, training, document control, QA Records, corrective action.

3. Corrective - Revise audit procedure in order to include missing requirements addressed by REECo's QAPP.

4. Corrective - Retrain appropriate QA personnel to inform them of the revised procedural requirements.

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4/89

Completed by Originating QA Organization

1 Date 9/27/89 | 2 Severity Level ☐ 1 ☒ 2 ☐ 3 | Page 1 of 2

3 Discovered During: Audit 89-5

3a Identified By: A.I. Arceo & C.E. Hampton

4 SDR No. 453 Rev. 0

5 Organization: REECo

6 Person(s) Contacted: D. Warriner

7 Response Due Date is 20 Working Days from Date of Transmittal

8 Requirement (Audit Checklist Reference, if Applicable)

NNWSI 88-9, Rev. 2, Section V, Para. 1.0, states inpart, "Activities affecting quality shall be prescribed by and performed in accordance with documented instructions, procedures, or drawings...."

9 Deficiency

The REECo Records Management Program has not developed implementing procedures at the (matrix) division level. The implementing procedures at the division level are in draft state; hence, it is not possible to assess full implement-

10 Recommended Action(s): ☒ Remedial ☐ Investigative ☒ Corrective

1) Remedial - Prepare the implementing procedure at the matrix division level for Records Management.

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11 QAE/Lead Auditor/Date	12 Division Manager/Date	13 Project Quality Mgr./Date
William H. Conn 10/12/89	10-12-89	James B. Blaylock 10/12/89

Completed by Organization in Block 5

14 Remedial/Investigative Action(s)

15 Effective Date _____

16 Cause of the Condition & Corrective Action to Prevent Recurrence

17 Effective Date _____

18 Signature/Date

Comp. by Orig. QA Org.

19 Response Accepted	QAE/Lead Auditor/Date	Division Manager/Date	Project Quality Mgr./Date
20 Corrective Action Verif. Satisfactory	QAE/Lead Auditor/Date	Division Manager/Date	Project Quality Mgr./Date

21 Remarks

22 QA CLOSURE	QAE/Lead Auditor/Date	Division Manager/Date	PQM/Date

9 Deficiency (continued)

ation capabilities. Until such time that all necessary procedures in the matrix organizations are developed, REECo is not able to fully implement the Records Management System.

10 Recommended Actions (continued)

2) Corrective - Implement the written procedure.

3) Corrective - Conduct training to applicable personnel.

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4/89

Completed by Originating QA Organization

1 Date 9/26/89	2 Severity Level ☐ 1 ☒ 2 ☐ 3	Page 1 of 2
3 Discovered During Audit 89-5	3a Identified By A.I. Arceo & C.E. Hampton	4 SDR No. 454 Rev. 0
5 Organization REECo	6 Person(s) Contacted C. Thompson & D. Warriner	7 Response Due Date is 20 Working Days from Date of Transmittal

8 Requirement (Audit Checklist Reference, if Applicable)
(CL #17-16) AP 1.7Q, Rev. 2, Para. 5.5.1.3, Designation of Records as QA Records.

9 Deficiency
Contrary to the above the following records were not appropriately designated:

10 Recommended Action(s): ☒ Remedial ☒ Investigative ☒ Corrective
1) Remedial - Make Corrections on the above listed records.

Aprvl.

11 QAE/Lead Auditor/Date	12 Division Manager/Date	13 Project Quality Mgr./Date
William H. Camp 10/6/89	10-6-89	Jano Blanford 10/6/89

Completed by Organization In Block 5

14 Remedial/Investigative Action(s)

15 Effective Date _____

16 Cause of the Condition & Corrective Action to Prevent Recurrence

17 Effective Date _____

18 Signature/Date

Comp. by Orig. QA Org.

19 Response Accepted	QAE/Lead Auditor/Date	Division Manager/Date	Project Quality Mgr./Date
20 Corrective Action Verif. Satisfactory	QAE/Lead Auditor/Date	Division Manager/Date	Project Quality Mgr./Date

21 Remarks

22 QA CLOSURE	QAE/Lead Auditor/Date	Division Manager/Date	PQM/Date

ENCLOSURE

8 Requirement (continued)

Records shall be designated as QA records (QA), non-QA records (QA: N/A) or indeterminate (IND) by placing the appropriate designation on the front of the records, in the upper right-hand corner, immediately below the WBS number. (Record package segments shall not require a separate QA designation.)

9 Deficiency (continued)

LRC RMS No.	Subject	From/Originator/ Date	Designation
RE003223	YMP-Procedure BH-6221 Document Review	M.A. Fox 1/3/89	QA:NA
RE005683	Requirements - YMP Records Management Authentication List	D.L. Koss 7/27/89	QA:NA
RE005687	Requirements - YMP Records Management Authentication List	D.L. Koss 7/27/89	QA:NA
RE005343	YMP QA Orientation	M.A. Fox 7/11/89	QA:NA
RE003363	YMP Audit 88-07 of REECo	M.A. Fox 1/20/89	QA:NA

10 Recommended Actions (continued)

2) Investigative - Review other records to determine if this condition exists in other records.

3) Corrective - Instruct record resource personnel on the correct designation of records.

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4/89

Completed by Originating QA Organization

1 Date 9/27/89 | 2 Severity Level ☐ 1 ☒ 2 ☐ 3 | Page 1 of 2

3 Discovered During: Audit 89-5

3a Identified By: A.I. Arceo & C.E. Hampton

4 SDR No. 455 Rev. 0

5 Organization: REECo

6 Person(s) Contacted: M. Fox, Steve Straub

7 Response Due Date is 20 Working Days from Date of Transmittal

8 Requirement (Audit Checklist Reference, if Applicable)
CL #6-1 & 6-4
NNWSI Project QA Plan/88-9, Revision, Section VI, Para. 1.2, states in part: "Implementation of Document Control shall provide for the following: a master

9 Deficiency
a) Contrary to the above cited requirements:

1. The master list of project controlled documents (dtd 8/23/89) did not

10 Recommended Action(s): ☒ Remedial ☒ Investigative ☒ Corrective

1. Remedial - Include the listed LS-SP-IP-001 and LS-SP-IP-003 procedures on the master list of controlled documents.

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11 QAE/Lead Auditor/Date	12 Division Manager/Date	13 Project Quality Mgr./Date
William H. Camp 10/5/89	10-5-89	James Blaylock 10/6/89

Completed by Organization in Block 5

14 Remedial/Investigative Action(s)

15 Effective Date _____

16 Cause of the Condition & Corrective Action to Prevent Recurrence

17 Effective Date _____

18 Signature/Date

Comp. by Orig. QA Org.

19 Response Accepted	QAE/Lead Auditor/Date	Division Manager/Date	Project Quality Mgr./Date
20 Corrective Action Verif. Satisfactory	QAE/Lead Auditor/Date	Division Manager/Date	Project Quality Mgr./Date

21 Remarks

22 QA CLOSURE	QAE/Lead Auditor/Date	Division Manager/Date	PQM/Date

ENCLOSURE

8 Requirement (continued)

list or equivalent to identify the correct and updated revisions of documents."

a) QP 6.0, Rev. 5

6.3.2 The PQAM shall develop and maintain a master list of the project's controlled docuemnts. The list shall identify the current revision of controlled documents issued for QA Level I & II activities.

b) QP 5.3, Rev. 0

6.4.5 After resolution of all comments, the procedure is prepared in final form by the responsible person who shall obtain final review and approval from the department manager and the PQAM.

9 Deficiency (continued)

include all controlled documents in existence.

2. QP 6.0, Rev. 5 does not provide a mechanism for QA to be notified of controlled documents generated within departments.

b) Implementing procedrue (LS-SP-IP-001, Rev. 0 dtd 7/20/89, LS-SP-IP-003, Rev. 0 dtd 9/18/89) were not approved by the PQAM. Implementing procedures are currently being reviewed by QA but are not being presented to QA in finalized form for approval. These procedures were not implemented to date.

10 Recommended Actions (continued)

2. Investigative - Verify if there are other controlled docuemnts issued and add them to the master list of controlled documents.

3. Corrective - Revise the affected implementing procedures to include a mechanism for QA to be notified when controlled documents are generated and issued.
4. Corrective - Inform other departments of the above requirements.